

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 246/TT/2014

Coram:

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

Date of Order : 19.12.2016

In the matter of:

Approval of transmission tariff for **Asset-1A**: 765 kV S/C Angul-Sundergarh (Line-II) transmission line and its bays and with 1 No. (3x80) MVAR line reactor and 1 No. 80 MVAR spare reactor each at Angul and Sundergarh, **Asset-1B**:1 No. 3X80 MVAR line reactor of 765 kV S/C Angul-Sundergarh Line-II as Bus Reactor at Sundergarh Pooling station along with associated bays, **Asset-II**:1 No. (3x500) MVA Transformer (1st) alongwith 1 No. 500 MVA Spare Transformer at Sundergarh, **Asset-III**: 1 No. (3x500) MVA Transformer (2nd) Transformer at Sundergarh, **Asset-IV**:1 No. (3x500) MVA Transformer (1st) alongwith 1 No. 500 MVA Spare Transformer at Angul, **Asset-V**: 1 No. (3x500) MVA Transformer (2nd) Transformer at Angul, **Asset-VI**:1 No. (3x80) MVAR Bus Reactor (1st) and its bays at Sundergarh, **Asset-VII**: 1 No. (3x80) MVAR Bus Reactor (2nd) and its bays at Sundergarh, **Asset-VIII**:1 No. (3x110) MVAR Reactor (1st) alongwith 1 No. 110 MVAR spare reactor at Angul and **Asset-IX**: 2 Nos. 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjaygarh Transmission Line, under "Transmission System for phase-I Generation Projects in Orissa-Part-A" in Eastern Region for tariff block 2014-19 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulation 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014.

And in the matter of:

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

....Petitioner

Vs

1. GMR Kamalanga Energy Limited,
Skip House, 25/1, Museum Road,
Bangalore, Karnataka-560 025



2. Monnet Power Company Limited,
Monnet Marg, MandirHasaud,
Raipur, Chattisgarh-492 101
3. Lanco Babandh Power Limited,
Plot No. 397, Phase-III, 2nd Floor,
UdyogVihar, Gurgaon,
Haryana-120 016
4. IND Barath Energy (Utkal) Limited,
Plot No. 30-A, Road No. 1,
Film Nagar, Jubilee Hills,
Hyderabad, Andhra Pradesh-500 033
5. Navbharat Power Private Limited,,
Navbharat Chambers, 6-3-1109/1,
3rd Floor, Left Wing, Raj Bhawan Road,
Somajiguda, Hyderabad,
Andhra Pradesh-500 082
6. Jindal India Thermal Power Limited,
Plot No. 12, Sector-B, Pocket-1
Local Shopping Complex,
Vasant Kunj, New Delhi-110 070
7. Sterlite Energy Limited,
SIPCOT Industrial Complex,
Tuticorin, Tamil Nadu-628 002
8. Bihar State Electricity Board,
VidyutBhawan, Bailey Road,
Patna-800 001
9. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lake City,
Kolkata-700 091
10. Grid Corporation of Orissa Limited,
Shahid Nagar,
Bhubaneswar-751 007
11. Damodar Valley Corporation,
DVC Tower, Maniktala, Civil Centre,
VIP Road,Kolkata-700 054



12. Power Department,
Government of Sikkim, Gangtok-737 101

13. Jharkhand State Electricity Board,
In front of Main Secretariat,
Doranda, Ranchi-834 002

.....Respondents

For petitioner : Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri AmitYadav, PGCIL
Shri M.M.Mondal, PGCIL
Shri S.K.Venkatesan, PGCIL

For respondents : None

ORDER

The present petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission charges for **Asset-1A**: 765 kV S/C Angul-Sundergarh (Line-II) transmission line and its bays and with 1 No. (3x80) MVAR line reactor and 1 No. 80 MVAR spare reactor each at Angul and Sundergarh, **Asset-1B**: 1 No. 3X80 MVAR line reactor of 765 kV S/C Angul-Sundergarh Line-II as Bus Reactor at Sundergarh Pooling station along with associated bays, **Asset-II**: 1 No. (3x500) MVA Transformer (1st) alongwith 1 No. 500 MVA Spare Transformer at Sundergarh, **Asset-III**: 1 No. (3x500) MVA Transformer (2nd) Transformer at Sundergarh, **Asset-IV**: 1 No. (3x500) MVA Transformer (1st) alongwith 1 No. 500 MVA Spare Transformer at Angul, **Asset-V**: 1 No. (3x500) MVA Transformer (2nd) Transformer at Angul, **Asset-VI**: 1 No. (3x80) MVAR Bus Reactor (1st) and its bays at Sundergarh, **Asset-VII**: 1 No. (3x80) MVAR Bus Reactor (2nd) and its bays at Sundergarh, **Asset-VIII**: 1 No. (3x110) MVAR Reactor (1st)



alongwith 1 No. 110 MVAR spare reactor at Angul and **Asset-IX**: 2 Nos. 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjaygarh Transmission Line (hereinafter referred to as “transmission assets”) under Transmission System for Phase-I Generation Projects in Orissa-Part-A in Eastern Region (hereinafter referred to as "Transmission System") for tariff block 2014-19, from the date of commercial operation to 31.3.2019 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The petitioner has been entrusted with the implementation of Transmission System for Phase-I Generation Projects in Orissa Part-A in Eastern Region. The transmission system for evacuation of power from Phase-I IPPs in Orissa was agreed in the Standing Committee meeting on Power System Planning in Eastern Region held on 14.9.2009 after discussion with the generation developers and constituents of ER. The transmission system was later deliberated in the 13th ERPC held on 26.3.2010 as well as special TCC meeting held on 12.4.2010. Further, the system was discussed in the 14th ERPC held on 11.6.2010 and was then finally agreed during the Standing Committee meeting on power system planning in Eastern Region, held on 20.9.2010 at NRPC.

3. The Investment Approval (IA) and expenditure sanction for the transmission system was accorded by the Board of Directors of the petitioner vide Memorandum No C/CP/Orissa Ph-I IPPS (Part-A) dated 17.9.2010 at an estimated cost of ₹207486 lakh including an IDC of ₹12820 lakh (based on 1st Quarter of 2010 price level). The transmission system was scheduled to be commissioned within 30 months from the date



of IA. Therefore, the scheduled date of commissioning of the transmission system was 16.3.2013 i.e. 1.4.2013.

4. The Revised Cost Estimate (RCE) for the transmission system was accorded by the Board of Directors of the petitioner vide Memorandum No C/CP/RCE-ER dated 23.2.2015 at revised cost estimate of ₹234837 lakh including an IDC of ₹24472 lakh (based on June, 2014 price level). As per the RCE, the overall completion schedule of the project is also revised to June, 2015.

5. We have considered the cost given in the RCE dated 23.5.2015 for the purpose of computation of tariff, as the RCE is for revising the cost estimates and not the scheduled timeline. Accordingly, the scheduled date of commissioning of the assets covered in the scheme was 1.4.2013. The scope of work covered under the scheme is broadly as follows:-

Transmission Lines:

- 1) Angul Pooling station-Jharsuguda (Sundergarh) Pooling station 765 kV 2xS/c line;
- 2) LILO of Rourkela-Raigarh 400 kV D/C line at Jharsuguda pooling station;
- 3) LILO of Meramundali-Jeypore 400 kV S/C line at Angul Pooling station; and
- 4) LILO of one Ckt. of Talcher-Meramundali 400 kV D/C line at Angul Pooling station.

Sub-stations:

- 1) 2x1500 MVA, 765/400 kV pooling station at Jharsuguda (Sundergarh) (New);
and
- 2) 2x1500 MVA, 765/400 kV pooling station at Angul (New).



Reactive Compensation

A. Bus Reactors

S. No.	Sub-station	Bus Reactor (765 kV)	Bus Reactor (400 kV)
1	765/400 kV Jharsuguda	2x240 MVAR	2x125 MVAR
2	765/400 kV Angul	2x330 MVAR	3x125 MVAR

B. Line Reactors

Sub-station	Line Reactors (765 kV)	
	Angul	Jharsuguda
765 kV, 2xS/C Angul pooling station-Jharsuguda pooling station Jharsuguda	240 MVAR (switchable) on each circuit	240 MVAR (fixed) on each circuit

6. The petitioner, vide affidavit dated 18.3.2016, has submitted that, the entire scope of the project is covered in 3 petitions viz. Petition Nos. 112/TT/2013, 252/TT/2015 and the instant petition. The tariff for 8 assets was approved vide order dated 7.10.2015 in Petition No. 112/TT/2013 and for 5 assets vide order dated 25.4.2016 in Petition No. 252/TT/2015.

7. In the instant petition, the petitioner had originally sought tariff for the period from actual/anticipated COD of the assets and had submitted the Auditor's Certificates for actual/estimated expenditure incurred upto COD and additional capitalization projected to be incurred from COD to 31.3.2019. As per the original petition, there were 9 assets and some of them were commissioned and some of them were anticipated to be commissioned. However, vide affidavit dated 21.7.2016, the petitioner has submitted actual COD of assets and the petitioner also submitted that Asset-I has been split into two assets and therefore, the instant petition covers 10 assets. The details of the assets covered in the instant petition and their date of commercial operation are as follows:-



Assets	Name of the Asset	Actual COD
Asset 1A	765 kV S/C Angul-Sundergarh (Line-II) transmission line and its bays and with 1 No. (3x80) MVAR line reactor and 1 No. 80 MVAR spare reactor each at Angul and Sundergarh	4.4.2015
Asset 1B	1 No. 3X80 MVAR line reactor of 765 kV S/C Angul-Sundergarh Line-II as Bus Reactor at Sundergarh Pooling station along with associated bays	2.11.2014
Asset II	1 No. (3x500) MVA Transformer (1 st) alongwith 1 No. 500 MVA Spare Transformer at Sundergarh	3.11.2014
Asset III	1 No. (3x500) MVA Transformer (2 nd) Transformer at Sundergarh	1.8.2014
Asset IV	1 No. (3x500) MVA Transformer (1 st) alongwith 1 No. 500 MVA Spare Transformer at Angul	4.4.2015
Asset V	1 No. (3x500) MVA Transformer (2 nd) Transformer at Angul	4.5.2015
Asset VI	1 No. (3x80) MVAR Bus Reactor (1 st) and its bays at Sundergarh	31.7.2014
Asset VII	1 No. (3x80) MVAR Bus Reactor (2nd) and its bays at Sundergarh	28.9.2014
Asset VIII	1 No. (3x110) MVAR Reactor (1 st) alongwith 1 No. 110 MVAR spare reactor at Angul	4.4.2015
Asset IX	2 Nos. 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjaygarh Transmission Line	31.7.2014

8. The details of the other assets of the transmission scheme are as follows:-

Srl.No	Name of the Asset	Actual COD	Remark
1	Asset-I: LILO of Meramundali-Jeypore 400 kV S/C line at Angul Sub-station	1.4.2013	Covered under 112/TT/2013
2	Asset-II: one no. of 125 MVAR Reactor (1st) and associated bays at Angul Sub-station	1.11.2013	
3	Asset-III: one no. of 125 MVAR Reactor (2nd) and associated bays at Angul Sub-station	1.6.2013	
4	Asset-IV: one no. of 125 MVAR Reactor (3rd) and associated bays at Angul Sub-station	1.5.2013	
5	Asset-V: LILO of one Ckt. Talcher-Meramundali 400 kV D/C line at Angul Sub-station	1.4.2013	
6	Asset-VI: LILO-I (Ckt.-III) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station	1.6.2013	
7	Asset-VII: LILO-II (Ckt.-I) of Rourkela-Raigarh 400	1.5.2013	



	kV D/C line at Jharsuguda Sub-station		
8	Asset-VIII: one no. of 125 MVAR Reactor (1st) and associated bays at Jharsuguda Substation	1.6.2013	
9	Asset-IX: one no. of 125 MVAR Reactor (2nd) and associated bays at Jharsuguda Substation	1.6.2013	
1	Asset-I 765 kV S/C Angul-Sundergarh (line-I) transmission line and its bays and with 1 no (3X80)MVAR line reactor and 1 no 80MVAR spare reactor each at Angul and Sundergarh	27.01.2016	Covered under 252/TT/2015
2	Asset-II 01 no. (3X110) MVAR Bus Reactor (2nd) and associated bay at Angul	1.04.2015	
3	Asset-III 01 no. (3X500) MVA Transformer (3rd) Transformer and associated bay at Angul	25.01.2016	
4	Asset-IV 01 no. (3X500) MVA Transformer (4th) Transformer and associated bay at Angul SS	1.04.2015	
5	Asset-V LILO of one Ckt of TalcherMeramundali 400 kV D/C line at Angul Sub-station	1.04.2014	

9. The details of the transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

Particulars	Asset-1A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	3815.75	4010.90	4068.98	4068.98
Interest on Loan	0.00	4421.07	4306.00	4008.83	3647.33
Return on Equity	0.00	4251.53	4468.95	4533.67	4533.67
Interest on Working Capital	0.00	303.67	311.19	307.74	300.00
O and M Expenses	0.00	293.56	305.66	315.94	326.40
Total	0.00	13085.58	13402.70	13235.16	12876.38
	Asset-1B				
Depreciation	66.23	170.97	179.66	182.04	182.04
Interest on Loan	73.71	181.39	177.29	164.47	148.99
Return on Equity	73.79	190.50	200.18	202.83	202.83
Interest on Working Capital	6.85	17.31	17.80	17.79	17.60
O and M Expenses	34.94	87.22	90.12	93.11	96.20
Total	255.52	647.39	665.05	660.24	647.66
	Asset-II				
Depreciation	89.71	250.42	328.96	381.76	381.76
Interest on Loan	100.41	265.82	329.91	359.28	326.27
Return on Equity	99.95	280.37	368.31	427.43	427.43
Interest on Working Capital	9.99	26.60	32.18	35.71	35.25
O and M Expenses	59.90	149.52	154.49	159.62	164.91
Total	359.96	972.73	1213.85	1363.80	1335.62
	Asset-III				
Depreciation	118.79	207.54	271.35	310.95	310.95
Interest on Loan	132.49	217.84	269.94	290.00	263.00



Return on Equity	132.36	232.36	303.80	348.14	348.14
Interest on Working Capital	14.18	23.40	27.99	30.66	30.33
O and M Expenses	96.87	149.52	154.49	159.62	164.91
Total	494.69	830.66	1027.57	1139.37	1117.33
	Asset-IV				
Depreciation	0.00	249.02	323.52	371.04	371.04
Interest on Loan	0.00	282.80	345.19	370.56	338.84
Return on Equity	0.00	278.81	362.22	415.42	415.42
Interest on Working Capital	0.00	26.92	32.26	35.45	35.01
O and M Expenses	0.00	149.52	154.49	159.62	164.91
Total	0.00	987.07	1217.68	1352.09	1325.22
	Asset-V				
Depreciation	0.00	190.56	269.05	304.38	304.38
Interest on Loan	0.00	210.65	279.79	295.36	268.90
Return on Equity	0.00	213.35	301.23	340.78	340.78
Interest on Working Capital	0.00	21.65	28.10	30.47	30.15
O and M Expenses	0.00	135.85	154.49	159.62	164.91
Total	0.00	772.06	1032.66	1130.61	1109.12
	Asset-VI				
Depreciation	87.27	157.90	177.01	186.41	186.41
Interest on Loan	99.62	168.74	176.18	170.99	154.49
Return on Equity	97.24	176.79	198.19	208.71	208.71
Interest on Working Capital	9.66	16.41	17.67	18.17	17.97
O and M Expenses	56.51	87.22	90.12	93.11	96.20
Total	350.30	607.06	659.17	677.39	663.78
	Asset-VII				
Depreciation	70.67	158.43	177.54	190.74	190.74
Interest on Loan	79.55	168.37	175.56	174.53	157.94
Return on Equity	78.74	177.38	198.77	213.55	213.55
Interest on Working Capital	7.66	16.42	17.68	18.47	18.26
O and M Expenses	43.15	87.22	90.12	93.11	96.20
Total	279.77	607.82	659.67	690.40	676.69
	Asset-VIII				
Depreciation	0.00	175.64	211.12	232.24	232.24
Interest on Loan	0.00	201.85	226.68	231.77	211.28
Return on Equity	0.00	196.65	236.37	260.02	260.02
Interest on Working Capital	0.00	18.03	20.50	21.81	21.51
O and M Expenses	0.00	87.22	90.12	93.11	96.20
Total	0.00	679.39	784.79	838.95	821.25
	Asset-IX				
Depreciation	105.24	174.43	200.69	216.12	216.12
Interest on Loan	115.96	180.36	193.73	193.30	174.86
Return on Equity	117.26	195.29	224.69	241.96	241.96
Interest on Working Capital	14.04	22.30	24.21	25.28	25.20
O and M Expenses	113.01	174.44	180.24	186.22	192.40
Total	465.51	746.82	823.56	862.88	850.54



10. 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 and none of the respondents have filed any reply.

11. Having heard the representatives of the parties and perused the material available on record we proceed to dispose of the petition.

Date of Commercial Operation (COD):

12. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

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

xxx

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

Provided that:

- (i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:
- (ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.”

13. The petitioner vide affidavit dated 4.7.2016 has submitted revised COD for Assets I A, IB, II, III, IV, VII and VIII. The CODs claimed by the petitioner are given hereunder:-



Assets	Revised COD
Asset-1A	4.4.2015
Asset-1B	2.11.2014
Asset-II	3.11.2014
Asset-III	1.8.2014
Asset-IV	4.4.2015
Asset-V	4.5.2015
Asset-VI	31.7.2014
Asset-VII	28.9.2014
Asset-VIII	4.4.2015
Asset-IX	31.7.2014

14. The petitioner was directed to provide status of LTA of other generators, whether LTA has become effective and if not, when shall it become effective. In response, petitioner, vide affidavit dated 18.3.2016 has submitted that the LTA of other generators is yet to be operationalized. Further, the petitioner vide affidavit dated 20.7.2016 has submitted that so far LTA has been operationalized in case of two IPPs viz. Ind Barath Power Ltd. and GMR Kamalanga Energy Ltd. However, LTA of other IPPs shall be operationalised upon establishment of adequate payment security mechanism by such IPPs.

15. CEA was asked to give the status report for "Phase-I generation projects in Odisha Part A" and the utilization of the transmission assets covered under HCPTC-I Transmission System associated with the generation projects. In response, CEA vide letter dated 16.10.2015 submitted the status given as below:-

A. The status of Phase-1 Generation Projects in Odisha Part A

Srl. No.	Name of the generating project	Capacity M/W	Original commissioning schedule	Expected commissioning schedule
1.	GMR Kamalanga Energy Ltd	1050	2011-12	Commissioned
2	Navbharat Power Pvt. Ltd	1050	2011-12	Project abandoned



3	Sterlite Energy Ltd	2400	2009-10	Commissioned
4	Monnet Espat and Energy Ltd	1050	2009-10	2016-17
5	Jindal India Thermal Power Ltd	1200	2011-12	Commissioned
6	Lanco Banandh Power Pvt. Ltd	2640	2013-14	2016-17and 2017-18
7	Ind-Bharath Energy (Utkal) Ltd	700	2011-12	2015-16

B. The power from the generation projects of Sterlite and Ind Bharath is planned to be pooled at Jharsuguda (Sundergarh) 765/400 kV pooling station and power from other generation projects indicated above is planned to be pooled at Angul 765/400 kV pooling station. The status of immediate evacuation from the project and interim generation for evacuation of power from the project is as follows:-

Sr. No.	Name of the generating project	Immediate evacuation system and status	Interim arrangement and status
1.	GMR Kamalanga Energy Ltd	GMR-Angul PS 400 kV D/C Line-commissioned (21.12.14)	-
2	Navbharat Power Pvt. Ltd	Navbharat-Angul PS 400 KV quad line, uncertain	-
3	Sterlite Energy Ltd	Sterlite-Sundergarh PS 400 kV D/C -2016-17	LILO of one ckt of Rourkela-Raigarh 400 kV D/C line-commissioned
4	Monnet Espat and Energy Ltd	Monnet-Angul PS 400 kV D/c line-March 2016	-
5	Jindal India Thermal Power Ltd	Jindal-Angul PS 400 kV D/C line-commissioned (1.6.14)	-
6	Lanco Babandh Power Pvt. Ltd	Lanco Babandh-Angul PS 400 kV 2xDc line 2016-17	-
7	Ind Bharath Energy (Utkal) Ltd	Ind Bharath-Sundergarh PS 400 kV D/c line-Nov. 2015	LILO of other ckt of Rourkela-Raigarh 400 kV D/C line-commissioned.

C. The details of common transmission system associated with above generation projects in Odisha Part A alongwith status is given below:-

a. Angul Pooling Station-Sundergarh Pooling Station 765 kV 2xSC line of line I



(commissioned in March 2015 and Line II by November, 2015)

- b. LILO of Rourkela-Raigarh 400 kV D/C at Sundergarh Pooling Station
(commissioned in May,2013)
- c. LILO of Meramundali –Jeypoor 400 kV S/C line at Angul Pooling Station
(commissioned in March, 2013)
- d. LILO of one ckt of Talcher-Meramundali 400 kV S/C line at Angul Pooling
Station (commissioned in March, 2014)
- e. Establishment of 2x1500 MVA765/400 kV Pooling Station at Sundergarh (both
ICTs commissioned)
- f. Establishment of 4x1500 MVA 765/400 kV Pooling Station at Angul (3 ckt.
commissioned)

D. The details of transmission assets covered in Petition No.246/TT/2014.

- a. Asset I 765 kV S/c Angul-Sundergarh (line II) transmission line and its bays
and with line (3x80) MVA line reactors and 1 no. 80 MVAR spare reactor each
at Angul and Sundergarh.
- b. Asset-II 1 Nos. (3x500) MVA transformer (1st) along with 1 Nos. 500 MVA
spare transformer at Sundergarh.
- c. Asset III 1 Nos. (3x500) MVA Transformer (2nd) at Sundergarh.
- d. Asset IV 1 Nos. (3x500) MVA transformer alongwith 1 no. 500 MVA spare
transformer at Angul.
- e. Asset V 1 Nos. 3x500 MVA transformer at Angul
- f. Asset VI 1 Nos. 3x80 MVAR Bus reactor and its bays at Sundergarh
- g. Asset VII 1 Nos. 3x80 MVAR Bus reactor and its bays at Sundergarh



- h. Asset VIII 1 Nos. 3x110 MVAR Bus reactor alongwith 1 nos. 110 MVAr spare reactor at Angul.
- i. Asset IX 02 Nos. 765 kV Bays at Sundergarh for 765 kV D/C Sundergarh-Dharamjaygarh transmission line.

E. Power of GMR TPP(1050 MW) and Jindal TPP (1200 MW) is being evacuated at 400 kV to the Angul Pooling Station through their immediate evacuation system. Assets mentioned at D(a), D(d), D(e), D(f), D(g), D(h), D(i) are being utilized for evacuation of above 2250 MW power pooled at Angul Pooling Station and onward transmission to Western Region. Asset at D(a) will also be helpful in catering to the contingency of Angul-Sundergarh 765 kV S/C line. The asset mentioned at D(b) would be utilized after the commissioning of generation project of Ind Bharath Energy (Utkal Ltd) anticipated to be commissioned in November, 2015. Asset mentioned at D(c) would be utilized only after the commissioning of immediate evacuation of Sterlite.

16. The petitioner was directed to submit a copy of relevant portion of DPR giving details of Line Reactors/ Bus Reactors and bays to be installed at Angul and Sundergarh Sub-station which are not covered in the Investment Approval, Copy of 'Minutes of Meeting of 14th ERPC's and Copy of 'Minutes of RPC/ SCM' wherein Line Reactors/ Spare Bus Reactors were agreed. In response, petitioner, vide affidavit dated 18.3.2016 has submitted the copy of DPR where the Line Reactor/Bus Reactor are covered.



17. The petitioner vide affidavits dated 20.7.2016 and 4.7.2016 has submitted RLDC trial operation certificate in case of all the assets. It is observed that the petitioner has revised its cost on the basis of trial operation certificate issued by RLDC for the first year. It is also observed that for an asset declared COD in April, 2015, trial operation certificate was issued on 4.4.2016. We do not approve of such a practice. We are of the view that the petitioner should have obtained the trial operation certificate at the time of declaring the COD. The petitioner is directed to obtain trial operation certificate in future at the time of declaring COD.

18. The petitioner was directed to submit the RPC approval for charging of 3x80 MVAR line reactor as bus reactor in case of Asset-1B. The petitioner, vide affidavit 21.7.2016, replied that "RPC approval of the use of line reactor as bus reactor shall be submitted shortly". As the petitioner has not submitted the RPC approval for charging the line reactor as bus reactor from 2.11.2014 to 3.4.2015, the date of commercial operation of Asset-1B is considered as 4.4.15.

19. Taking into considerations the submissions made by the petitioner and the CEA and the RLDC certificates submitted by the petitioner in support of trial operation, the following dates of commercial operation is approved for the instant assets:-

Assets	Actual COD
Asset-1A	4.4.2015
Asset -1B	4.4.2015
Asset-II	3.11.2014
Asset-III	1.8.2014
Asset-IV	4.4.2015
Asset-V	4.5.2015
Asset-VI	31.7.2014
Asset-VII	28.9.2014



Asset-VIII	4.4.2015
Asset-IX	31.7.2014

Capital cost

20. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provides 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.”

(2) The Capital Cost of a new project shall include the following:

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Increase in cost in contract packages as approved by the Commission;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;

(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;”

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and

(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

21. The petitioner, vide affidavit dated 13.8.2014, initially claimed the capital cost of the assets based on actual/anticipated COD. Subsequently, based on actual COD and splitting of Asset I, the petitioner vide affidavit dated 18.3.2016 has submitted Auditor’s



Certificates along with revised tariff forms in respect of all the assets. It is observed that the COD given in the Auditor's certificate, which is obtained after 1 to 2 years of COD of assets, indicates wrong dates of commercial operation. The petitioner is directed to clarify the same at the time of truing-up and to take care of the same in future cases. Further, vide affidavit dated 20.7.2016, the petitioner has submitted Revised Auditor Certificates and revised tariff forms in case of Assets 1A and 1B. The capital cost mentioned in these Auditor Certificates submitted vide affidavit dated 18.3.2016 and 20.7.2016 has been considered for tariff determination. The petitioner submitted the revised date of COD for assets vide affidavit dated 4.7.2016.

22. The COD mentioned in the Auditor certificates for some of the assets is different from the actual COD claimed by the petitioner, as detailed below :-

Asset No.	COD as mentioned in Auditor Certificate	Actual COD claimed by the petitioner
Asset II	2.11.2014	3.11.2014
Asset III	31.7.2014	1.8.2014
Asset IV	1.4.2015	4.4.2015
Asset VII	27.9.2014	28.9.2014
Asset VIII	1.4.2015	4.4.2015

The petitioner is directed to submit revised tariff forms as per actual COD considered in the instant petition at the time of truing up duly certified by the statutory auditor.

23. As stated at para 18 above, the COD of Asset 1B is considered as 4.4.2015. In case of other assets, the capital cost as on the COD mentioned in the Auditor Certificate is considered for the purpose of computation of tariff. The petitioner has submitted the RCE and the approved reapportioned cost of the assets. The details of the approved



apportioned cost, revised apportioned cost as per RCE and actual capital cost claimed as on actual COD(s) and estimated additional capital expenditure incurred or to be incurred as per Auditor's Certificates dated 9.3.2016, 13.7.2016 and 14.7.2016 are summarised below:-

Assets	Apportioned approved cost as per Investment Approval	Revised apportioned cost as per RCE	Capital cost claimed on actual COD as per Auditor Certificate	Additional Capital expenditure Incurred / Proposed			Total estimated completion cost
				2014-15	2015-16	2016-17	
Asset-1A	69494.95	77020.00	71925.80	0.00	2938.07	2200.00	77063.87
Asset-1B		3448.00	2970.36	175.99	211.32	90.02	3447.69
Asset-II	10954.43	7822.00	3954.63	300.42	975.34	2000.00	7230.39
Asset-III	8551.49	6481.00	3250.23	221.80	917.14	1500.00	5889.17
Asset-IV	10413.97	7450.00	4345.73	0.00	881.58	1800.00	7027.31
Asset-V	8064.93	6110.00	3653.21	0.00	773.50	1338.00	5764.71
Asset-VI	3602.06	3890.00	2131.99	674.62	367.93	355.92	3530.46
Asset-VII	3602.06	3890.00	2388.12	500.52	223.84	500.00	3612.48
Asset-VIII	3393.12	4588.00	3155.37	0.00	443.13	800.00	4398.50
Asset-IX	3116.37	4590.00	2856.96	241.43	410.30	584.44	4093.13
Total	121193.38	125289.00	100632.40	2114.78	8142.15	11168.38	122057.70

Cost Over-run

24. The estimated completion cost of the instant assets is more than the initial approved apportioned cost. However, the estimated completion cost is within the reapportioned cost of all the assets except in case of Asset 1A. The estimated completion cost of ₹77063.87 lakh of Asset 1A exceeds the reapportioned cost of ₹77020 lakh. Hence, the capital cost of Asset 1A is restricted to its revised apportioned cost. However, the actual capital cost allowed on cash basis is still within the reapportioned cost, the recovery towards cost over-run is not considered now and it will be reviewed at the time of truing up.



Time over-run

25. As per the IA dated 17.9.2010, the assets covered in the instant petition were scheduled to be commissioned within 30 months from the date of IA. Accordingly, the scheduled date of commissioning works out to 1.4.2013 against which the assets were commissioned as detailed below:-

Assets	Scheduled COD	COD	Time over-run
Asset-1A	1.4.2013	4.4.2015	24 months and 3 days
Asset-1B		4.4.2015	24 months and 3 days
Asset-II		3.11.2014	19 months and 2 days
Asset-III		1.8.2014	16 months
Asset-IV		4.4.2014	24 months and 3 days
Asset-V		4.5.2014	25 months and 3 days
Asset-VI		31.7.2014	16 months
Asset-VII		28.9.2014	17 months and 27 days
Asset-VIII		4.4.2015	24 months and 3 days
Asset-IX		31.7.2014	16 months

26. Thus, there is a time over-run of 16 months to 25 months and 3 days in commissioning of the various assets covered in the instant petition. The petitioner submitted the reasons for time over-run in case of the instant assets in the petition and vide affidavits dated 4.7.2016 and 1.9.2016. The petitioner has attributed the reasons for time over-run due to delay in land acquisition, delay in forest clearance and RoW issues and the justification given by the petitioner are as follows:-



A. Delay at Angul end in case of Assets IA, IB, IV, V and VIII

I. Land acquisition

There was delay in handing over the land by Government of Odisha for 765/400 kV Pooling Station at Angul. The application for land acquisition for 765/400 kV Pooling Station at Angul was submitted to Government of Odisha on 17.12.2009 and 22.12.2009 and subsequently on 2.1.2010 i.e.9 months before the Investment Approval. After completion of all formalities viz. publication of Notification under Section-IV, VI, IX and XI in case of private land, approval of Government of Odisha for grant of Government land on lease, the possession of land was delivered by the Land Acquisition authorities as under:-

- i) Private land-30.19Acres on 28.12.2011 (Village Baliani)
- ii) Private land-0.47 Acres on 28.12.2011 (Village Giridhibasia)
- iii) Government land-137.40 Acres on 13.2.2012 (Village Fulpada)
- iv) Government land-34.83 Acres on 13.2.2012 (Village Talmul Sasan)
- v) Private land 66.38Acres on 26.3.2012 (Village Fulpada)

Though, the application for land acquisition was made in December, 2009, i.e. about 9 months prior to investment approval, the land acquisition was completed by 26.3.2012 i.e. after a period of 26 months from the date of application. With regard to land acquisition problem at Angul, the petitioner also received letters dated 13.12.2011 and 26.9.2012 from district Authorities respectively.

II. ROW Problems

- (i) Right from the beginning of the construction work of Angul sub-station and associated transmission line in the area, severe ROW obstructions were faced.



Sometimes local villagers mixed up with anti-socials and threatened the contractors and stopped the work inside the sub-station area. Prolonged persuasion and meetings at district administration level was conducted at several times.

- (ii) The time over-run due to ROW at Angul end, in respect of Asset-IA i.e. 765 kV S/C Angul-Sundergarh Line-II. ROW issues at Angul end were faced from 3.1.2012 to 16.3.2015 resulting in a delay of around thirty eight (38) months. ROW issues were also encountered at the Angul Sub-station premises alongwith various other locations during foundation/stringing of the Angul-Sundergarh (line-II) transmission line. Written communications were made with concerned authorities regarding the obstruction/threat made by the local villagers in working of the petitioner at Angul 765 kV Sub-station in addition to reporting obstruction at various location of the 765 kV S/C Angul-Sundergarh Transmission line. The ROW issue affected the progress of the various sub-stations elements i.e. ICT and reactors which led to subsequent delay in their commissioning as well. The chronology of the activities of ROW constraints at Angul end is as follows:-

Date	Remarks
3.1.12	Letter to Inspector In-charge, Banarpal, Angul requesting police protection near Fulpada village
8.2.12	Letter to SP, Angul for deployment of policeman at Angul Sub-station site in view of threat from miscreants and locals.
29.1.12	Letter to Inspector In-charge, Bantala, Angul requesting police protection near Basala village at Loc. 7/3 and 7/4 and the same is acknowledged by office of Inspector In-charge, Bantala.
24.2.12	Letter to Collector and DC regarding kind intervention in the ROW matter at sub-station site
8.4.12	Letter to SP, Angul for deployment of policeman at Angul Sub-station site in view of stoppage of work at various locations in 4-5 villages
14.5.12	Letter to Collector and DC , Angul requesting assistance in resumption of site work at Angul site
4.6.12	Letter to Inspector In-charge, Handapa, Angul requesting action against forcible stoppage of work at Loc. 50/1



25.7.12	Letter to Inspector In-charge , Jarapada, Angul requesting action against tree enumeration works by POWERGRID
4.11.12	Letter to Inspector In-charge, Kishore Nagar, Angul requesting action against dacoity and stealing of tower equipments.
30.11.12	Letter to Inspector In-charge , Banarpal, Angul requesting police protection near Fulpada village
10.1.13	Letter to Inspector In-charge, Thakurgarh , Angul requesting action against locals obstructing the stringing works
22.1.13	Letter to Inspector In-charge, Bantala, Angul requesting police protection for foundation works being hampered regularly at Loc. 15/2
26.2.13	Letter to Inspector In-charge, Hardapa, Angul requesting action against forcible stoppage of foundation works at Loc. 50/2 and the same is acknowledged by office of Inspector In-charge, Hardapa, Angul.
11.3.13	Letter to Inspector In-charge, Bantala, Angul requesting police action against forcible stoppage of Stringing works at Loc. 9/0
25.3.13	Letter to Inspector In-charge, Rairkhol, Angul requesting police action against forcible stoppage of foundation/erection works at Loc. 100/4
05.4.13	Letter to Inspector In-charge, Thakurgarh , Angul requesting police action against forcible stoppage of foundation works at Loc. 69/4
11.4.13	Letter to Inspector In-charge, Bantala, Angul requesting police action against forcible stoppage of Foundation/erection works at Loc. 8/0
22.4.13	Letter to Inspector In-charge, Thakurgarh , Angul requesting police action against forcible stoppage of erection works at Loc. 53/0
28.4.13	Letter to Inspector In-charge, Bantala, Angul requesting police action against damage to tower equipments by villagers works at Loc. 8/0 and 9/0 and the same is acknowledged by office of Inspector In-charge, Bantala.
31.5.13	Letter to Collector and DC, Angul, regarding kind intervention in problem faced during tree felling along the TL corridor and the same is acknowledged by office of Collector and District Magistrate, Angul.
24.6.13	Letter to Inspector In-charge, Bantala, Angul requesting police protection where manhandling situation occurred at Loc. 19/0 and the same is acknowledged by office of Inspector In-charge, Bantala.
8.8.13	Letter to SP, Angul for deployment of policeman at Angul Sub-station site in view of agitation from locals.
19.9.13	Letter to Inspector In-charge, Banarpal, Angul requesting action against forcible stoppage of work and the same is acknowledged by office of Inspector In-charge, Banarpal, Angul.
9.10.13	Letter to Inspector In-charge, Bantala, Angul requesting police action against damage to tower equipments by villagers works at Loc. 10/0 and 11/0
24.10.13	Letter to Collector and DC, Angul regarding kind intervention in assistance for finalisation of crop compensation and ROW problem faced during tree felling along the TL corridor
19.12.13	Letter to Inspector In-charge, Bantala, Angul requesting police action against forcible stoppage of Foundation works at Loc. 22/1
26.2.14	Letter to Inspector In-charge , Angul requesting police action against theft of tower equipments at Loc. 8/1 to 8/5



27.2.14	Letter to Collector and DC regarding kind intervention for deployment of Magistrate for looking into problem faced during TL construction works and the same is acknowledged by office of Collector and District Magistrate, Angul.
12.3.14	Letter to SDM, Hindol, requesting extension of help in TL stringing works in view of ROW issue created by local villagers and the same is acknowledged by office of SDM, Hindol.
21.4.14	Letter to Sub-Collector, Angul, regarding organising a meeting with the villagers who have been created ROW issue and the same is acknowledged by office of Sub Collector, Angul.
30.4.14	Letter to Sub-Collector, Angul, requesting his intervention for resumption of TL works and the same is acknowledged by office of Sub Collector, Angul.
17.5.14	Letter to Sub-Collector, Angul, requesting assistance of Revenue Department in finalization of compensation to the affected owners who have been obstructing TL works
12.9.14	Minutes of meeting attending by police and local administration in view of resolving the compensation and ROW issue
19.9.14	Letter to IG, Police requesting for attending a meeting to resolve to ROW issue
23.9.14	Letter to Sub-Collector, Athmalik, requesting removal of obstruction created by land owners and villagers during TL construction and the same is acknowledged by office of Sub Collector, Athmalik.
30.9.14	Letter to Sub-Collector, Athmalik, requesting removal of obstruction created by land owners and villagers during TL construction
17.11.14	Letter to Sub-Collector, Athmalik, requesting removal of obstruction created by land owners and villagers during TL construction and the same is acknowledged by office of Sub collector, Athmalik.
27.1.15	Letter to Collector, Angul, intimating him of persistent ROW problem faced along the TL corridor and the letter is personally handed over to Collector, Angul on 28.1.2015.
21.2.15	Letter to Sub-Collector, BDO and Tahasildar, Athmalik, requesting finalization of compensation of crop and property at the earliest in view of Row faced by POWERGRID during TL construction
21.2.2015	District office, Angul addressed letter to the Sub-Collector, Athmalik with regard to finalisation of cases referred to the committee for determination of compensation for the crop/property affected by construction of transmission towers and stringing of conductors overhead by different user agencies and the same copy also sent to Manager, Sub-station construction, PGCIL, Angul.
16.3.15	Letter to Sub-Collector, Athmalik, requesting deputing a Magistrate for completion of stringing works in section 47/0 to 48/0 in view of obstruction created by land owners
20.3.15	Strike and bandh called by villagers of Fulpuda demanding sub-contracting of ongoing works at Angul Sub-station

B. Delay at Sundergarh end for Assets IA, IB, II, III, VI, VII and IX



I. Land Acquisition

The petitioner submitted that there has been delay in handing over the land by Government of Odisha for 765/400 KV Pooling Station at Jharsuguda /Sundergarh. The application for land acquisition for 765/400 kV Pooling Station at Sundergarh/Jharsuguda was made to Government of Odisha on 29.9.2009 i.e. around 12 months before the date of investment approval. After completion of all formalities viz. publication of notification under Section-IV, VI, IX and XI in case of private land, approval of Government of Odisha for grant of government land on lease, the possession of land was delivered by the land acquisition authorities as under:-

- i) Private land-118.02 Acres on 5.12.2011 (Village-Kenapali)
- ii) Government land (on lease)-10 Acres on 13.12.2011 (Village-Kenapali)
- iii) Government land (on lease) -0.67 Acres on 26.9.2012 (Village-Kenapali)
- iv) Government land (on lease) -1.410 Acres on 17.1.2013 (Village-Kenapali)

Though, the application for land acquisition was made in September, 2009, about 12 months prior to investment approval, the land acquisition took almost 39 months from the date of application.

II. ROW Problems at Jharsuguda (Sundergarh) end

Right from the beginning of the construction work of Jharsuguda Sub-station and associated transmission line in the area, severe ROW obstructions were faced. Sometimes local villagers mixed up with anti-socials and threatened the contractors and stopped the work inside the sub-station area. Prolonged persuasion and meetings at district administration level had to be conducted on several occasions. Various letters



reporting ROW issues at Sundergarh end from 25.4.2011 to 17.3.2015 were written to authorities. The ROW issues at Sundergarh end delayed commissioning of assets by approximately forty seven (47) months. Asset III and Asset VI have been commissioned at Sundergarh Sub-station on 31.7.2014 i.e. after a delay of 16 months. Further, on 27.9.2014, 1 no (3X80) MVAR Bus reactor (2nd) was commissioned at Sundergarh Sub-station (Subject Asset VII) after a delay of 18 months and on 2.11.2014, another ICT, 3X500 MVA (1st) was commissioned at Sundergarh Sub-station (Subject Asset II) after a delay of approximately 19 months. As various 765 kV elements were commissioned simultaneously w.e.f 31.7.2014 at Sundergarh Sub-station, the commissioning of the Assets II and VII was further delayed as the same requires special Tools and Plants (TandP) and services of experts from manufacturers alongwith the deployment of multiple gangs and testing officials and additional manpower. Therefore, the testing and commissioning of the Assets II and VII could be taken up only after the commissioning of these elements on 31.7.2014 at Sundergarh Sub-station. The chronology of the activities of ROW constrains at Sundergarh end is as follows:-

Date	Remarks
25.4.11	Letter to Gram Panchayat, Sulehi, Jharsuguda, requesting cooperation of villagers in carrying out preliminary survey which has been hampered due to opposition of villagers and the same is acknowledged by office of sarpanch, Sulehi Gram Panchayat, Jharsuguda.
1.6.11	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to convince the affected parties to accept the stipulated compensation and give away the demand for exorbitant amount demanded and the same is acknowledged by office of Tahasildar, Kirmira Tahasila, Jharsuguda.
10.6.11	Letter to Tahsildar, Kolabira, Jharsuguda, requesting him to convince the affected parties to accept the stipulated compensation and give away the demand for exorbitant amount for resumption of construction work
11.6.11	Letter to Inspector In-charge, Loikera, Jharsuguda, to intervene in the matter of claim of higher compensation towards land by villagers.



15.6.11	Letter to Inspector In-charge, Loikera, Jharsuguda, requesting police protection for foundation works being hampered regularly at Loc. 31/2
16.6.11	Letter to Tahsildar, Kolabira, Jharsuguda, requesting him to convince the concerned persons to accept the stipulated compensation and give away the exorbitant amount demanded for resumption of construction work and the same is acknowledged by office of Tahasildar, KolabiraTahasila,Jharsuguda.
27.6.11	Letter to Collector and DC, Jharsuguda, for intervention and administrative support in view of problem faced during TL construction
16.7.11	Letter to Inspector In-charge, kolabira, Jharsuguda, to intervene in the matter of claim for higher compensation towards land by villagers. and the same is acknowledged by office of Inspector-in-charge, Kolabira Police station, Jharsuguda.
29.7.11	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to resolve the compensation issue which is hampering the progress of TL construction works and the same is acknowledged by office of Tahasildar,KirmiraTahasil,Jharsuguda.
1.8.11	Letter to SP, Jharsuguda, requesting him to resolve the persistent ROW issue at various location of TL and the same is acknowledged by the office of SP, Jharsuguda.
24.8.11	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to resolve the compensation issue which is hampering the progress of TL construction works
1.11.11	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting him to convince the villagers in view of resumption of construction work stalled due to their demands and related ROW issue and the same is acknowledged by office of Inspector-In-Charge,Kolabirara police station, Jharsuguda.
27.1.12	Letter to Collector and DC, Jharsuguda, regarding kind intervention as local administration failed to resolve the ROW issue completely and the same is acknowledged by office of District magistrate &Collector, Jharsuguda,Odisha.
17.2.12	Letter to Tahsildar, Kirmana, Jharsuguda, requesting him to resolve the compensation issue which is hampering the progress of TL construction works
2.5.12	Letter to Collector and DC, Jharsuguda, regarding deployment of police and other local administrators to resolve the ROW issue
28.5.12	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to resolve the persistent compensation issue in completion of TL being built for national interest
29.9.12	Letter to Tahsildar, Kolabirara, Jharsuguda, requesting him to resolve the persistent compensation issue in completion of TL being built for national interest and the same is acknowledged by office of Tahasildar,Kolabirara,Jharsuguda.
4.10.12	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to resolve the persistent compensation issue in completion of TL being built for national interest and the same is acknowledged by office of Tahasildar,Kirmira,Jharsuguda.
8.11.12	Letter to Inspector In-charge, Kirmira, Jharsuguda, intimating him of Collector's order and requesting him to expedite the matter to resolve the compensation issue and the same is acknowledged by office of Inspector-In-Charge, Kirmira police station, Jharsuguda.



15.11.12	Letter to Collector and DC, Jharsuguda, regarding deployment of police and other local administrators to resolve the ROW issue
12.12.12	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to resolve the persistent compensation issue in completion of TL being built for national interest
6.2.13	Letter to Tahsildar, Kolabira, Jharsuguda, requesting him to depute revenue official for identification of owner leading to dispute in tower foundation and compensation work
15.2.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, for convincing the identified land owner leading to dispute in tower foundation and compensation work
4.3.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of stringing works at Loc. 48/0 and 48/1
7.4.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL works by mob at Loc. 48B/0
15.4.13	Letter to Tahsildar, Kirmira, Jharsuguda, requesting him to resolve the compensation issue by convincing the land owners who are demanding higher compensation than approved by government and the same is acknowledged by office of Tahasildar, Kirmiratahasila, Jharsuguda.
21.4.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL excavation works by land owner at Loc. 43/1
23.4.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL excavation works by land owner at Loc. 43/0
24.4.13	Letter to Tahsildar, Kolabira, Jharsuguda, requesting him to resolve the compensation issue by convincing the land owners who are demanding higher compensation than approved by government.
29.4.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL excavation works by land owner at Loc. 43/4
8.5.13	Letter to Sub-Collector, Jharsuguda, requesting him to intervene in the compensation issue and provide necessary police protection in the meantime so that TL works could be resumed
19.10.13	Letter to SP, Jharsuguda, apprising him of the ROW and theft of material issue and requesting his kind assistance in the matter
11.11.13	Letter to Inspector In-charge, Loikera, Jharsuguda, requesting police action against forcible stoppage of TL excavation works by land owner at Loc. 30B/0
11.11.13	Letter to Collector and DC, Jharsuguda, regarding deployment of police and other local administrators to resolve the ROW issue at Loc. 29/0 and 30/0 for smooth execution of TL works
19.11.13	Letter to Collector and DC, Jharsuguda, requesting him to issue an order in accordance with Indian Telegraph Act 1885, which shall enable POWERGRID to resume work of TL works in view of continued ROW and obstruction by land owners and villagers and the same is acknowledged by the office of district magistrate & Collector, Jharsuguda, Odisha.
10.12.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL works by land owner at Loc. 39/0 and the



	same is acknowledged by office of Inspector-In-Charge,Kolabira police station,Jharsuguda.
13.12.13	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL works by land owner's unjustified demand for land compensation for tower erection at Loc. 40/4 and the same is acknowledged by office of Inspector-In-Charge, Kolabira police station, Jharsuguda.
7.2.14	Letter to Inspector In-charge, Loikera, Jharsuguda, requesting police action against forcible stoppage of TL excavation works by land owner at Loc. 31/0
18.2.14	Letter to Inspector In-charge, Kolabira, Jharsuguda, requesting police action against forcible stoppage of TL works by land owner demanding exorbitant amount of compensation at Loc. 42A/2
23.5.14	Letter to Collector and DC, Jharsuguda, requesting him to issue an order in accordance with Indian Telegraph Act 1885, which shall enable POWERGRID to resume work of TL stringing / construction in view of continued ROW and obstruction by land owners and villagers and the same is acknowledged by office of District magistrate &Collector,Jharsuguda, Odisha.
29.5.14	Letter from Tahasildar, Kolabira, to DC and Collector , Jharsuguda , asking for deployment of police protection during TL construction at behest of POWERGRID
09.6.14	Letter to DPMU (District Planning Monitoring Unit) Jharsuguda to SP, Jharsuguda, inviting his necessary action as per order of DC and Collector regarding ROW issue relating to compensation
21.6.14	Letter from Tahsildar, Kolabira, to DC and Collector , Jharsuguda , asking for deployment of police protection during TL construction at behest of POWERGRID
23.7.14	Letter to Collector and DC, Jharsuguda, regarding deployment of police and other local administrators to resolve the ROW issue at Loc. 42A/2 for smooth execution of TL works and acknowledged by office of District magistrate &Collector,Jharsuguda,Odisha.
13.2.15	Letter to Inspector In-charge, Laikera, Jharsuguda, requesting police action against forcible stoppage of TL stringing work by villagers and the same is acknowledged by office of Inpector-incharge, Laikera police station, Jharsuguda.
17.3.15	Letter to BDO, Kirmira, Jharsuguda, requesting him to depute the necessary officials to provide the assessment of development work demanded by villagers in lieu of passage of TL from respective villages and the same is acknowledged by office of block development officer,Kirmira,Jharsuguda.

III. Forest Clearance at Angul-Jharsuguda transmission line

- (i) The proposal for forest clearance for diversion of forest land for construction of 2 X 765kV S/C Angul (pooling station)-Jharsuguda (pooling station) transmission lines, was submitted on 18.7.2011 to Chief Conservator of Forests (CCF),



Forest Division and Nodal officer, Bhubaneswar. On his direction, the revised proposal was submitted on 1.2.2012 incorporating the queries/ comments of the CCF. The CCF, Bhubaneswar forwarded the proposal to the Divisional Forest Officer (DFO) of Angul forest division Forest division with a copy to Regional CCF, Rourkela/Sambalpur/ Angul circle on 29.3.2012, the certification regarding compliance of RFA was submitted by the concerned District Magistrate/Collector of Sundergarh (3.9.2012), Jharsuguda (26.10.2012), Sambalpur (25.10.2012 and 1.11.2012) and Angul (1.11.2012). The Regional CCF, Angul forwarded the proposal to CCF, Bhubaneswar on 27.3.2013 and Principal CCF, Odisha forwarded the proposal to Principal Secretary to Government, Forest and Environment department, Odisha on 20.5.2013. The Special Secretary to Government, Forest and Environment Department, Odisha forwarded the proposal to MOEF, Government of India on 12.6.2013.

- (ii) The Stage-I clearance was granted by MOEF, Government of India to Principal Secretary (Forests), Government of Odisha on 21.11.2013 and after necessary compliance, the Stage-II (Final) clearance was granted by MOEF, Government of India to Principal Secretary (Forests), Government of Odisha on 29.4.2014.
- (iii) The entire process of forest clearance took around 2 years and 9 months and delayed the completion of the transmission line.
- (iv) The chronology of the forest clearance for the 765kV S/C Angul-Jharsuguda line is as follows:-



	Particulars	Date
i	Forest proposal submitted to CCF, Nodal office of the PCCF Odisha, Bhubaneswar	18.7.11 and the same is acknowledged by office of CCF,
ii	CCF raised some queries and returned the proposal	9.9.11 and 29.9.11
iii	Office of CCF, Odisha addressed letter to Chief Manager(TLC),Jharsuguda with regard to proposal of diversion of 289.162 ha .of forest land.	29.9.2011
iiiv	Revised proposal submitted	1.2.12
v	Nodal officer forwarded proposal to DFO, Angul Forest Division with a copy to Regional CCF, Rourkela/ Sambalpur/Angul circle	29.3.12
vi	FRA Certificate issued by concerned District Magistrate/Collector	3.9.12, 26.10.12, 25.10.12 and 1.11.12, 1.11.12
vii	District office,jharsuguda addressed letter to Divisional Forest officer with regard to proposal for diversion of forest land HC 16.7788 for construction of 2X765 kV SC transmission lines from Angulpoling station to Jharsuguda Pooling station and the same copy forwarded to PGCIL.	3.10.2012
	The office of the collector& district magistrate, Samblapur addressed letter to the divisional forest officer, sambalpur with regard to diversion of forest land.	25.10.2012
viii	Odisha Space application centre addressed letter to GM,PGCIL, Angul with regard to issue of Geo-referenced maps of 765 kV S/C line-1 &Line-II transmission line corridor of Sundergarh forest division, Rairakhol forest division, Angul forest division. and Sambalpur(south) forest division	October and November 2012
ix	Regional CCF, Angul forwarded the proposal to CCF, Bhubaneswar	27.3.2013
x	The Principal CCF, Odisha forwarded the proposal to Principal Secretary to Government, Forest and Environment Department, Odisha	20.5.2013
xi	Special Secretary to Government, Forest and Environment Department, Odisha forwarded the proposal to MOEF, Government of India	12.6.2013
xii	Stage-I clearance granted by MOEF, Government of India to Principal Secretary (Forests), Government of Odisha	21.11.2013
xiii	Stage-II clearance (final) granted by MOEF, Government of India to Principal Secretary (Forests), Government of Odisha	29.4.2014
Supplementary documents		



O/o. the Divisional Forest Officer, Sundergarh addressed letter to Divisional Manager, Jharsuguda with regard to felling of 127 nos standing trees in the RoW of 2X765 IV SC and D/C tr.line from Angul poling station	22.7.2014
Tree cutting by Sundergarh Division	12.8.2014
Tree cutting by Angul Division	17.9.2014
Tree cutting by Sambalpur Division	15.10.2014
Tree cutting by Rairakhol Division	24.10.2014
Tree cutting by Athmallik Division	1.12.2014

(v)The petitioner has submitted that it took around forty months in obtaining forest and corresponding tree cutting clearances. Though the tree cutting clearance was obtained on 1.12.2014, there was delay due to ROW issue during the stringing and tree cutting activity and they were resolved after the repeated follow up with State Administration and intervention and stringent action by Police. Accordingly, the transmission line could be commissioned on 1.4.2015.

27. We have considered the submissions of the petitioner. The time over-run in commissioning of 765 kV S/C Angul-Sundergarh (line-II) and its bays at Angulend, (pertaining to Assets IA, IB, IV, V and VIII) is due to delay in land acquisition and severe RoW problems and delay in obtaining forest clearance. The land acquisition process was initiated 9 months before the date of IA and the petitioner has submitted documents to substantiate its claim. We have perused the documents. The process of land acquisition was completed on 26.3.2012 i.e. after a period of 18 months 9 days from the date of I.A.(17.9.2010). There was delay in handing over of the land by Government of Odisha. The petitioner has submitted vide affidavit dated 18.3.2016 that it had planned the possession of land to be completed by 3.3.2011. Hence, the time taken from Investment



Approval (17.9.2010) to 3.3.2011 shall not be condoned under delay due to land acquisition. The time taken from 4.3.2011 to 26.3.2012 (12 months 23 days) due to land acquisition for Asset- IA, IB, IV, V& VIII at Angul end is condoned.

28. The time over-run at Sundergarh end, pertaining to Asset II, III, VI and VII has been attributed to delay in land acquisition. The petitioner has submitted that land acquisition process was initiated 9 months before the IA and the petitioner has submitted the documents substantiating its claim. As per the documents submitted by the petitioner, the land acquisition at Sundergarh Pooling Stations was completed on 17.1.2013. i.e. after a period of 28 months from the date of IA. The reason for time over-run is due to delay in handing over the land by Government of Odisha at Sundergarh Pooling Station. The petitioner has submitted vide affidavit dated 18.3.2016 that it had planned the possession of land to be completed by 3.3.2011. Hence, the time taken from Investment Approval (17.9.2010) to 3.3.2011 shall not be condoned under delay due to land acquisition. The delay from 4.3.2011 to 17.1.2013 (22 months 14 days) due to land acquisition for Asset- II, III, VI& VII at Sundergarh end is condoned. 28. It is also observed that there was delay in obtaining forest clearance and delay in grant of tree felling orders and it has delayed the commissioning of Angul-Sundergarh line. The entire process of forest clearance took around 2 years and 9 months. As per the Forest (Conservation) Amendment Rules, 2004 notified by MoEF dated 3.2.2004, the timeline for forest approval after submission of proposal is 210 days by State Government and 90 days by Forest Advisory Committee of Central Government i.e. total 300 days. The process of forest approval should normally take 300 days, however in the instant case it



took more than 1000 days. The time taken for land acquisition, for obtaining forest clearance and the RoW issues run parallel. It is observed that the time over-run in case of instant assets is due to delay in land acquisition, RoW issues and delay in getting forest clearance. In spite of long delays in statutory approvals and land acquisition, the petitioner was able to reduce the period of time over-run. We are of the view that the delay due to statutory approvals and land acquisition is beyond the control of the petitioner and cannot be attributed to the petitioner and hence the time over-run in case of the instant assets is condoned. Further, the petitioner has submitted that delay in Asset – IA, IB, IV, V and VIII at Angul substation is due to delay in commissioning of Angul-Sundergarh line since they had to be commissioned matching with line as detailed below.

29. For Asset II- the total delay is 19 Months 2 days. The time period of 22 months 14 days has been on account of land acquisition and is considered beyond the control of petitioner. Hence, the entire delay of 19 Months 2 days is condoned.

30. Asset-III, VI, VII & IX are associated with Sundergarh-Dharamjayagarh line which was commissioned on 31.7.2016 and whose delay has been condoned vide Petition No 244/TT/2014. Hence delay of Assets III, VI & IX which have been commissioned matching with commissioning of Sundergarh-Dharamjayagarh line i.e 31.7.2014 is condoned fully.

31. For Asset VII the delay of 22 months 14 days due to land acquisition has been considered beyond the control of the petitioner as at para 26 above. Hence the entire



delay of 17 Months 27 days is condoned. Hence the delay in all assets is considered as beyond the control of petitioner and the time overrun is condoned.

Interest During Construction (IDC)

32. The petitioner has claimed IDC for the instant assets and has submitted Auditor Certificates dated 13.7.2016/14.7.2016 and 9.3.2016 in support of its claim. The petitioner has also submitted a statement showing IDC discharged upto COD, which consist of loan wise details like amount of loan, date of drawal, interest rate considered and date of payment of annual interest. However, the petitioner has not submitted the loan wise computation of liability discharged after COD. The petitioner has submitted the exchange rate as on COD of the foreign currency loans. But has not submitted the exchange rate applicable at the time of drawl of foreign loans and at the time of due dates of interest payment. The petitioner in IDC statement has mentioned a proposed loan for Asset V whereas there is no such loan mentioned in Form 9C and Form 12B. Hence, in case of Asset V, the proposed loan has been considered as nil for the purpose of IDC determination.

33. Based on the above, the IDC on cash basis is computed. For this purpose the drawl date submitted by the petitioner was assumed as the date of loan fund infusion. The amount of loan mentioned in Form 12B is considered as loan amount. The rate provided by the petitioner has been considered. Accordingly, the IDC on cash basis as on COD has been determined. The undischarged IDC as on COD as determined has been reduced from the capital cost as on COD. Since the loan wise computation of discharge of IDC is not submitted by the petitioner, the same was not considered as additional capital



expenditure. However, the petitioner is directed to submit the loan wise computation of discharge of IDC after COD at the time of true up and the actual discharge of IDC will be allowed as additional capital expenditure at the time of true-up.

Treatment of IEDC

34. The petitioner, vide Auditor Certificates dated 13.7.2016/14.7.2016 and 9.3.2016, has claimed Incidental Expenditure During Construction (IEDC). The IEDC claimed are within the percentage on Hard Cost as indicated in the Abstract Cost Estimate. This line of action was approved by the Commission vide order dated 20.5.2015 in Petition No. 109/TT/2013.

Initial Spares

35. The petitioner has claimed the following initial spares corresponding to Transmission Lines and Sub-Stations: -

Asset	(₹in lakh)	
	Transmission Lines	Sub-station
Asset-1A	475.21	195.76
Asset-1B	0.00	0.00
Asset-II	0.00	216.44
Asset-III	0.00	184.66
Asset-IV	0.00	0.00
Asset-V	0.00	0.00
Asset-VI	0.00	119.58
Asset-VII	0.00	119.58
Asset-VIII	0.00	0.00
Asset-IX	0.00	1.75

36. The initial spares claimed by the petitioner are within the limit prescribed in Regulation 13 of the 2014 Tariff Regulations for all assets except Asset 1A. In case of Asset 1A, the initial spare claimed towards sub-station exceeds the ceiling limit prescribed. Excess initial spares amounts to ₹8.66 lakh in case of sub-station is disallowed as detailed



below. Accordingly, the initial spares allowed for Assets II, III, VI, VII and IX are ₹216.44 lakh, ₹184.66 lakh, ₹119.58 lakh, ₹119.58 lakh and ₹1.75 lakh respectively. In case of Asset IA, ₹475.21 lakh and ₹187.09 lakh was allowed for the transmission line and sub-station portions respectively. The initial spares claimed by the petitioner in case of all other assets is allowed and considered for arriving at capital cost of the instant assets.

(₹ in lakh)

Particulars	Total capital cost	Initial spares claimed	Ceiling Limit as per Regulation, 2014	Initial Spares worked out	Excess initial spares disallowed
Asset1A (Sub-station)	4677.39	195.76	4.00%	187.10	8.66

Capital cost allowed as on COD

37. The details of the capital cost as on COD allowed for the purpose of computation of Transmission Tariff in the present petition, after scrutiny of IEDC and IDC and Initial Spares are shown below:-

(₹ in lakh)

Assets	Capital Cost Claimed as on COD	Undischarged liabilities (i.e. IDC)	Disallowed IDC	Disallowed IEDC	Excess Initial Spares	Capital cost as on COD on CASH basis considered for tariff. (f)=(a)-(b)-(c)-(d)-(e)
	(a)	(b)	(c)	(d)	(e)	
Asset-1A	71925.80	1039.10	0.00	0.00	8.66	70,878.03
Asset-1B	2970.36	27.85	0.00	0.00	0.00	2,942.51
Asset-II	3954.63	0.00	0.00	0.00	0.00	3,954.63
Asset-III	3250.23	0.00	0.00	0.00	0.00	3,250.23
Asset-IV	4345.73	143.68	5.47	0.00	0.00	4,196.58
Asset-V	3653.21	135.71	0.00	0.00	0.00	3,517.50
Asset-VI	2131.99	0.00	0.00	0.00	0.00	2,131.99
Asset-VII	2388.12	42.73	0.00	0.00	0.00	2,345.39
Asset-VIII	3155.37	100.80	0.00	0.00	0.00	3,054.57
Asset-IX	2856.96	0.00	0.00	0.00	0.00	2,856.96
Total	100632.40	1489.87	5.47	0.00	8.66	99128.39



Additional Capitalization Expenditure

38. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“ (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 recognised to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law or compliance of any existing law.”

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.

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

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

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

40. The cut-off date of Assets IA, IB, II, III, IV, V, VI, VII, VIII and IX are 31.3.2018, 31.3.2018, 31.3.2017, 31.3.2017, 31.3.2018, 31.3.2018, 31.3.2017, 31.3.2017, 31.3.2018 and 31.3.2017 respectively.



41. The petitioner has claimed additional capital expenditure as shown in para22 and has submitted Auditor Certificates dated 13.7.2016/14.7.2016 and 9.3.2016 in support of its claim. As stated above, the undischarged IDC has been not considered as additional capital expenditure and the same will be considered at the time of true up based on submission of required information by the petitioner.

42. Accordingly, the additional capital expenditure considered for the purpose of tariff computation are summarized below:-

(₹ in lakh)

Assets	Additional Capital Expenditure (actual/proposed)		
	2014-15	2015-16	2016-17
Asset-1A	0.00	2938.07	2200.00
Asset-1B	0.00	209.58	90.02
Asset-II	300.42	975.34	2000.00
Asset-III	221.80	917.14	1500.00
Asset-IV	0.00	881.58	1800.00
Asset-V	0.00	773.50	1338.00
Asset-VI	674.62	367.93	355.92
Asset-VII	500.52	223.84	500.00
Asset-VIII	0.00	443.13	800.00
Asset-IX	241.43	410.30	584.44
Total	1938.79	8140.41	11168.38

43. Based on the above, the capital cost as on COD and the additional capital expenditure considered for tariff computation for all the assets are summarised as below:-

(₹ in lakh)

Particulars	Capital Cost allowed as on COD	Additional Capital Expenditure					Estimated completion cost
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1A	70,878.03	0.00	2938.07	2200.00	0.00	0.00	76016.10
Asset-1B	2,942.51	0.00	209.58	90.02	0.00	0.00	3242.11
Asset-II	3,954.63	300.42	975.34	2000.00	0.00	0.00	7230.39



Asset-III	3,250.23	221.80	917.14	1500.00	0.00	0.00	5889.17
Asset-IV	4,196.58	0.00	881.58	1800.00	0.00	0.00	6878.16
Asset-V	3,517.50	0.00	773.50	1338.00	0.00	0.00	5629.00
Asset-VI	2,131.99	674.62	367.93	355.92	0.00	0.00	3530.46
Asset-VII	2,345.39	500.52	223.84	500.00	0.00	0.00	3569.75
Asset-VIII	3,054.57	0.00	443.13	800.00	0.00	0.00	4297.70
Asset-IX	2,856.96	241.43	410.30	584.44	0.00	0.00	4093.13
Total	99128.39	1938.79	8140.41	11168.38	0.00	0.00	120375.97

Debt- Equity Ratio

44. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

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, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as maybe admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

45. The capital cost on the dates of commercial operation arrived at as above and additional capitalization allowed have been considered in the normative debt-equity ratio of



70:30. The details of debt-equity as on dates of commercial operation and 31.3.2019 considered on normative basis are as under:-

(₹ in lakh)

Asset	Debt-Equity on COD					
	Debt	Equity	Total	Debt (in %)	Equity (in %)	Total (in %)
Asset-1A	49614.62	21263.41	70878.03	70.00	30.00	100.00
Asset-1B	2059.76	882.75	2942.51	70.00	30.00	100.00
Asset-II	2768.24	1186.39	3954.63	70.00	30.00	100.00
Asset-III	2275.16	975.07	3250.23	70.00	30.00	100.00
Asset-IV	2937.61	1258.97	4196.58	70.00	30.00	100.00
Asset-V	2462.25	1055.25	3517.50	70.00	30.00	100.00
Asset-VI	1492.39	639.60	2131.99	70.00	30.00	100.00
Asset-VII	1641.77	703.61	2345.39	70.00	30.00	100.00
Asset-VIII	2138.20	916.37	3054.57	70.00	30.00	100.00
Asset-IX	1999.88	857.08	2856.96	70.00	30.00	100.00
Total	69389.89	29738.50	99128.39	-	-	-

46. The normative Debt-equity ratio 70:30 has been considered for the additional capital expenditure allowed from COD to 31-03-2019, the details whereof are as under :-

(₹in lakh)

Asset	Debt-Equity on 31.3.2019					
	Debt	Equity	Total	Debt (in %)	Equity (in %)	Total (in %)
Asset-1A	53211.27	22804.83	76016.10	70.00	30.00	100.00
Asset-1B	2269.48	972.63	3242.11	70.00	30.00	100.00
Asset-II	5061.27	2169.12	7230.39	70.00	30.00	100.00
Asset-III	4122.42	1766.75	5889.17	70.00	30.00	100.00
Asset-IV	4814.71	2063.45	6878.16	70.00	30.00	100.00
Asset-V	3940.30	1688.70	5629.00	70.00	30.00	100.00
Asset-VI	2471.32	1059.14	3530.46	70.00	30.00	100.00
Asset-VII	2498.83	1070.92	3569.75	70.00	30.00	100.00
Asset-VIII	3008.39	1289.31	4297.70	70.00	30.00	100.00
Asset-IX	2865.20	1227.93	4093.13	70.00	30.00	100.00
Total	84263.20	36112.78	120375.97	-	-	-



Return on Equity:-

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

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

- (i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:
- (ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- (iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- (iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this



purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

“(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.”

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

49. 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.



Rate of Return on Equity (Pre Tax)		19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	0.00	177.80	188.08	190.73	190.73
Particulars	Asset-II				
Opening Normative Equity	1186.39	1276.52	1569.12	2169.12	2169.12
Addition due to Additional Capitalization	90.13	292.60	600.00	0.00	0.00
Closing Normative Equity	1276.52	1569.12	2169.12	2169.12	2169.12
Average Equity	1231.45	1422.82	1869.12	2169.12	2169.12
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	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)	98.58	279.01	366.53	425.36	425.36
Particulars	Asset-III				
Opening Normative Equity	975.07	1041.61	1316.75	1766.75	1766.75
Addition due to Additional Capitalization	66.54	275.14	450.00	0.00	0.00
Closing Normative Equity	1041.61	1316.75	1766.75	1766.75	1766.75
Average Equity	1008.34	1179.18	1541.75	1766.75	1766.75
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	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)	131.64	231.24	302.34	346.46	346.46
Particulars	Asset-IV				
Opening Normative Equity	0.00	1258.97	1523.45	2063.45	2063.45
Addition due to Additional Capitalization	0.00	264.47	540.00	0.00	0.00
Closing Normative Equity	0.00	1523.45	2063.45	2063.45	2063.45
Average Equity	0.00	1391.21	1793.45	2063.45	2063.45
Return on Equity (Base Rate)	0.00	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	0.00	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)	0.00	270.58	351.70	404.64	404.64
Particulars	Asset-V				
Opening Normative Equity	0.00	1055.25	1287.30	1688.70	1688.70
Addition due to Additional Capitalization	0.00	232.05	401.40	0.00	0.00
Closing Normative Equity	0.00	1287.30	1688.70	1688.70	1688.70



Average Equity	0.00	1171.28	1488.00	1688.70	1688.70
Return on Equity (Base Rate)	0.00	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	0.00	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)	0.00	208.98	291.80	331.15	331.15
Particulars	Asset-VI				
Opening Normative Equity	639.60	841.98	952.36	1059.14	1059.14
Addition due to Additional Capitalization	202.39	110.38	106.78	0.00	0.00
Closing Normative Equity	841.98	952.36	1059.14	1059.14	1059.14
Average Equity	740.79	897.17	1005.75	1059.14	1059.14
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	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)	97.11	175.94	197.23	207.70	207.70
Particulars	Asset-VII				
Opening Normative Equity	703.61	853.77	920.92	1070.92	1070.92
Addition due to Additional Capitalization	150.16	67.15	150.00	0.00	0.00
Closing Normative Equity	853.77	920.92	1070.92	1070.92	1070.92
Average Equity	778.69	887.34	995.92	1070.92	1070.92
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	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)	77.40	174.01	195.30	210.01	210.01
Particulars	Asset-VIII				
Opening Normative Equity	0.00	916.37	1049.31	1289.31	1289.31
Addition due to Additional Capitalization	0.00	132.94	240.00	0.00	0.00
Closing Normative Equity	0.00	1049.31	1289.31	1289.31	1289.31
Average Equity	0.00	982.84	1169.31	1289.31	1289.31
Return on Equity (Base Rate)	0.00	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	0.00	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)	0.00	191.16	229.30	252.83	252.83



Particulars	Asset-IX				
Opening Normative Equity	857.08	929.51	1052.60	1227.93	1227.93
Addition due to Additional Capitalization	72.43	123.09	175.33	0.00	0.00
Closing Normative Equity	929.51	1052.60	1227.93	1227.93	1227.93
Average Equity	893.29	991.05	1140.27	1227.93	1227.93
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	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)	117.10	194.35	223.61	240.80	240.80

Interest on loan

51. Regulation 26 of the 2014 Tariff Regulations with regard to Interest on Loan specifies as under:-

“(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(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 depreciation allowed for the year or part of the year.

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.”

52. The petitioner’s entitlement to interest on loan has been calculated as per Regulation 26 of the 2014 Tariff Regulations on the basis of following:-

(a) Gross amount of loan, repayment of instalments and rate of interest on actual loan have been considered as per the petition;

(b) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year;

(c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan; and

(d) The petitioner has availed loan viz. SBI 10000 for some of the assets. However, the repayment schedule of the loan has not been submitted. The petitioner is directed to submit the repayment schedule for the loan SBI 10000 at the time of filing the true up petition.

53. The petitioner has submitted that the interest on loan has been considered on the basis of rate prevailing as on respective CODs and the change in interest due to floating rate of interest applicable, if any, for the project needs to be claimed/ adjusted over the tariff block 2014-19. The interest on loan has been calculated on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up.



54. Detailed calculations in support of interest on loan have been calculated as given at Annexure I to X of this order.

55. The details of interest on loan calculated are as under:-

(₹ in lakh)

Particulars	Asset-1A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	0.00	49614.62	51671.27	53211.27	53211.27
Cumulative Repayment upto Previous Year	0.00	0.00	3788.61	7744.18	11757.84
Net Loan-Opening	0.00	49614.62	47882.66	45467.09	41453.44
Addition due to Additional Capitalisation	0.00	2056.65	1540.00	0.00	0.00
Repayment during the year	0.00	3788.61	3955.57	4013.65	4013.65
Net Loan-Closing	0.00	47882.66	45467.09	41453.44	37439.79
Average Loan	0.00	48748.64	46674.87	43460.26	39446.61
Weighted Average Rate of Interest on Loan		9.08%	9.09%	9.09%	9.11%
Interest on Loan	0.00	4389.54	4244.18	3952.07	3595.48
Particulars	Asset-1B				
Gross Normative Loan	0.00	2059.76	2206.47	2269.48	2269.48
Cumulative Repayment upto Previous Year	0.00	0.00	159.58	328.39	499.57
Net Loan-Opening	0.00	2059.76	2046.89	1941.09	1769.91
Addition due to Additional Capitalisation	0.00	146.71	63.01	0.00	0.00
Repayment during the year	0.00	159.58	168.81	171.18	171.18
Net Loan-Closing	0.00	2046.89	1941.09	1769.91	1598.73
Average Loan	0.00	2053.32	1993.99	1855.50	1684.32
Weighted Average Rate of Interest on Loan		8.58%	8.63%	8.63%	8.65%
Interest on Loan	0.00	174.66	172.03	160.16	145.61
Particulars	Asset-II				
Gross Normative Loan	2768.24	2978.54	3661.27	5061.27	5061.27
Cumulative Repayment upto Previous Year	0.00	88.48	338.89	667.86	1049.62
Net Loan-Opening	2768.24	2890.06	3322.38	4393.42	4011.65
Addition due to Additional	210.29	682.74	1400.00	0.00	0.00



Capitalisation					
Repayment during the year	88.48	250.42	328.96	381.76	381.76
Net Loan-Closing	2890.06	3322.38	4393.42	4011.65	3629.89
Average Loan	2829.15	3106.22	3857.90	4202.53	3820.77
Weighted Average Rate of Interest on Loan	8.58%	8.56%	8.55%	8.55%	8.54%
Interest on Loan	99.08	265.92	330.01	359.38	326.36
Particulars	Asset-III				
Gross Normative Loan	2275.16	2430.42	3072.42	4122.42	4122.42
Cumulative Repayment upto Previous Year	0.00	118.15	325.69	597.03	907.98
Net Loan-Opening	2275.16	2312.27	2746.73	3525.39	3214.44
Addition due to Additional Capitalisation	155.26	642.00	1050.00	0.00	0.00
Repayment during the year	118.15	207.54	271.35	310.95	310.95
Net Loan-Closing	2312.27	2746.73	3525.39	3214.44	2903.49
Average Loan	2293.72	2529.50	3136.06	3369.91	3058.96
Weighted Average Rate of Interest on Loan	8.63%	8.61%	8.61%	8.61%	8.60%
Interest on Loan	131.80	217.90	269.99	290.05	263.06
Particulars	Asset-IV				
Gross Normative Loan	0.00	2937.61	3554.71	4814.71	4814.71
Cumulative Repayment upto Previous Year	0.00	0.00	242.85	558.49	921.66
Net Loan-Opening	0.00	2937.61	3311.87	4256.22	3893.05
Addition due to Additional Capitalisation	0.00	617.11	1260.00	0.00	0.00
Repayment during the year	0.00	242.85	315.65	363.17	363.17
Net Loan-Closing	0.00	3311.87	4256.22	3893.05	3529.88
Average Loan	0.00	3124.74	3784.04	4074.63	3711.47
Weighted Average Rate of Interest on Loan		8.90%	8.90%	8.90%	8.94%
Interest on Loan	0.00	275.85	336.78	362.84	331.79
Particulars	Asset-V				
Gross Normative Loan	0.00	2462.25	3003.70	3940.30	3940.30
Cumulative Repayment upto Previous Year	0.00	0.00	187.56	449.45	746.66
Net Loan-Opening	0.00	2462.25	2816.14	3490.85	3193.64
Addition due to Additional Capitalisation	0.00	541.45	936.60	0.00	0.00
Repayment during the year	0.00	187.56	261.89	297.21	297.21
Net Loan-Closing	0.00	2816.14	3490.85	3193.64	2896.43



Average Loan	0.00	2639.20	3153.50	3342.25	3045.04
Weighted Average Rate of Interest on Loan		8.63%	8.63%	8.63%	8.62%
Interest on Loan	0.00	207.32	272.16	288.35	262.51
Particulars	Asset-VI				
Gross Normative Loan	1492.39	1964.63	2222.18	2471.32	2471.32
Cumulative Repayment upto Previous Year	0.00	87.16	245.06	422.07	608.48
Net Loan-Opening	1492.39	1877.47	1977.12	2049.25	1862.84
Addition due to Additional Capitalisation	472.23	257.55	249.14	0.00	0.00
Repayment during the year	87.16	157.90	177.01	186.41	186.41
Net Loan-Closing	1877.47	1977.12	2049.25	1862.84	1676.43
Average Loan	1684.93	1927.29	2013.18	1956.05	1769.64
Weighted Average Rate of Interest on Loan	8.83%	8.76%	8.75%	8.74%	8.73%
Interest on Loan	99.49	168.74	176.18	171.00	154.50
Particulars	Asset-VII				
Gross Normative Loan	1641.77	1992.14	2148.83	2498.83	2498.83
Cumulative Repayment upto Previous Year	0.00	69.46	225.64	400.92	589.40
Net Loan-Opening	1641.77	1922.67	1923.19	2097.91	1909.42
Addition due to Additional Capitalisation	350.36	156.69	350.00	0.00	0.00
Repayment during the year	69.46	156.17	175.28	188.48	188.48
Net Loan-Closing	1922.67	1923.19	2097.91	1909.42	1720.94
Average Loan	1782.22	1922.93	2010.55	2003.67	1815.18
Weighted Average Rate of Interest on Loan	8.66%	8.63%	8.62%	8.61%	8.60%
Interest on Loan	78.20	165.99	173.37	172.54	156.14
Particulars	Asset-VIII				
Gross Normative Loan	0.00	2138.20	2448.39	3008.39	3008.39
Cumulative Repayment upto Previous Year	0.00	0.00	171.56	377.36	604.28
Net Loan-Opening	0.00	2138.20	2276.83	2631.03	2404.11
Addition due to Additional Capitalisation	0.00	310.19	560.00	0.00	0.00
Repayment during the year	0.00	171.56	205.80	226.92	226.92
Net Loan-Closing	0.00	2276.83	2631.03	2404.11	2177.19
Average Loan	0.00	2207.51	2453.93	2517.57	2290.65
Weighted Average Rate of Interest on Loan		9.01%	9.00%	9.00%	9.01%
Interest on Loan	0.00	197.24	220.95	226.53	206.50



Particulars	Asset-IX				
Gross Normative Loan	1999.88	2168.88	2456.09	2865.20	2865.20
Cumulative Repayment upto Previous Year	0.00	105.10	279.53	480.22	696.33
Net Loan-Opening	1999.88	2063.78	2176.56	2384.98	2168.87
Addition due to Additional Capitalisation	169.00	287.21	409.11	0.00	0.00
Repayment during the year	105.10	174.43	200.69	216.12	216.12
Net Loan-Closing	2063.78	2176.56	2384.98	2168.87	1952.75
Average Loan	2031.83	2120.17	2280.77	2276.92	2060.81
Weighted Average Rate of Interest on Loan	8.33%	8.33%	8.32%	8.31%	8.31%
Interest on Loan	113.10	176.67	189.76	189.25	171.19

Depreciation

56. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:-

"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

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:



Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station or the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.”

57. The depreciation has been worked out in accordance with Regulation 27 extracted above. All the assets in the instant petition will complete 12 years beyond 2018-19 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-II. Accordingly, depreciation has been worked out on the basis of capital expenditure as on COD and additional capitalization incurred/ projected to be incurred thereafter, wherein depreciation for the first year has been calculated on pro-rata basis for the year/ part of year.

58. The details of the depreciation worked out are as under :-



(₹ in lakh)

Particulars	Asset-1A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	0.00	70878.03	73816.10	76016.10	76016.10
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	2938.07	2200.00	0.00	0.00
Closing Gross Block	0.00	73816.10	76016.10	76016.10	76016.10
Average Gross Block	0.00	72347.07	74916.10	76016.10	76016.10
Rate of Depreciation	0.00	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	0.00	65112.36	67424.49	68414.49	68414.49
Remaining Depreciable Value	0.00	65112.36	63635.88	60670.31	56656.66
Depreciation	0.00	3788.61	3955.57	4013.65	4013.65
Cumulative Depreciation	0.00	3788.61	7744.18	11757.84	15771.49
Particulars	Asset-1B				
Opening Gross block	0.00	2942.51	3152.09	3242.11	3242.11
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	209.58	90.02	0.00	0.00
Closing Gross Block	0.00	3152.09	3242.11	3242.11	3242.11
Average Gross Block	0.00	3047.30	3197.10	3242.11	3242.11
Rate of Depreciation	0.00	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	0.00	2742.57	2877.39	2917.90	2917.90
Remaining Depreciable Value	0.00	2742.57	2717.81	2589.51	2418.33
Depreciation	0.00	159.58	168.81	171.18	171.18
Cumulative Depreciation	0.00	159.58	328.39	499.57	670.75
Particulars	Asset-II				
Opening Gross block	3954.63	4255.05	5230.39	7230.39	7230.39
Addition during 2014-19 due to Projected Additional Capitalisation	300.42	975.34	2000.00	0.00	0.00
Closing Gross Block	4255.05	5230.39	7230.39	7230.39	7230.39
Average Gross Block	4104.84	4742.72	6230.39	7230.39	7230.39
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	3694.36	4268.45	5607.35	6507.35	6507.35
Remaining Depreciable Value	3694.36	4179.97	5268.46	5839.50	5457.73
Depreciation	88.48	250.42	328.96	381.76	381.76
Cumulative Depreciation	88.48	338.89	667.86	1049.62	1431.39
Particulars	Asset-III				
Opening Gross block	3250.23	3472.03	4389.17	5889.17	5889.17
Addition during 2014-19 due to Projected Additional Capitalisation	221.80	917.14	1500.00	0.00	0.00
Closing Gross Block	3472.03	4389.17	5889.17	5889.17	5889.17
Average Gross Block	3361.13	3930.60	5139.17	5889.17	5889.17
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	3025.02	3537.54	4625.25	5300.25	5300.25



Remaining Depreciable Value	3025.02	3419.39	4299.57	4703.22	4392.27
Depreciation	118.15	207.54	271.35	310.95	310.95
Cumulative Depreciation	118.15	325.69	597.03	907.98	1218.93
Particulars	Asset-IV				
Opening Gross block	0.00	4196.58	5078.16	6878.16	6878.16
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	881.58	1800.00	0.00	0.00
Closing Gross Block	0.00	5078.16	6878.16	6878.16	6878.16
Average Gross Block	0.00	4637.37	5978.16	6878.16	6878.16
Rate of Depreciation	0.00	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	0.00	4173.63	5380.34	6190.34	6190.34
Remaining Depreciable Value	0.00	4173.63	5137.50	5631.85	5268.68
Depreciation	0.00	242.85	315.65	363.17	363.17
Cumulative Depreciation	0.00	242.85	558.49	921.66	1284.83
Particulars	Asset-V				
Opening Gross block	0.00	3517.50	4291.00	5629.00	5629.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	773.50	1338.00	0.00	0.00
Closing Gross Block	0.00	4291.00	5629.00	5629.00	5629.00
Average Gross Block	0.00	3904.25	4960.00	5629.00	5629.00
Rate of Depreciation	0.00	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	0.00	3513.83	4464.00	5066.10	5066.10
Remaining Depreciable Value	0.00	3513.83	4276.44	4616.65	4319.44
Depreciation	0.00	187.56	261.89	297.21	297.21
Cumulative Depreciation	0.00	187.56	449.45	746.66	1043.87
Particulars	Asset-VI				
Opening Gross block	2131.99	2806.61	3174.54	3530.46	3530.46
Addition during 2014-19 due to Projected Additional Capitalisation	674.62	367.93	355.92	0.00	0.00
Closing Gross Block	2806.61	3174.54	3530.46	3530.46	3530.46
Average Gross Block	2469.30	2990.58	3352.50	3530.46	3530.46
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	2222.37	2691.52	3017.25	3177.41	3177.41
Remaining Depreciable Value	2222.37	2604.36	2772.19	2755.34	2568.93
Depreciation	87.16	157.90	177.01	186.41	186.41
Cumulative Depreciation	87.16	245.06	422.07	608.48	794.89
Particulars	Asset-VII				
Opening Gross block	2345.39	2845.91	3069.75	3569.75	3569.75
Addition during 2014-19 due to Projected Additional Capitalisation	500.52	223.84	500.00	0.00	0.00
Closing Gross Block	2845.91	3069.75	3569.75	3569.75	3569.75
Average Gross Block	2595.65	2957.83	3319.75	3569.75	3569.75
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	2336.08	2662.04	2987.77	3212.77	3212.77



Remaining Depreciable Value	2336.08	2592.58	2762.13	2811.85	2623.37
Depreciation	69.46	156.17	175.28	188.48	188.48
Cumulative Depreciation	69.46	225.64	400.92	589.40	777.88
Particulars	Asset-VIII				
Opening Gross block	0.00	3054.57	3497.70	4297.70	4297.70
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	443.13	800.00	0.00	0.00
Closing Gross Block	0.00	3497.70	4297.70	4297.70	4297.70
Average Gross Block	0.00	3276.14	3897.70	4297.70	4297.70
Rate of Depreciation	0.00	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	0.00	2948.52	3507.93	3867.93	3867.93
Remaining Depreciable Value	0.00	2948.52	3336.37	3490.57	3263.65
Depreciation	0.00	171.56	205.80	226.92	226.92
Cumulative Depreciation	0.00	171.56	377.36	604.28	831.20
Particulars	Asset-IX				
Opening Gross block	2856.96	3098.39	3508.69	4093.13	4093.13
Addition during 2014-19 due to Projected Additional Capitalisation	241.43	410.30	584.44	0.00	0.00
Closing Gross Block	3098.39	3508.69	4093.13	4093.13	4093.13
Average Gross Block	2977.68	3303.54	3800.91	4093.13	4093.13
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	2679.91	2973.19	3420.82	3683.82	3683.82
Remaining Depreciable Value	2679.91	2868.08	3141.29	3203.60	2987.48
Depreciation	105.10	174.43	200.69	216.12	216.12
Cumulative Depreciation	105.10	279.53	480.22	696.33	912.45

Operation and Maintenance Expenses (O&M Expenses)

59. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system based on the type of sub-station and the transmission line. The norms specified for the assets covered in the instant petition are as follows:-

Element	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
765 kV bay	84.42	87.22	90.12	93.11	96.20
400 kV bay	60.30	62.30	64.37	66.51	68.71
Single Circuit (Bundled Conductor with four sub-conductors)	0.606	0.627	0.647	0.669	0.691
Double Circuit (Bundled Conductor with four or more sub-conductors)	1.062	1.097	1.133	1.171	1.210



60. The O&M Expenses claimed by the petitioner, vide affidavit dated 18.3.2016 and 20.7.2016, are as under:-

(₹ in lakh)

Srl. No	Asset	O&M Expenses claimed by the petitioner				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	Asset-IA	0	293.56	305.66	315.94	326.4
2	Asset- IB	34.94	87.22	90.12	93.11	96.2
3	Asset-II	59.9	149.52	154.49	159.62	164.91
4	Asset-III	96.87	149.52	154.49	159.62	164.91
5	Asset-IV	0	149.52	154.49	159.62	164.91
6	Asset-V	0	135.85	154.49	159.62	164.91
7	Asset-VI	56.51	87.22	90.12	93.11	96.20
8	Asset-VII	43.15	87.22	90.12	93.11	96.2
9	Asset-VIII	0	87.22	90.12	93.11	96.2
10	Asset-IX	113.01	174.44	180.24	186.22	192.40

61. The O&M Expenses claimed by the petitioner for instant assets have been restricted in accordance with the norms specified in 2014 Tariff Regulations. The allowable O&M Expenses for the purpose of tariff are as under:-

(₹ in lakh)

Element	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IA (COD: 4.4.2015)					
1 No.s 765 kV bays	0	86.34	90.12	93.11	96.20
196.08 km 765 kV S/C Tr. Line	0	121.71	126.86	131.17	135.49
75.27 km 765 kV D/C Tr. Line	0	85.00	88.67	91.6	94.70
Total	0	293.05	305.65	315.93	326.39
Asset-IB (COD: 4.4.2015)					
1 Nos. 765 kV bays	0	86.34	90.12	93.11	96.20
Total	0	86.34	90.12	93.11	96.20
Asset-II (COD: 3.11.2014)					
1 Nos. 765 kV bays	34.23	87.22	90.12	93.11	96.20
1 Nos. 400 kV bays	24.42	62.30	64.37	66.51	68.7
Total	58.65	149.52	154.49	159.62	164.9
Asset-III (COD: 1.8.2014)					
1 Nos. 765 kV bays	55.97	87.22	90.12	93.11	96.20
1 Nos. 400 kV bays	39.97	62.30	64.37	66.51	68.7
Total	95.94	149.52	154.49	159.62	164.9



Asset-IV (COD: 4.4.2015)					
1 Nos. 765 kV bays	0	87.22	90.12	93.11	96.20
1 Nos. 400 kV bays	0	62.30	64.37	66.51	68.7
Total	0	149.52	154.49	159.62	164.9
Asset-V (COD: 4.5.2015)					
1 Nos. 765 kV bays	0	79.33	90.12	93.11	96.20
1 Nos. 400 kV bays	0	56.66	64.37	66.51	68.7
Total	0	135.99	154.49	159.62	164.9
Asset-VI (COD: 31.7.2014)					
1 Nos. 765 kV bays	56.20	87.22	90.12	93.11	96.20
Total	56.20	87.22	90.12	93.11	96.20
Asset-VII (COD: 28.9.2014)					
1 Nos. 765 kV bays	42.55	87.22	90.12	93.11	96.20
Total	42.55	87.22	90.12	93.11	96.20
Asset-VIII (COD: 4.4.2015)					
1 Nos. 765 kV bays	0	87.22	90.12	93.11	96.20
Total	0	87.22	90.12	93.11	96.20
Asset-IX (COD: 31.7.2014)					
2 Nos. 765 kV bays	112.27	174.44	180.24	186.22	192.4
Total	112.27	174.44	180.24	186.22	192.4

62. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 had been arrived at 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 is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

63. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.



Interest on working capital

64. Clause 1 (c) and 3 of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff

Regulations specify as follows:-

“28. Interest on Working Capital: (1) The working capital shall cover:-

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

(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”

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later”

“(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;”

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

(₹ in lakh)

Particulars	Asset-1A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.00	43.96	45.85	47.39	48.96
O and M expenses	0.00	24.42	25.47	26.33	27.20
Receivables	0.00	2165.26	2203.30	2176.24	2117.28
Total	0.00	2,233.64	2,274.62	2,249.95	2,193.43
Interest	0.00	299.07	307.07	303.74	296.11
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%



Particulars	Asset-1B				
Maintenance Spares	0.00	12.95	13.52	13.97	14.43
O and M expenses	0.00	7.20	7.51	7.76	8.02
Receivables	0.00	102.47	106.03	105.39	103.45
Total	0.00	122.61	127.06	127.12	125.90
Interest	0.00	16.42	17.15	17.16	17.00
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-II				
Maintenance Spares	21.55	22.43	23.17	23.94	24.74
O and M expenses	11.97	12.46	12.87	13.30	13.74
Receivables	144.78	161.91	202.02	226.97	222.27
Total	178.30	196.79	238.07	264.21	260.75
Interest	9.83	26.57	32.14	35.67	35.20
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-III				
Maintenance Spares	21.62	22.43	23.17	23.94	24.74
O and M expenses	12.01	12.46	12.87	13.30	13.74
Receivables	123.07	138.26	171.02	189.62	185.94
Total	156.70	173.15	207.07	226.86	224.42
Interest	14.08	23.38	27.95	30.63	30.30
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-IV				
Maintenance Spares	0.00	22.61	23.17	23.94	24.74
O and M expenses	0.00	12.56	12.87	13.30	13.74
Receivables	0.00	162.20	198.38	220.85	216.49
Total	0.00	197.38	234.42	258.10	254.96
Interest	0.00	26.43	31.65	34.84	34.42
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-V				
Maintenance Spares	0.00	22.42	23.17	23.94	24.74
O and M expenses	0.00	12.46	12.87	13.30	13.74
Receivables	0.00	139.45	167.98	184.38	180.90
Total	0.00	174.33	204.03	221.62	219.38
Interest	0.00	21.41	27.54	29.92	29.62
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-VI				
Maintenance Spares	12.61	13.08	13.52	13.97	14.43
O and M expenses	7.01	7.27	7.51	7.76	8.02
Receivables	87.16	101.03	109.70	112.73	110.46
Total	106.78	121.38	130.73	134.45	132.90
Interest	9.64	16.39	17.65	18.15	17.94
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-VII				
Maintenance Spares	12.59	13.08	13.52	13.97	14.43
O and M expenses	7.00	7.27	7.51	7.76	8.02
Receivables	90.47	99.94	108.59	113.74	111.49
Total	110.06	120.29	129.62	135.46	133.93



Interest	7.53	16.24	17.50	18.29	18.08
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-VIII				
Maintenance Spares	0.00	13.08	13.52	13.97	14.43
O and M expenses	0.00	7.27	7.51	7.76	8.02
Receivables	0.00	110.79	127.71	136.80	133.93
Total	0.00	131.14	148.74	158.52	156.37
Interest	0.00	17.56	20.08	21.40	21.11
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Particulars	Asset-IX				
Maintenance Spares	25.19	26.17	27.04	27.93	28.86
O and M expenses	14.00	14.54	15.02	15.52	16.03
Receivables	115.06	123.68	136.40	142.92	140.93
Total	154.25	164.38	178.45	186.38	185.82
Interest	13.92	22.19	24.09	25.16	25.09
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%

Transmission charges

66. The transmission charges allowed for the transmission assets are summarized as follows:-

(₹ in lakh)

Particulars	Asset-1A				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	3788.61	3955.57	4013.65	4013.65
Interest on Loan	0.00	4389.54	4244.18	3952.07	3595.48
Return on Equity	0.00	4221.29	4407.31	4472.03	4472.03
Interest on Working Capital	0.00	299.07	307.07	303.74	296.11
O and M Expenses	0.00	293.05	305.65	315.93	326.39
Total	0.00	12991.56	13219.78	13057.42	12703.66
Particulars	Asset-1B				
Depreciation	0.00	159.58	168.81	171.18	171.18
Interest on Loan	0.00	174.66	172.03	160.16	145.61
Return on Equity	0.00	177.80	188.08	190.73	190.73
Interest on Working Capital	0.00	16.42	17.15	17.16	17.00
O and M Expenses	0.00	86.34	90.12	93.11	96.20
Total	0.00	614.80	636.20	632.34	620.72
Particulars	Asset-II				
Depreciation	88.48	250.42	328.96	381.76	381.76
Interest on Loan	99.08	265.92	330.01	359.38	326.36
Return on Equity	98.58	279.01	366.53	425.36	425.36
Interest on Working Capital	9.83	26.57	32.14	35.67	35.20



Capital					
O and M Expenses	58.65	149.52	154.49	159.62	164.91
Total	354.61	971.44	1212.14	1361.79	1333.60
Particulars	Asset-III				
Depreciation	118.15	207.54	271.35	310.95	310.95
Interest on Loan	131.80	217.90	269.99	290.05	263.06
Return on Equity	131.64	231.24	302.34	346.46	346.46
Interest on Working Capital	14.08	23.38	27.95	30.63	30.30
O and M Expenses	95.94	149.52	154.49	159.62	164.90
Total	491.61	829.56	1026.12	1137.70	1115.66
Particulars	Asset-IV				
Depreciation	0.00	242.85	315.65	363.17	363.17
Interest on Loan	0.00	275.85	336.78	362.84	331.79
Return on Equity	0.00	270.58	351.70	404.64	404.64
Interest on Working Capital	0.00	26.43	31.65	34.84	34.42
O and M Expenses	0.00	149.52	154.49	159.62	164.90
Total	0.00	965.22	1190.25	1325.11	1298.91
Particulars	Asset-V				
Depreciation	0.00	187.56	261.89	297.21	297.21
Interest on Loan	0.00	207.32	272.16	288.35	262.51
Return on Equity	0.00	208.98	291.80	331.15	331.15
Interest on Working Capital	0.00	21.41	27.54	29.92	29.62
O and M Expenses	0.00	135.99	154.49	159.62	164.90
Total	0.00	761.26	1007.88	1106.26	1085.39
Particulars	Asset-VI				
Depreciation	87.16	157.90	177.01	186.41	186.41
Interest on Loan	99.49	168.74	176.18	171.00	154.50
Return on Equity	97.11	175.94	197.23	207.70	207.70
Interest on Working Capital	9.64	16.39	17.65	18.15	17.94
O and M Expenses	56.20	87.22	90.12	93.11	96.20
Total	349.60	606.18	658.19	676.36	662.74
Particulars	Asset-VII				
Depreciation	69.46	156.17	175.28	188.48	188.48
Interest on Loan	78.20	165.99	173.37	172.54	156.14
Return on Equity	77.40	174.01	195.30	210.01	210.01
Interest on Working Capital	7.53	16.24	17.50	18.29	18.08
O and M Expenses	42.55	87.22	90.12	93.11	96.20
Total	275.14	599.63	651.57	682.43	668.92
Particulars	Asset-VIII				
Depreciation	0.00	171.56	205.80	226.92	226.92
Interest on Loan	0.00	197.24	220.95	226.53	206.50
Return on Equity	0.00	191.16	229.30	252.83	252.83



Interest on Working Capital	0.00	17.56	20.08	21.40	21.11
O and M Expenses	0.00	87.22	90.12	93.11	96.20
Total	0.00	664.73	766.25	820.79	803.56
Particulars	Asset-IX				
Depreciation	105.10	174.43	200.69	216.12	216.12
Interest on Loan	113.10	176.67	189.76	189.25	171.19
Return on Equity	117.10	194.35	223.61	240.80	240.80
Interest on Working Capital	13.92	22.19	24.09	25.16	25.09
O and M Expenses	112.27	174.44	180.24	186.22	192.40
Total	461.49	742.07	818.38	857.55	845.59

67. The entire project is covered in 3 different petitions. therefore, the petitioner may be directed to submit a consolidated single true-up petition for the tariff period 2014-19 covering all the assets of projects (i.e. the assets covered in Petition No. 112/TT/2013 consisting of 8 assets and Petition No. 252/TT/2015 consisting of 5 assets and the instant petition consisting of 10 assets).

Filing Fee and the Publication Expenses

68. 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

69. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be



entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

70. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. The petitioner has further prayed that if any taxes and duties including cess etc. are imposed by any statutory/Government/municipal authorities, it shall be allowed to be recovered from the beneficiaries. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of transmission charges

71. As per the Single Line Diagram (SLD) at Annexure-XI, the ICTs (Assets- II and III) at Sundergarh Sub-station would be utilized with the commissioning of associated 765 kV system and downstream 400 kV system. The associated 765 kV system is Sundergarh-Dharamjaygarh line and one of the associated 400 kV system is LILO of Rourkela-Raigarh line. This 765 kV line was commissioned on 31.7.2014 and ICT's on 1.8.2014 and 3.11.2014 and 400 kV connection through LILO of Rourkela-Raigarh was established on 1.5.2013 and 1.6.2013. Hence, ICTs were in operation since their date of commercial operation. As such, 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.

72. This order disposes of Petition No. 246/TT/2014.

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					
ASSET 1A					
(₹ in lakh)					
	Details of Loan	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII				
	Gross loan opening	937.21	937.21	937.21	937.21
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	78.10
	Net Loan-Opening	937.21	937.21	937.21	859.11
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	78.10	78.10
	Net Loan-Closing	937.21	937.21	859.11	781.01
	Average Loan	937.21	937.21	898.16	820.06
	Rate of Interest	7.93%	7.93%	7.93%	7.93%
	Interest	74.32	74.32	71.22	65.03
	Rep Schedule	12 Annual instalments from 20.05.2017			
2	Bond XXXIV				
	Gross loan opening	2297.00	2297.00	2297.00	2297.00
	Cumulative Repayment upto DOCO/previous year	191.42	382.84	574.26	765.68
	Net Loan-Opening	2105.58	1914.16	1722.74	1531.32
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	191.42	191.42	191.42	191.42
	Net Loan-Closing	1914.16	1722.74	1531.32	1339.90
	Average Loan	2009.87	1818.45	1627.03	1435.61
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	177.67	160.75	143.83	126.91
	Rep Schedule	12 Annual instalments from 21.10.2014			
3	Bond XXXV				
	Gross loan opening	570.00	570.00	570.00	570.00
	Cumulative Repayment upto DOCO/previous year	0.00	47.50	95.00	142.50
	Net Loan-Opening	570.00	522.50	475.00	427.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	47.50	47.50	47.50	47.50
	Net Loan-Closing	522.50	475.00	427.50	380.00
	Average Loan	546.25	498.75	451.25	403.75



	Rate of Interest	9.64%	9.64%	9.64%	9.64%
	Interest	52.66	48.08	43.50	38.92
	Rep Schedule	12 Annual instalments from 31.5.2015			
4	Bond XXXVI				
	Gross loan opening	1800.00	1800.00	1800.00	1800.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	120.00	240.00
	Net Loan-Opening	1800.00	1800.00	1680.00	1560.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	120.00	120.00	120.00
	Net Loan-Closing	1800.00	1680.00	1560.00	1440.00
	Average Loan	1800.00	1740.00	1620.00	1500.00
	Rate of Interest	9.35%	9.35%	9.35%	9.35%
	Interest	168.30	162.69	151.47	140.25
	Rep Schedule	15 Annual instalments from 29.8.2016			
5	Bond XXXVII				
	Gross loan opening	1000.00	1000.00	1000.00	1000.00
	Cumulative Repayment upto DOCO/previous year	0.00	83.33	166.66	249.99
	Net Loan-Opening	1000.00	916.67	833.34	750.01
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	83.33	83.33	83.33	83.33
	Net Loan-Closing	916.67	833.34	750.01	666.68
	Average Loan	958.34	875.01	791.68	708.35
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	88.65	80.94	73.23	65.52
	Rep Schedule	12 Annual instalments from 26.12.2016			
7	SBI (21.3.2012)				
	Gross loan opening	2754.00	2754.00	2754.00	2754.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	250.36	500.72
	Net Loan-Opening	2754.00	2754.00	2503.64	2253.28
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	250.36	250.36	250.36
	Net Loan-Closing	2754.00	2503.64	2253.28	2002.92
	Average Loan	2754.00	2628.82	2378.46	2128.10
	Rate of Interest	10.25%	10.25%	10.25%	10.25%
	Interest	282.29	269.45	243.79	218.13



	Rep Schedule	22 half yearly instalment from 31.08.2016			
8	Bond XL				
	Gross loan opening	4000.00	4000.00	4000.00	4000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	333.33	666.66
	Net Loan-Opening	4000.00	4000.00	3666.67	3333.34
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	333.33	333.33	333.33
	Net Loan-Closing	4000.00	3666.67	3333.34	3000.01
	Average Loan	4000.00	3833.34	3500.01	3166.68
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	372.00	356.50	325.50	294.50
	Rep Schedule	12 Annual instalments from 28.6.2016			
9	Bond XLI				
	Gross loan opening	4025.27	4025.27	4025.27	4025.27
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	335.44	670.88
	Net Loan-Opening	4025.27	4025.27	3689.83	3354.39
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	335.44	335.44	335.44
	Net Loan-Closing	4025.27	3689.83	3354.39	3018.94
	Average Loan	4025.27	3857.55	3522.11	3186.67
	Rate of Interest	8.85%	8.85%	8.85%	8.85%
	Interest	356.24	341.39	311.71	282.02
	Rep Schedule	12 annual instalments from 19.10.2016			
10	Bond XXXVIII				
	Gross loan opening	919.00	919.00	919.00	919.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	919.00	919.00	919.00	919.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	919.00	919.00	919.00	919.00
	Average Loan	919.00	919.00	919.00	919.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	85.01	85.01	85.01	85.01
	Rep Schedule	Redeemable at par on 09.03.2027 (Bullet Payment)			
11	BOND XXXIX)				
	Gross loan opening	4127.00	4127.00	4127.00	4127.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	4127.00	4127.00	4127.00	4127.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00



	Net Loan-Closing	4127.00	4127.00	4127.00	4127.00
	Average Loan	4127.00	4127.00	4127.00	4127.00
	Rate of Interest	9.40%	9.40%	9.40%	9.40%
	Interest	387.94	387.94	387.94	387.94
	Rep Schedule	29.3.2027 Bullet Payment			
	IFC (IFC Loan) (31419-02)				
13	Gross loan opening	961.94	961.94	961.94	961.94
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	96.19
	Net Loan-Opening	961.94	961.94	961.94	865.75
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	96.19	96.19
	Net Loan-Closing	961.94	961.94	865.75	769.55
	Average Loan	961.94	961.94	913.84	817.65
	Rate of Interest	3.23%	3.23%	3.23%	3.23%
	Interest	31.07	31.07	29.52	26.41
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017			
	FC Bond (17.1.2013)				
	Gross loan opening	31.97	31.97	31.97	31.97
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	31.97	31.97	31.97	31.97
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	31.97	31.97	31.97	31.97
	Average Loan	31.97	31.97	31.97	31.97
	Rate of Interest	3.88%	3.88%	3.88%	3.88%
	Interest	1.24	1.24	1.24	1.24
	Rep Schedule	Bullet payment on 17.1.2023			
	Bond XLIV				
	Gross loan opening	9521.89	9521.89	9521.89	9521.89
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	9521.89	9521.89	9521.89	9521.89
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	3173.96
	Net Loan-Closing	9521.89	9521.89	9521.89	6347.93
	Average Loan	9521.89	9521.89	9521.89	7934.91



Rate of Interest	8.70%	8.70%	8.70%	8.70%
Interest	828.40	828.40	828.40	690.34
Rep Schedule	3 equall instalments on 15.7.2018, 15.7.2023 and 15.7.2028			
Bond XLV				
Gross loan opening	269.72	269.72	269.72	269.72
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	22.48
Net Loan-Opening	269.72	269.72	269.72	247.24
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	22.48	22.48
Net Loan-Closing	269.72	269.72	247.24	224.76
Average Loan	269.72	269.72	258.48	236.00
Rate of Interest	9.65%	9.65%	9.65%	9.65%
Interest	26.03	26.03	24.94	22.77
Rep Schedule	12 annual instalments from 28.2.2018			
SBI (2014-15) ADD ACP 2015-16				
Gross loan opening	0.00	2056.65	2056.65	2056.65
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	2056.65	2056.65	2056.65
Additions during the year	2056.65	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00
Net Loan-Closing	2056.65	2056.65	2056.65	2056.65
Average Loan	1028.33	2056.65	2056.65	2056.65
Rate of Interest	10.25%	10.25%	10.25%	10.25%
Interest	105.40	210.81	210.81	210.81
Rep Schedule	Not Available			
SBI (2014-15)				
Gross loan opening	3132.25	3132.25	3132.25	3132.25
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
Net Loan-Opening	3132.25	3132.25	3132.25	3132.25
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00
Net Loan-Closing	3132.25	3132.25	3132.25	3132.25
Average Loan	3132.25	3132.25	3132.25	3132.25
Rate of Interest	10.25%	10.25%	10.25%	10.25%
Interest	321.06	321.06	321.06	321.06
Rep Schedule	Not Available			



	Bond XLVI				
	Gross loan opening	9176.92	9176.92	9176.92	9176.92
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	9176.92	9176.92	9176.92	9176.92
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	9176.92	9176.92	9176.92	9176.92
	Average Loan	9176.92	9176.92	9176.92	9176.92
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	853.45	853.45	853.45	853.45
	Rep Schedule	Three equal Instalments on 4.9.2019, 4.9.2024 and 4.9.2029			
	Bond XLVII				
	Gross loan opening	3000.00	3000.00	3000.00	3000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	3000.00	3000.00	3000.00	3000.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	250.00
	Net Loan-Closing	3000.00	3000.00	3000.00	2750.00
	Average Loan	3000.00	3000.00	3000.00	2875.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%
	Interest	267.90	267.90	267.90	256.74
	Rep Schedule	12 annual instalments from 20.10.2018			
	Bond XLVIII				
	Gross loan opening	1096.50	1823.88	1823.88	1823.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1096.50	1823.88	1823.88	1823.88
	Additions during the year	727.38	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	1823.88	1823.88	1823.88	1823.88
	Average Loan	1460.19	1823.88	1823.88	1823.88
	Rate of Interest	8.2%	8.2%	8.2%	8.2%
	Interest	119.74	149.56	149.56	149.56
	Rep Schedule	9.3.2027 Bullet Payment			
	Total Loan				
	Gross loan opening	49620.67	52404.70	52404.70	52404.70



	Cumulative Repayment upto DOCO/previous year	191.42	513.67	1875.05	3433.21
	Net Loan-Opening	49429.25	51891.03	50529.65	48971.49
	Additions during the year	2784.03	0.00	0.00	0.00
	Repayment during the year	322.25	1361.38	1558.16	4732.12
	Net Loan-Closing	51891.03	50529.65	48971.49	43989.37
	Average Loan	50660.14	51210.34	49750.57	46480.43
	Weighted Average Rate of Interest	9.08%	9.09%	9.09%	9.11%
	Interest	4599.35	4656.59	4524.08	4236.60



Annexure II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
ASSET 1B						
(₹ in lakh)						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond – XLIII					
	Gross loan opening	800.00	800.00	800.00	800.00	800.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	66.67
	Net Loan-Opening	800.00	800.00	800.00	800.00	733.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	66.67	66.67
	Net Loan-Closing	800.00	800.00	800.00	733.33	666.66
	Average Loan	800.00	800.00	800.00	766.67	700.00
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	63.44	63.44	63.44	60.80	55.51
	Rep Schedule	12 Annual instalments from 20.5.2017				
2	Bond XLVII					
	Gross loan opening	309.75	309.75	309.75	309.75	309.75
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	309.75	309.75	309.75	309.75	309.75
	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	25.81
	Net Loan-Closing	309.75	309.75	309.75	309.75	283.94
	Average Loan	309.75	309.75	309.75	309.75	296.85
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	27.66	27.66	27.66	27.66	26.51
	Rep Schedule	12 annual instalments from 20.10.2018				
3	Bond XLI					
	Gross loan opening	800.00	800.00	800.00	800.00	800.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	66.67	133.34
	Net Loan-Opening	800.00	800.00	800.00	733.33	666.66
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	66.67	66.67	66.67
	Net Loan-Closing	800.00	800.00	733.33	666.66	599.99
	Average Loan	800.00	800.00	766.67	700.00	633.33
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	70.80	70.80	67.85	61.95	56.05



	Rep Schedule	12 annual instalments from 19.10.2016				
4	SBI (2014-15) ADD ACP 2015-16					
	Gross loan opening	0.00	0.00	147.92	147.92	147.92
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	147.92	147.92	147.92
	Additions during the year	0.00	147.92	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	147.92	147.92	147.92	147.92
	Average Loan	0.00	73.96	147.92	147.92	147.92
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	0.00	7.58	15.16	15.16	15.16
	Rep Schedule	Not Available				
5	Bond XLVI					
	Gross loan opening	150.00	150.00	150.00	150.00	150.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	150.00	150.00	150.00	150.00	150.00
	Additions during the year		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	150.00	150.00	150.00	150.00	150.00
	Average Loan	150.00	150.00	150.00	150.00	150.00
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	13.95	13.95	13.95	13.95	13.95
	Rep Schedule	Three equal Instalments on 4.9.2019, 4.9.2024 and 4.9.2029				
6	Bond XLVII ADD CAP					
	Gross loan opening	0.00	0.00	19.50	19.50	19.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	19.50	19.50	19.50
	Additions during the year	0.00	19.50	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	1.63
	Net Loan-Closing	0.00	19.50	19.50	19.50	17.88
	Average Loan	0.00	9.75	19.50	19.50	18.69
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	0.00	0.87	1.74	1.74	1.67
	Rep Schedule	12 annual instalments from 20.10.2018				
7	Bond XLVIII					
	Gross loan opening	0.00	123.19	123.19	123.19	123.19
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00



	Net Loan-Opening	0.00	123.19	123.19	123.19	123.19
	Additions during the year	123.19	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	123.19	123.19	123.19	123.19	123.19
	Average Loan	61.60	123.19	123.19	123.19	123.19
	Rate of Interest	8.2%	8.2%	8.2%	8.2%	8.2%
	Interest	5.05	10.10	10.10	10.10	10.10
	Rep Schedule	Four equal Instalments on 23.1.2020, 23.1.2022 and 23.1.2025 and 23.1.2030				
	Total Loan					
	Gross loan opening		2182.94	2350.36	2350.36	2350.36
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	66.67	200.01
	Net Loan-Opening	2059.75	2182.94	2350.36	2283.69	2150.35
	Additions during the year	123.19	167.42	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	66.67	133.34	134.97
	Net Loan-Closing	2182.94	2350.36	2283.69	2150.35	1989.58
	Average Loan	2121.35	2266.65	2317.03	2217.02	2069.96
	Weighted Average Rate of Interest	8.53%	8.58%	8.63%	8.63%	8.65%
	Interest	180.90	194.40	199.91	191.36	178.95



Annexure III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET II					
(₹ in lakh)					
Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Bond - XLIII					
Gross loan opening	607.00	607.00	607.00	607.00	607.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	50.58
Net Loan-Opening	607.00	607.00	607.00	607.00	556.42
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	50.58	50.58
Net Loan-Closing	607.00	607.00	607.00	556.42	505.84
Average Loan	607.00	607.00	607.00	581.71	531.13
Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
Interest	48.14	48.14	48.14	46.13	42.12
Rep Schedule	12 Annual instalments from 20.5.2017				
Bond XXXIV					
Gross loan opening	439.17	439.17	439.17	439.17	439.17
Cumulative Repayment upto DOCO/previous year	0.00	36.60	73.20	109.80	146.40
Net Loan-Opening	439.17	402.57	365.97	329.37	292.77
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	36.60	36.60	36.60	36.60	36.60
Net Loan-Closing	402.57	365.97	329.37	292.77	256.17
Average Loan	420.87	384.27	347.67	311.07	274.47
Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
Interest	37.21	33.97	30.73	27.50	24.26
Rep Schedule	12 Annual instalments from 21.10.2014				
Bond XXXV					
Gross loan opening	10.00	10.00	10.00	10.00	10.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.83	1.66	2.49
Net Loan-Opening	10.00	10.00	9.17	8.34	7.51
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.83	0.83	0.83	0.83
Net Loan-Closing	10.00	9.17	8.34	7.51	6.68
Average Loan	10.00	9.59	8.76	7.93	7.10
Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%



Interest	0.96	0.92	0.84	0.76	0.68
Rep Schedule	12 Annual instalments from 31.5.2015				
Bond XXXVI					
Gross loan opening	29.50	29.50	29.50	29.50	29.50
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	1.97	3.94
Net Loan-Opening	29.50	29.50	29.50	27.53	25.56
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	1.97	1.97	1.97
Net Loan-Closing	29.50	29.50	27.53	25.56	23.59
Average Loan	29.50	29.50	28.52	26.55	24.58
Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
Interest	2.76	2.76	2.67	2.48	2.30
Rep Schedule	15 Annual instalments from 29.8.2016				
Bond XXXVII					
Gross loan opening	72.50	72.50	72.50	72.50	72.50
Cumulative Repayment upto DOCO/previous year	0.00	0.00	6.04	12.08	18.12
Net Loan-Opening	72.50	72.50	66.46	60.42	54.38
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	6.04	6.04	6.04	6.04
Net Loan-Closing	72.50	66.46	60.42	54.38	48.34
Average Loan	72.50	69.48	63.44	57.40	51.36
Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
Interest	6.71	6.43	5.87	5.31	4.75
Rep Schedule	12 Annual instalments from 26.12.2015				
XXXVIII					
Gross loan opening	15.50	15.50	15.50	15.50	15.50
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	15.50	15.50	15.50	15.50	15.50
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	15.50	15.50	15.50	15.50	15.50
Average Loan	15.50	15.50	15.50	15.50	15.50
Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
Interest	1.43	1.43	1.43	1.43	1.43
Rep Schedule	Redeemable at par on 09.03.2027 (Bullet Payment)				



SBI (21.3.2012)					
Gross loan opening	21.00	21.00	21.00	21.00	21.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	1.91	3.82
Net Loan-Opening	21.00	21.00	21.00	19.09	17.18
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	1.91	1.91	1.91
Net Loan-Closing	21.00	21.00	19.09	17.18	15.27
Average Loan	21.00	21.00	20.05	18.14	16.23
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	2.15	2.15	2.05	1.86	1.66
Rep Schedule	22 half yearly instalment from 31.08.2016				
Bond XL					
Gross loan opening	42.00	42.00	42.00	42.00	42.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	3.50	7.00
Net Loan-Opening	42.00	42.00	42.00	38.50	35.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	3.50	3.50	3.50
Net Loan-Closing	42.00	42.00	38.50	35.00	31.50
Average Loan	42.00	42.00	40.25	36.75	33.25
Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
Interest	3.91	3.91	3.74	3.42	3.09
Rep Schedule	12 Annual instalments from 28.6.2016				
Bond XLI					
Gross loan opening	75.50	75.50	75.50	75.50	75.50
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	6.29	12.58
Net Loan-Opening	75.50	75.50	75.50	69.21	62.92
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	6.29	6.29	6.29
Net Loan-Closing	75.50	75.50	69.21	62.92	56.63
Average Loan	75.50	75.50	72.36	66.07	59.78
Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
Interest	6.68	6.68	6.40	5.85	5.29
Rep Schedule	12 annual instalments from 19.10.2016				
BOND XXXIX)					
Gross loan opening	29.00	29.00	29.00	29.00	29.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	29.00	29.00	29.00	29.00	29.00
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	29.00	29.00	29.00	29.00	29.00
Average Loan	29.00	29.00	29.00	29.00	29.00
Rate of Interest	9.400%	9.40%	9.40%	9.40%	9.40%
Interest	2.73	2.73	2.73	2.73	2.73
Rep Schedule	29.3.2027 Bullet Payment				
IFC (IFC A Loan) (31419-00)					
Gross loan opening	13.63	13.63	13.63	13.63	13.63
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	1.36
Net Loan-Opening	13.63	13.63	13.63	13.63	12.27
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	1.36	1.36
Net Loan-Closing	13.63	13.63	13.63	12.27	10.90
Average Loan	13.63	13.63	13.63	12.95	11.59
Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
Interest	0.44	0.44	0.44	0.42	0.37
Rep Schedule	20 Semi Annual Payment starting from 15-09-2017				
FC Bond (17.1.2013)					
Gross loan opening	3.10	3.10	3.10	3.10	3.10
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	3.10	3.10	3.10	3.10	3.10
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	3.10	3.10	3.10	3.10	3.10
Average Loan	3.10	3.10	3.10	3.10	3.10
Rate of Interest	3.875%	3.875%	3.875%	3.875%	3.875%
Interest	0.12	0.12	0.12	0.12	0.12
Rep Schedule	Bullet payment on 17.1.2023				
Bond XLIV					
Gross loan opening	1370.34	1370.34	1370.34	1370.34	1370.34
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	1370.34	1370.34	1370.34	1370.34	1370.34
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	456.78
Net Loan-Closing	1370.34	1370.34	1370.34	1370.34	913.56
Average Loan	1370.34	1370.34	1370.34	1370.34	1141.95



Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
Interest	119.22	119.22	119.22	119.22	99.35
Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
Bond XLV					
Gross loan opening	40.00	40.00	40.00	40.00	40.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	3.33
Net Loan-Opening	40.00	40.00	40.00	40.00	36.67
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	3.33	3.33
Net Loan-Closing	40.00	40.00	40.00	36.67	33.34
Average Loan	40.00	40.00	40.00	38.34	35.01
Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
Interest	3.86	3.86	3.86	3.70	3.38
Rep Schedule	12 annual instalments from 28.2.2018				
Bond XLVIII ADD CAP					
Gross loan opening	0.00	210.29	210.29	210.29	210.29
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	210.29	210.29	210.29	210.29
Additions during the year	210.29	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	210.29	210.29	210.29	210.29	210.29
Average Loan	105.15	210.29	210.29	210.29	210.29
Rate of Interest	8.2%	8.2%	8.2%	8.2%	8.2%
Interest	8.62	17.24	17.24	17.24	17.24
Rep Schedule	4 Equal instalments on 23.01.2020,23.01.2022,23.01.2025 and 23.01.2030				
Total Loan					
Gross loan opening	2768.24	2978.53	2978.53	2978.53	2978.53
Cumulative Repayment upto DOCO/previous year	0.00	36.60	80.07	137.21	249.62
Net Loan-Opening	2768.24	2941.93	2898.46	2841.32	2728.91
Additions during the year	210.29	0.00	0.00	0.00	0.00
Repayment during the year	36.60	43.47	57.14	112.41	569.19
Net Loan-Closing	2941.93	2898.46	2841.32	2728.91	2159.72
Average Loan	2855.09	2920.20	2869.89	2785.12	2444.31
Weighted Average Rate of Interest	8.58%	8.56%	8.55%	8.55%	8.54%
Interest	244.93	250.00	245.49	238.17	208.79



Annexure IV

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
ASSET III						
(₹ in lakh)						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII					
	Gross loan opening	385.00	385.00	385.00	385.00	385.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	32.08
	Net Loan-Opening	385.00	385.00	385.00	385.00	352.92
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	32.08	32.08
	Net Loan-Closing	385.00	385.00	385.00	352.92	320.84
	Average Loan	385.00	385.00	385.00	368.96	336.88
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	30.53	30.53	30.53	29.26	26.71
	Rep Schedule	12 Annual instalments from 20.5.2017				
2	Bond XXXIV					
	Gross loan opening	299.95	299.95	299.95	299.95	299.95
	Cumulative Repayment upto DOCO/previous year	0.00	25.00	50.00	75.00	100.00
	Net Loan-Opening	299.95	274.95	249.95	224.95	199.95
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	25.00	25.00	25.00	25.00	25.00
	Net Loan-Closing	274.95	249.95	224.95	199.95	174.95
	Average Loan	287.45	262.45	237.45	212.45	187.45
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	25.41	23.20	20.99	18.78	16.57
	Rep Schedule	12 Annual instalments from 21.10.2014				
3	Bond XXXV					
	Gross loan opening	4.00	4.00	4.00	4.00	4.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.33	0.66	0.99
	Net Loan-Opening	4.00	4.00	3.67	3.34	3.01
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.33	0.33	0.33	0.33
	Net Loan-Closing	4.00	3.67	3.34	3.01	2.68
	Average Loan	4.00	3.84	3.51	3.18	2.85



	Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%
	Interest	0.39	0.37	0.34	0.31	0.27
	Rep Schedule	12 Annual instalments from 31.5.2015				
4	Bond XXXVI					
	Gross loan opening	13.00	13.00	13.00	13.00	13.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.87	1.74
	Net Loan-Opening	13.00	13.00	13.00	12.13	11.26
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.87	0.87	0.87
	Net Loan-Closing	13.00	13.00	12.13	11.26	10.39
	Average Loan	13.00	13.00	12.57	11.70	10.83
	Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
	Interest	1.22	1.22	1.17	1.09	1.01
	Rep Schedule	15 Annual instalments from 29.8.2016				
5	Bond XXXVII					
	Gross loan opening	31.50	31.50	31.50	31.50	31.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	2.63	5.26	7.89
	Net Loan-Opening	31.50	31.50	28.87	26.24	23.61
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	2.63	2.63	2.63	2.63
	Net Loan-Closing	31.50	28.87	26.24	23.61	20.98
	Average Loan	31.50	30.19	27.56	24.93	22.30
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	2.91	2.79	2.55	2.31	2.06
	Rep Schedule	12 Annual instalments from 26.12.2015				
6	BOND XL					
	Gross loan opening	43.00	43.00	43.00	43.00	43.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	3.58	7.16
	Net Loan-Opening	43.00	43.00	43.00	39.42	35.84
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	3.58	3.58	3.58
	Net Loan-Closing	43.00	43.00	39.42	35.84	32.26
	Average Loan	43.00	43.00	41.21	37.63	34.05
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	4.00	4.00	3.83	3.50	3.17
	Rep Schedule	12 Annual instalments from 28.6.2016				



7	SBI (21.3.2012)					
	Gross loan opening	21.50	21.50	21.50	21.50	21.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	1.95	3.90
	Net Loan-Opening	21.50	21.50	21.50	19.55	17.60
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1.95	1.95	1.95
	Net Loan-Closing	21.50	21.50	19.55	17.60	15.65
	Average Loan	21.50	21.50	20.53	18.58	16.63
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	2.20	2.20	2.10	1.90	1.70
	Rep Schedule	22 annual instalments from 31.8.2016				
8	Bond XLI					
	Gross loan opening	78.50	78.50	78.50	78.50	78.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	6.54	13.08
	Net Loan-Opening	78.50	78.50	78.50	71.96	65.42
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	6.54	6.54	6.54
	Net Loan-Closing	78.50	78.50	71.96	65.42	58.88
	Average Loan	78.50	78.50	75.23	68.69	62.15
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	6.95	6.95	6.66	6.08	5.50
	Rep Schedule	12 annual instalments from 19.10.2016				
9	Bond XXXVIII					
	Gross loan opening	6.50	6.50	6.50	6.50	6.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	6.50	6.50	6.50	6.50	6.50
	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	6.50	6.50	6.50	6.50	6.50
	Average Loan	6.50	6.50	6.50	6.50	6.50
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	0.60	0.60	0.60	0.60	0.60
	Rep Schedule	9.3.2027 Bullet Payment				
10	BOND XXXIX)					
	Gross loan opening	30.00	30.00	30.00	30.00	30.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	30.00	30.00	30.00	30.00	30.00
	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	30.00	30.00	30.00	30.00	30.00



	Average Loan	30.00	30.00	30.00	30.00	30.00
	Rate of Interest	9.400%	9.400%	9.400%	9.400%	9.400%
	Interest	2.82	2.82	2.82	2.82	2.82
	Rep Schedule	29.3.2027 Bullet Payment				
	IFC (IFC A Loan) (31419-00)					
11	Gross loan opening	6.68	6.68	6.68	6.68	6.68
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.67
	Net Loan-Opening	6.68	6.68	6.68	6.68	6.02
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.67	0.67
	Net Loan-Closing	6.68	6.68	6.68	6.02	5.35
	Average Loan	6.68	6.68	6.68	6.35	5.68
	Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
	Interest	0.22	0.22	0.22	0.21	0.18
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017				
12	FC Bond (17.1.2013)					
	Gross loan opening	0.61	0.61	0.61	0.61	0.61
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.61	0.61	0.61	0.61	0.61
	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	0.61	0.61	0.61	0.61	0.61
	Average Loan	0.61	0.61	0.61	0.61	0.61
	Rate of Interest	3.875%	3.875%	3.875%	3.875%	3.875%
	Interest	0.02	0.02	0.02	0.02	0.02
	Rep Schedule	Bullet payment on 17.1.2023				
13	Bond XLIV					
	Gross loan opening	1304.92	1304.92	1304.92	1304.92	1304.92
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	1304.92	1304.92	1304.92	1304.92	1304.92
	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	434.97
	Net Loan-Closing	1304.92	1304.92	1304.92	1304.92	869.95
	Average Loan	1304.92	1304.92	1304.92	1304.92	1087.44
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	113.53	113.53	113.53	113.53	94.61
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
14	Bond XLV					
	Gross loan opening	50.00	50.00	50.00	50.00	50.00



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	4.17
	Net Loan-Opening	50.00	50.00	50.00	50.00	45.83
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	4.17	4.17
	Net Loan-Closing	50.00	50.00	50.00	45.83	41.66
	Average Loan	50.00	50.00	50.00	47.92	43.75
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	4.83	4.83	4.83	4.62	4.22
	Rep Schedule	12 annual instalments from 28.2.2018				
	Bond XLVIII ADD CAP					
	Gross loan opening	0.00	155.26	155.26	155.26	155.26
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	155.26	155.26	155.26	155.26
	Additions during the year	155.26	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	155.26	155.26	155.26	155.26	155.26
	Average Loan	77.63	155.26	155.26	155.26	155.26
	Rate of Interest	8.2%	8.2%	8.2%	8.2%	8.2%
	Interest	6.37	12.73	12.73	12.73	12.73
	Rep Schedule	Four equal Instalments on 23.1.2020, 23.1.2022 and 23.1.2025 and 23.1.2030				
	Total Loan					
	Gross loan opening	2275.16	2430.42	2430.42	2430.42	2430.42
	Cumulative Repayment upto DOCO/previous year	0.00	25.00	52.96	93.86	171.68
	Net Loan-Opening	2275.16	2405.42	2377.46	2336.56	2258.74
	Additions during the year	155.26	0.00	0.00	0.00	0.00
	Repayment during the year	25.00	27.96	40.90	77.82	512.79
	Net Loan-Closing	2405.42	2377.46	2336.56	2258.74	1745.95
	Average Loan	2340.29	2391.44	2357.01	2297.65	2002.35
	Weighted Average Rate of Interest	8.63%	8.61%	8.61%	8.61%	8.60%
	Interest	201.99	206.00	202.92	197.76	172.19



Annexure V

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
ASSET IV					
(₹ in lakh)					
	Details of Loan	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII				
	Gross loan opening	463.00	463.00	463.00	463.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	38.58
	Net Loan-Opening	463.00	463.00	463.00	424.42
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	38.58	38.58
	Net Loan-Closing	463.00	463.00	424.42	385.84
	Average Loan	463.00	463.00	443.71	405.13
	Rate of Interest	7.93%	7.93%	7.93%	7.93%
	Interest	36.72	36.72	35.19	32.13
	Rep Schedule	12 Annual instalments from 20.5.2017			
2	Bond XXXIV				
	Gross loan opening	100.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	8.33	16.66	24.99	33.32
	Net Loan-Opening	91.67	83.34	75.01	66.68
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	8.33	8.33	8.33	8.33
	Net Loan-Closing	83.34	75.01	66.68	58.35
	Average Loan	87.51	79.18	70.85	62.52
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	7.74	7.00	6.26	5.53
	Rep Schedule	12 Annual instalments from 21.10.2014			
3	Bond XXXV				
	Gross loan opening	4.00	4.00	4.00	4.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.33	0.66	0.99
	Net Loan-Opening	4.00	3.67	3.34	3.01
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.33	0.33	0.33	0.33
	Net Loan-Closing	3.67	3.34	3.01	2.68
	Average Loan	3.84	3.51	3.18	2.85



	Rate of Interest	9.64%	9.64%	9.64%	9.64%
	Interest	0.37	0.34	0.31	0.27
	Rep Schedule	12 Annual instalments from 31.5.2015			
4	Bond XXXVI				
	Gross loan opening	13.00	13.00	13.00	13.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.87	1.74
	Net Loan-Opening	13.00	13.00	12.13	11.26
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.87	0.87	0.87
	Net Loan-Closing	13.00	12.13	11.26	10.39
	Average Loan	13.00	12.57	11.70	10.83
	Rate of Interest	9.35%	9.35%	9.35%	9.35%
	Interest	1.22	1.17	1.09	1.01
	Rep Schedule	15 Annual instalments from 29.8.2016			
5	Bond XXXVII				
	Gross loan opening	31.50	31.50	31.50	31.50
	Cumulative Repayment upto DOCO/previous year	0.00	2.63	5.26	7.89
	Net Loan-Opening	31.50	28.87	26.24	23.61
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.63	2.63	2.63	2.63
	Net Loan-Closing	28.87	26.24	23.61	20.98
	Average Loan	30.19	27.56	24.93	22.30
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	2.79	2.55	2.31	2.06
	Rep Schedule	12 Annual instalments from 26.12.2015			
6	BOND XL				
	Gross loan opening	43.00	43.00	43.00	43.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	3.58	7.16
	Net Loan-Opening	43.00	43.00	39.42	35.84
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	3.58	3.58	3.58
	Net Loan-Closing	43.00	39.42	35.84	32.26
	Average Loan	43.00	41.21	37.63	34.05
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	4.00	3.83	3.50	3.17
	Rep Schedule	12 Annual instalments from 28.6.2016			



7	SBI (21.3.2012)				
	Gross loan opening	21.50	21.50	21.50	21.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.95	3.91
	Net Loan-Opening	21.50	21.50	19.55	17.59
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	1.95	1.95	1.95
	Net Loan-Closing	21.50	19.55	17.59	15.64
	Average Loan	21.50	20.52	18.57	16.61
	Rate of Interest	10.25%	10.25%	10.25%	10.25%
	Interest	2.20	2.10	1.90	1.70
	Rep Schedule	22 semi annual instalments from 31.8.2016			
9	Bond XLI				
	Gross loan opening	78.50	78.50	78.50	78.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	6.54	13.08
	Net Loan-Opening	78.50	78.50	71.96	65.42
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	6.54	6.54	6.54
	Net Loan-Closing	78.50	71.96	65.42	58.88
	Average Loan	78.50	75.23	68.69	62.15
	Rate of Interest	8.85%	8.85%	8.85%	8.85%
	Interest	6.95	6.66	6.08	5.50
	Rep Schedule	12 annual instalments from 19.10.2016			
10	Bond XXXVIII				
	Gross loan opening	6.50	6.50	6.50	6.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	6.50	6.50	6.50	6.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	6.50	6.50	6.50	6.50
	Average Loan	6.50	6.50	6.50	6.50
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	0.60	0.60	0.60	0.60
	Rep Schedule	9.3.2027 Bullet Payment			
11	BOND XXXIX)				
	Gross loan opening	30.00	30.00	30.00	30.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	30.00	30.00	30.00	30.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	30.00	30.00	30.00	30.00



	Average Loan	30.00	30.00	30.00	30.00
	Rate of Interest	9.400%	9.400%	9.400%	9.400%
	Interest	2.82	2.82	2.82	2.82
	Rep Schedule	29.3.2027 Bullet Payment			
	IFC (IFC A Loan) (31419-00)				
13	Gross loan opening	6.95	6.95	6.95	6.95
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.70
	Net Loan-Opening	6.95	6.95	6.95	6.26
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.70	0.70
	Net Loan-Closing	6.95	6.95	6.26	5.56
	Average Loan	6.95	6.95	6.60	5.91
	Rate of Interest	3.23%	3.23%	3.23%	3.23%
	Interest	0.22	0.22	0.21	0.19
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017			
	FC Bond (17.1.2013)				
	Gross loan opening	0.63	0.63	0.63	0.63
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.63	0.63	0.63	0.63
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.63	0.63	0.63	0.63
	Average Loan	0.63	0.63	0.63	0.63
	Rate of Interest	3.875%	3.875%	3.875%	3.875%
	Interest	0.02	0.02	0.02	0.02
	Rep Schedule	Bullet payment on 17.1.2023			
	Bond XLIV				
	Gross loan opening	1577.99	1577.99	1577.99	1577.99
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1577.99	1577.99	1577.99	1577.99
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	526.00
	Net Loan-Closing	1577.99	1577.99	1577.99	1051.99
	Average Loan	1577.99	1577.99	1577.99	1314.99
	Rate of Interest	8.70%	8.70%	8.70%	8.70%
	Interest	137.29	137.29	137.29	114.40
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028			
	Bond XLV				
	Gross loan opening	50.00	50.00	50.00	50.00



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.17
	Net Loan-Opening	50.00	50.00	50.00	45.83
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.17	4.17
	Net Loan-Closing	50.00	50.00	45.83	41.66
	Average Loan	50.00	50.00	47.92	43.75
	Rate of Interest	9.65%	9.65%	9.65%	9.65%
	Interest	4.83	4.83	4.62	4.22
	Rep Schedule	12 annual instalments from 28.2.2018			
	SBI (2014-15)				
	Gross loan opening	517.52	517.52	517.52	517.52
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	517.52	517.52	517.52	517.52
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	517.52	517.52	517.52	517.52
	Average Loan	517.52	517.52	517.52	517.52
	Rate of Interest	10.25%	10.25%	10.25%	10.25%
	Interest	53.05	53.05	53.05	53.05
	Rep Schedule	Not Available			
	Total Loan				
	Gross loan opening	2944.09	2944.09	2944.09	2944.09
	Cumulative Repayment upto DOCO/previous year	8.33	19.62	43.85	111.53
	Net Loan-Opening	2935.76	2924.47	2900.24	2832.56
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	11.29	24.23	67.68	593.68
	Net Loan-Closing	2924.47	2900.24	2832.56	2238.88
	Average Loan	2930.12	2912.36	2866.40	2535.72
	Weighted Average Rate of Interest	8.90%	8.90%	8.90%	8.94%
	Interest	260.80	259.20	255.25	226.68



Annexure VI

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET V					
				(₹ in lakh)	
	Details of Loan	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII				
	Gross loan opening	376.00	376.00	376.00	376.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	31.33
	Net Loan-Opening	376.00	376.00	376.00	344.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	31.33	31.33
	Net Loan-Closing	376.00	376.00	344.67	313.34
	Average Loan	376.00	376.00	360.34	329.01
	Rate of Interest	7.93%	7.93%	7.93%	7.93%
	Interest	29.82	29.82	28.57	26.09
	Rep Schedule	12 Annual instalments from 20.5.2017			
2	Bond XXXIV				
	Gross loan opening	26.50	26.50	26.50	26.50
	Cumulative Repayment upto DOCO/previous year	2.21	4.42	6.63	8.84
	Net Loan-Opening	24.29	22.08	19.87	17.66
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.21	2.21	2.21	2.21
	Net Loan-Closing	22.08	19.87	17.66	15.45
	Average Loan	23.19	20.98	18.77	16.56
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	2.05	1.85	1.66	1.46
	Rep Schedule	12 Annual instalments from 21.10.2014			
3	Bond XXXV				
	Gross loan opening	4.00	4.00	4.00	4.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.33	0.66	0.99
	Net Loan-Opening	4.00	3.67	3.34	3.01
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.33	0.33	0.33	0.33
	Net Loan-Closing	3.67	3.34	3.01	2.68
	Average Loan	3.84	3.51	3.18	2.85



	Rate of Interest	9.64%	9.64%	9.64%	9.64%
	Interest	0.37	0.34	0.31	0.27
	Rep Schedule	12 Annual instalments from 31.5.2015			
4	Bond XXXVI				
	Gross loan opening	13.00	13.00	13.00	13.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.87	1.74
	Net Loan-Opening	13.00	13.00	12.13	11.26
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.87	0.87	0.87
	Net Loan-Closing	13.00	12.13	11.26	10.39
	Average Loan	13.00	12.57	11.70	10.83
	Rate of Interest	9.35%	9.35%	9.35%	9.35%
	Interest	1.22	1.17	1.09	1.01
	Rep Schedule	15 Annual instalments from 29.8.2016			
5	Bond XXXVII				
	Gross loan opening	31.50	31.50	31.50	31.50
	Cumulative Repayment upto DOCO/previous year	0.00	2.63	5.26	7.89
	Net Loan-Opening	31.50	28.87	26.24	23.61
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.63	2.63	2.63	2.63
	Net Loan-Closing	28.87	26.24	23.61	20.98
	Average Loan	30.19	27.56	24.93	22.30
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	2.79	2.55	2.31	2.06
	Rep Schedule	12 Annual instalments from 26.12.2015			
6	BOND XL				
	Gross loan opening	43.00	43.00	43.00	43.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	3.58	7.16
	Net Loan-Opening	43.00	43.00	39.42	35.84
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	3.58	3.58	3.58
	Net Loan-Closing	43.00	39.42	35.84	32.26
	Average Loan	43.00	41.21	37.63	34.05
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	4.00	3.83	3.50	3.17
	Rep Schedule	12 Annual instalments from 28.6.2016			



7	SBI (21.3.2012)				
	Gross loan opening	21.50	21.50	21.50	21.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.95	3.91
	Net Loan-Opening	21.50	21.50	19.55	17.59
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	1.95	1.95	1.95
	Net Loan-Closing	21.50	19.55	17.59	15.64
	Average Loan	21.50	20.52	18.57	16.61
	Rate of Interest	10.10%	10.10%	10.10%	10.10%
	Interest	2.17	2.07	1.88	1.68
	Rep Schedule	22 SEMI annual instalments from 31.8.2016			
8	Bond XLI				
	Gross loan opening	400.00	400.00	400.00	400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	33.33	66.66
	Net Loan-Opening	400.00	400.00	366.67	333.34
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	33.33	33.33	33.33
	Net Loan-Closing	400.00	366.67	333.34	300.01
	Average Loan	400.00	383.34	350.01	316.68
	Rate of Interest	8.85%	8.85%	8.85%	8.85%
	Interest	35.40	33.93	30.98	28.03
	Rep Schedule	12 annual instalments from 19.10.2016			
9	Bond XXXVIII				
	Gross loan opening	6.50	6.50	6.50	6.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	6.50	6.50	6.50	6.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	6.50	6.50	6.50	6.50
	Average Loan	6.50	6.50	6.50	6.50
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	0.60	0.60	0.60	0.60
	Rep Schedule	9.3.2027 Bullet Payment			
10	BOND XXXIX)				
	Gross loan opening	30.00	30.00	30.00	30.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	30.00	30.00	30.00	30.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	30.00	30.00	30.00	30.00



	Average Loan	30.00	30.00	30.00	30.00
	Rate of Interest	9.400%	9.400%	9.400%	9.400%
	Interest	2.82	2.82	2.82	2.82
	Rep Schedule	29.3.2027 Bullet Payment			
11	Bond XLIV				
	Gross loan opening	1275.11	1275.11	1275.11	1275.11
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1275.11	1275.11	1275.11	1275.11
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	425.04
	Net Loan-Closing	1275.11	1275.11	1275.11	850.07
	Average Loan	1275.11	1275.11	1275.11	1062.59
	Rate of Interest	8.70%	8.70%	8.70%	8.70%
	Interest	110.93	110.93	110.93	92.45
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028			
12	Bond XLV				
	Gross loan opening	50.00	50.00	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.17
	Net Loan-Opening	50.00	50.00	50.00	45.83
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.17	4.17
	Net Loan-Closing	50.00	50.00	45.83	41.66
	Average Loan	50.00	50.00	47.92	43.75
	Rate of Interest	9.65%	9.65%	9.65%	9.65%
	Interest	4.83	4.83	4.62	4.22
	Rep Schedule	12 annual instalments from 28.2.2018			
13	Bond XLVIII				
	Gross loan opening	185.07	185.07	185.07	185.07
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	185.07	185.07	185.07	185.07
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	185.07	185.07	185.07	185.07
	Average Loan	185.07	185.07	185.07	185.07
	Rate of Interest	8.2%	8.2%	8.2%	8.2%
	Interest	15.18	15.18	15.18	15.18



	Rep Schedule	Four equal Instalments on 23.1.2020, 23.1.2022 and 23.1.2025 and 23.1.2030			
	Total Loan				
	Gross loan opening	2462.18	2462.18	2462.18	2462.18
	Cumulative Repayment upto DOCO/previous year	2.21	7.38	52.28	132.69
	Net Loan-Opening	2459.97	2454.80	2409.90	2329.49
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	5.17	44.90	80.40	505.44
	Net Loan-Closing	2454.80	2409.90	2329.49	1824.05
	Average Loan	2457.39	2432.35	2369.69	2076.77
	Weighted Average Rate of Interest	8.63%	8.63%	8.63%	8.62%
	Interest	212.17	209.92	204.44	179.04



Annexure VII

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET VI						
(₹ in lakh)						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII					
	Gross loan opening	100.00	100.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	8.33
	Net Loan-Opening	100.00	100.00	100.00	100.00	91.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	8.33	8.33
	Net Loan-Closing	100.00	100.00	100.00	91.67	83.34
	Average Loan	100.00	100.00	100.00	95.84	87.51
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	7.93	7.93	7.93	7.60	6.94
	Rep Schedule	12 Annual instalments from 20.5.2017				
2	Bond XXXIV					
	Gross loan opening	190.21	190.21	190.21	190.21	190.21
	Cumulative Repayment upto DOCO/previous year	0.00	15.85	31.70	47.55	63.40
	Net Loan-Opening	190.21	174.36	158.51	142.66	126.81
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	15.85	15.85	15.85	15.85	15.85
	Net Loan-Closing	174.36	158.51	142.66	126.81	110.96
	Average Loan	182.29	166.44	150.59	134.74	118.89
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	16.11	14.71	13.31	11.91	10.51
	Rep Schedule	12 Annual instalments from 21.10.2014				
3	Bond XXXV					
	Gross loan opening	6.00	6.00	6.00	6.00	6.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.50	1.00	1.50
	Net Loan-Opening	6.00	6.00	5.50	5.00	4.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.50	0.50	0.50	0.50
	Net Loan-Closing	6.00	5.50	5.00	4.50	4.00
	Average Loan	6.00	5.75	5.25	4.75	4.25



	Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%
	Interest	0.58	0.55	0.51	0.46	0.41
	Rep Schedule	12 Annual instalments from 31.5.2015				
4	Bond XXXVI					
	Gross loan opening	17.00	17.00	17.00	17.00	17.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	1.13	2.26
	Net Loan-Opening	17.00	17.00	17.00	15.87	14.74
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1.13	1.13	1.13
	Net Loan-Closing	17.00	17.00	15.87	14.74	13.61
	Average Loan	17.00	17.00	16.44	15.31	14.18
	Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
	Interest	1.59	1.59	1.54	1.43	1.33
	Rep Schedule	15 Annual instalments from 29.8.2016				
5	Bond XXXVII					
	Gross loan opening	42.00	42.00	42.00	42.00	42.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	3.50	7.00	10.50
	Net Loan-Opening	42.00	42.00	38.50	35.00	31.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	3.50	3.50	3.50	3.50
	Net Loan-Closing	42.00	38.50	35.00	31.50	28.00
	Average Loan	42.00	40.25	36.75	33.25	29.75
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	3.89	3.72	3.40	3.08	2.75
	Rep Schedule	12 Annual instalments from 26.12.2015				
6	BOND XL					
	Gross loan opening	58.00	58.00	58.00	58.00	58.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.83	9.66
	Net Loan-Opening	58.00	58.00	58.00	53.17	48.34
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.83	4.83	4.83
	Net Loan-Closing	58.00	58.00	53.17	48.34	43.51
	Average Loan	58.00	58.00	55.59	50.76	45.93
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	5.39	5.39	5.17	4.72	4.27
	Rep Schedule	12 Annual instalments from 28.6.2016				



7	SBI (21.3.2012)					
	Gross loan opening	29.00	29.00	29.00	29.00	29.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	2.64	5.27
	Net Loan-Opening	29.00	29.00	29.00	26.36	23.73
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	2.64	2.64	2.64
	Net Loan-Closing	29.00	29.00	26.36	23.73	21.09
	Average Loan	29.00	29.00	27.68	25.05	22.41
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	2.97	2.97	2.84	2.57	2.30
	Rep Schedule	22 semi annual instalments from 31.8.2016				
8	Bond XLI					
	Gross loan opening	104.00	104.00	104.00	104.00	104.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	8.67	17.34
	Net Loan-Opening	104.00	104.00	104.00	95.33	86.66
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.67	8.67	8.67
	Net Loan-Closing	104.00	104.00	95.33	86.66	77.99
	Average Loan	104.00	104.00	99.67	91.00	82.33
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	9.20	9.20	8.82	8.05	7.29
	Rep Schedule	12 annual instalments from 19.10.2016				
9	Bond XXXVIII					
	Gross loan opening	9.00	9.00	9.00	9.00	9.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	9.00	9.00	9.00	9.00	9.00
	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	9.00	9.00	9.00	9.00	9.00
	Average Loan	9.00	9.00	9.00	9.00	9.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	0.83	0.83	0.83	0.83	0.83
	Rep Schedule	9.3.2027 Bullet Payment				
10	BOND XXXIX)					
	Gross loan opening	40.00	40.00	40.00	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	40.00	40.00	40.00	40.00	40.00
	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	40.00	40.00	40.00	40.00	40.00



	Average Loan	40.00	40.00	40.00	40.00	40.00
	Rate of Interest	9.400%	9.400%	9.400%	9.400%	9.400%
	Interest	3.76	3.76	3.76	3.76	3.76
	Rep Schedule	29.3.2027 Bullet Payment				
	IFC (IFC A Loan) (31419-00)					
11	Gross loan opening	7.90	7.90	7.90	7.90	7.90
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.79
	Net Loan-Opening	7.90	7.90	7.90	7.90	7.11
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.79	0.79
	Net Loan-Closing	7.90	7.90	7.90	7.11	6.32
	Average Loan	7.90	7.90	7.90	7.50	6.71
	Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
	Interest	0.26	0.26	0.26	0.24	0.22
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017				
12	FC Bond (17.1.2013)					
	Gross loan opening	2.43	2.43	2.43	2.43	2.43
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2.43	2.43	2.43	2.43	2.43
	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	2.43	2.43	2.43	2.43	2.43
	Average Loan	2.43	2.43	2.43	2.43	2.43
	Rate of Interest	3.875%	3.875%	3.875%	3.875%	3.875%
	Interest	0.09	0.09	0.09	0.09	0.09
	Rep Schedule	Bullet payment on 17.1.2023				
13	Bond XLIV					
	Gross loan opening	586.85	586.85	586.85	586.85	586.85
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	586.85	586.85	586.85	586.85	586.85
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	195.62
	Net Loan-Closing	586.85	586.85	586.85	586.85	391.23
	Average Loan	586.85	586.85	586.85	586.85	489.04
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	51.06	51.06	51.06	51.06	42.55
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
14	Bond XLV					
	Gross loan opening	300.00	300.00	300.00	300.00	300.00



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	25.00
	Net Loan-Opening	300.00	300.00	300.00	300.00	275.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	25.00	25.00
	Net Loan-Closing	300.00	300.00	300.00	275.00	250.00
	Average Loan	300.00	300.00	300.00	287.50	262.50
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	28.95	28.95	28.95	27.74	25.33
	Rep Schedule	12 annual instalments from 28.2.2018				
15	Bond XLVIII ADD CAP					
	Gross loan opening	0.00	472.23	472.23	472.23	472.23
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	472.23	472.23	472.23	472.23
	Additions during the year	472.23	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	472.23	472.23	472.23	472.23	472.23
	Average Loan	236.12	472.23	472.23	472.23	472.23
	Rate of Interest	8.2%	8.2%	8.2%	8.2%	8.2%
	Interest	19.36	38.72	38.72	38.72	38.72
	Rep Schedule					
	Total Loan					
	Gross loan opening	1492.39	1964.62	1964.62	1964.62	1964.62
	Cumulative Repayment upto DOCO/previous year	0.00	15.85	35.70	72.82	144.05
	Net Loan-Opening	1492.39	1948.77	1928.92	1891.80	1820.57
	Additions during the year	472.23	0.00	0.00	0.00	0.00
	Repayment during the year	15.85	19.85	37.12	71.24	266.86
	Net Loan-Closing	1948.77	1928.92	1891.80	1820.57	1553.71
	Average Loan	1720.58	1938.84	1910.36	1856.18	1687.14
	Weighted Average Rate of Interest	8.83%	8.76%	8.75%	8.74%	8.73%
	Interest	151.98	169.75	167.18	162.27	147.29



Annexure VIII

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET VII						
(₹ in lakh)						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII					
	Gross loan opening	480.00	480.00	480.00	480.00	480.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	40.00
	Net Loan-Opening	480.00	480.00	480.00	480.00	440.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	40.00	40.00
	Net Loan-Closing	480.00	480.00	480.00	440.00	400.00
	Average Loan	480.00	480.00	480.00	460.00	420.00
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	38.06	38.06	38.06	36.48	33.31
	Rep Schedule	12 Annual instalments from 20.5.2017				
2	BOND XL					
	Gross loan opening	58.00	58.00	58.00	58.00	58.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.83	9.66
	Net Loan-Opening	58.00	58.00	58.00	53.17	48.34
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.83	4.83	4.83
	Net Loan-Closing	58.00	58.00	53.17	48.34	43.51
	Average Loan	58.00	58.00	55.59	50.76	45.93
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	5.39	5.39	5.17	4.72	4.27
	Rep Schedule	12 Annual instalments from 28.6.2016				
3	SBI (21.3.2012)					
	Gross loan opening	174.00	174.00	174.00	174.00	174.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	15.82	31.64
	Net Loan-Opening	174.00	174.00	174.00	158.18	142.36
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	15.82	15.82	15.82
	Net Loan-Closing	174.00	174.00	158.18	142.36	126.54
	Average Loan	174.00	174.00	166.09	150.27	134.45
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	17.84	17.84	17.02	15.40	13.78
	Rep Schedule	22 semi annual instalments from 31.8.2016				
4	Bond XLI					
	Gross loan opening	439.53	439.53	439.53	439.53	439.53



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	36.63	73.26
	Net Loan-Opening	439.53	439.53	439.53	402.90	366.27
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	36.63	36.63	36.63
	Net Loan-Closing	439.53	439.53	402.90	366.27	329.64
	Average Loan	439.53	439.53	421.22	384.59	347.96
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	38.90	38.90	37.28	34.04	30.79
	Rep Schedule	12 annual instalments from 19.10.2016				
5	BOND XXXIX)					
	Gross loan opening	40.00	40.00	40.00	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	40.00	40.00	40.00	40.00	40.00
	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	40.00	40.00	40.00	40.00	40.00
	Average Loan	40.00	40.00	40.00	40.00	40.00
	Rate of Interest	9.400%	9.400%	9.400%	9.400%	9.400%
	Interest	3.76	3.76	3.76	3.76	3.76
	Rep Schedule	29.3.2027 Bullet Payment				
	IFC (IFC A Loan) (31419-00)					
6	Gross loan opening	8.05	8.05	8.05	8.05	8.05
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.81
	Net Loan-Opening	8.05	8.05	8.05	8.05	7.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.81	0.81
	Net Loan-Closing	8.05	8.05	8.05	7.25	6.44
	Average Loan	8.05	8.05	8.05	7.65	6.85
	Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
	Interest	0.26	0.26	0.26	0.25	0.22
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017				
7	FC Bond (17.1.2013)					
	Gross loan opening	1.24	1.24	1.24	1.24	1.24
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	1.24	1.24	1.24	1.24	1.24
	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	1.24	1.24	1.24	1.24	1.24
	Average Loan	1.24	1.24	1.24	1.24	1.24
	Rate of Interest	3.875%	3.875%	3.875%	3.875%	3.875%
	Interest	0.05	0.05	0.05	0.05	0.05



	Rep Schedule	Bullet payment on 17.1.2023				
8	Bond XLIV					
	Gross loan opening	443.31	445.85	445.85	445.85	445.85
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	443.31	445.85	445.85	445.85	445.85
	Additions during the year	2.54	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	147.77
	Net Loan-Closing	445.85	445.85	445.85	445.85	298.08
	Average Loan	444.58	445.85	445.85	445.85	371.97
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	38.68	38.79	38.79	38.79	32.36
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
9	Bond XLV ADD CAP					
	Gross loan opening	0.00	25.00	25.00	25.00	25.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	2.08
	Net Loan-Opening	0.00	25.00	25.00	25.00	22.92
	Additions during the year	25.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	2.08	2.08
	Net Loan-Closing	25.00	25.00	25.00	22.92	20.84
	Average Loan	12.50	25.00	25.00	23.96	21.88
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	1.21	2.41	2.41	2.31	2.11
	Rep Schedule	12 annual instalments from 28.2.2018				
10	Bond XLVII ADD CAP					
	Gross loan opening	0.00	48.48	48.48	48.48	48.48
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	48.48	48.48	48.48	48.48
	Additions during the year	48.48	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	4.04
	Net Loan-Closing	48.48	48.48	48.48	48.48	44.44
	Average Loan	24.24	48.48	48.48	48.48	46.46
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	2.16	4.33	4.33	4.33	4.15
	Rep Schedule	12 annual instalments from 20.10.2018				
11	Bond XLVIII ADD CAP					
	Gross loan opening	0.00	301.88	301.88	301.88	301.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	301.88	301.88	301.88	301.88
	Additions during the year	301.88	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	301.88	301.88	301.88	301.88	301.88
Average Loan	150.94	301.88	301.88	301.88	301.88
Rate of Interest	8.2%	8.2%	8.2%	8.2%	8.2%
Interest	12.38	24.75	24.75	24.75	24.75
Rep Schedule	4 equal instalments on 23.1.2020, 23.1.2022, 23.1.2025 and 23.1.2030				
Total Loan					
Gross loan opening	1644.13	1973.55	1973.55	1973.55	1973.55
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	57.28	157.45
Net Loan-Opening	1644.13	1973.55	1973.55	1916.27	1816.11
Additions during the year	377.90	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	57.28	100.17	251.98
Net Loan-Closing	2022.03	2022.03	1964.75	1864.59	1612.61
Average Loan	1833.08	2022.03	1993.39	1914.67	1738.60
Weighted Average Rate of Interest	8.66%	8.63%	8.62%	8.61%	8.60%
Interest	158.69	174.54	171.89	164.88	149.56



Annexure IX

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET VIII					
(₹ in lakh)					
	Details of Loan	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII				
	Gross loan opening	197.00	197.00	197.00	197.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	16.42
	Net Loan-Opening	197.00	197.00	197.00	180.58
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	16.42	16.42
	Net Loan-Closing	197.00	197.00	180.58	164.17
	Average Loan	197.00	197.00	188.79	172.38
	Rate of Interest	7.93%	7.93%	7.93%	7.93%
	Interest	15.62	15.62	14.97	13.67
	Rep Schedule	12 Annual instalments from 20.05.2017			
2	Bond XXXIV				
	Gross loan opening	125.00	125.00	125.00	125.00
	Cumulative Repayment upto DOCO/previous year	10.42	20.84	31.26	41.68
	Net Loan-Opening	114.58	104.16	93.74	83.32
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	10.42	10.42	10.42	10.42
	Net Loan-Closing	104.16	93.74	83.32	72.90
	Average Loan	109.37	98.95	88.53	78.11
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	9.67	8.75	7.83	6.90
	Rep Schedule	12 Annual instalments from 21.10.2014			
3	Bond XXXV				
	Gross loan opening	4.50	4.50	4.50	4.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.38	0.76	1.14
	Net Loan-Opening	4.50	4.12	3.74	3.36
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.38	0.38	0.38	0.38
	Net Loan-Closing	4.12	3.74	3.36	2.98
	Average Loan	4.31	3.93	3.55	3.17
	Rate of Interest	9.64%	9.64%	9.64%	9.64%
	Interest	0.42	0.38	0.34	0.31
	Rep Schedule	12 Annual instalments from 31.5.2015			
4	Bond XXXVI				
	Gross loan opening	14.25	14.25	14.25	14.25



	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.95	1.90
	Net Loan-Opening	14.25	14.25	13.30	12.35
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.95	0.95	0.95
	Net Loan-Closing	14.25	13.30	12.35	11.40
	Average Loan	14.25	13.78	12.83	11.88
	Rate of Interest	9.35%	9.35%	9.35%	9.35%
	Interest	1.33	1.29	1.20	1.11
	Rep Schedule	15 Annual instalments from 29.8.2016			
5	Bond XXXVII				
	Gross loan opening	35.25	35.25	35.25	35.25
	Cumulative Repayment upto DOCO/previous year	0.00	2.94	5.88	8.82
	Net Loan-Opening	35.25	32.31	29.37	26.43
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.94	2.94	2.94	2.94
	Net Loan-Closing	32.31	29.37	26.43	23.49
	Average Loan	33.78	30.84	27.90	24.96
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	3.12	2.85	2.58	2.31
	Rep Schedule	12 Annual instalments from 26.12.2015			
6	SBI (21.3.2012)				
	Gross loan opening	189.00	189.00	189.00	189.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	17.18	34.36
	Net Loan-Opening	189.00	189.00	171.82	154.64
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	17.18	17.18	17.18
	Net Loan-Closing	189.00	171.82	154.64	137.46
	Average Loan	189.00	180.41	163.23	146.05
	Rate of Interest	10.25%	10.25%	10.25%	10.25%
	Interest	19.37	18.49	16.73	14.97
	Rep Schedule	22 half yearly instalment from 31.08.2016			
7	Bond XL				
	Gross loan opening	48.00	48.00	48.00	48.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	4.00	8.00
	Net Loan-Opening	48.00	48.00	44.00	40.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	4.00	4.00	4.00
	Net Loan-Closing	48.00	44.00	40.00	36.00
	Average Loan	48.00	46.00	42.00	38.00
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	4.46	4.28	3.91	3.53



	Rep Schedule	12 Annual instalments from 28.6.2016			
8	Bond XLI				
	Gross loan opening	86.25	86.25	86.25	86.25
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	7.19	14.38
	Net Loan-Opening	86.25	86.25	79.06	71.87
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	7.19	7.19	7.19
	Net Loan-Closing	86.25	79.06	71.87	64.68
	Average Loan	86.25	82.66	75.47	68.28
	Rate of Interest	8.85%	8.85%	8.85%	8.85%
	Interest	7.63	7.31	6.68	6.04
	Rep Schedule	12 annual instalments from 19.10.2016			
9	Bond XXXVIII				
	Gross loan opening	7.50	7.50	7.50	7.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	7.50	7.50	7.50	7.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	7.50	7.50	7.50	7.50
	Average Loan	7.50	7.50	7.50	7.50
	Rate of Interest	9.25%	9.25%	9.25%	9.25%
	Interest	0.69	0.69	0.69	0.69
	Rep Schedule	Redeemable at par on 09.03.2027 (Bullet Payment)			
10	BOND XXXIX)				
	Gross loan opening	33.00	33.00	33.00	33.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	33.00	33.00	33.00	33.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	33.00	33.00	33.00	33.00
	Average Loan	33.00	33.00	33.00	33.00
	Rate of Interest	9.40%	9.40%	9.40%	9.40%
	Interest	3.10	3.10	3.10	3.10
	Rep Schedule	29.3.2027 Bullet Payment			
	IFC (IFC Loan) (31419-00)				
11	Gross loan opening	7.58	7.58	7.58	7.58
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.76
	Net Loan-Opening	7.58	7.58	7.58	6.82
	Additions during the year	0.00	0.00	0.00	0.00



	Repayment during the year	0.00	0.00	0.76	0.76
	Net Loan-Closing	7.58	7.58	6.82	6.07
	Average Loan	7.58	7.58	7.20	6.45
	Rate of Interest	3.23%	3.23%	3.23%	3.23%
	Interest	0.24	0.24	0.23	0.21
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017			
12	FC Bond (17.1.2013)				
	Gross loan opening	0.63	0.63	0.63	0.63
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.63	0.63	0.63	0.63
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.63	0.63	0.63	0.63
	Average Loan	0.63	0.63	0.63	0.63
	Rate of Interest	3.875%	3.875%	3.875%	3.875%
	Interest	0.02	0.02	0.02	0.02
	Rep Schedule	Bullet payment on 17.1.2023			
13	Bond XLIV				
	Gross loan opening	695.00	695.00	695.00	695.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	695.00	695.00	695.00	695.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	231.67
	Net Loan-Closing	695.00	695.00	695.00	463.33
	Average Loan	695.00	695.00	695.00	579.17
	Rate of Interest	8.70%	8.70%	8.70%	8.70%
	Interest	60.47	60.47	60.47	50.39
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028			
14	Bond XLV				
	Gross loan opening	70.21	70.21	70.21	70.21
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	5.85
	Net Loan-Opening	70.21	70.21	70.21	64.36
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	5.85	5.85
	Net Loan-Closing	70.21	70.21	64.36	58.51
	Average Loan	70.21	70.21	67.29	61.44



	Rate of Interest	9.65%	9.65%	9.65%	9.65%
	Interest	6.78	6.78	6.49	5.93
	Rep Schedule	12 annual instalments from 28.2.2018			
15	Bond XLVI				
	Gross loan opening	624.72	624.72	624.72	624.72
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	624.72	624.72	624.72	624.72
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	624.72	624.72	624.72	624.72
	Average Loan	624.72	624.72	624.72	624.72
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	58.10	58.10	58.10	58.10
	Rep Schedule	Three equal Instalments on 4.9.2019, 4.9.2024 and 4.9.2029			
	Total Loan				
	Gross loan opening	2137.89	2137.89	2137.89	2137.89
	Cumulative Repayment upto DOCO/previous year	10.42	24.16	67.22	133.30
	Net Loan-Opening	2127.47	2113.73	2070.67	2004.59
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	13.74	43.06	66.08	297.75
	Net Loan-Closing	2113.73	2070.67	2004.59	1706.83
	Average Loan	2120.60	2092.20	2037.63	1855.71
	Weighted Average Rate of Interest	9.01%	9.00%	9.00%	9.01%
	Interest	191.04	188.38	183.34	167.29



Annexure X

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
ASSET IX**

(₹ in lakh)

	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond - XLIII					
	Gross loan opening	480.00	480.00	480.00	480.00	480.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	40.00
	Net Loan-Opening	480.00	480.00	480.00	480.00	440.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	40.00	40.00
	Net Loan-Closing	480.00	480.00	480.00	440.00	400.00
	Average Loan	480.00	480.00	480.00	460.00	420.00
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	38.06	38.06	38.06	36.48	33.31
	Rep Schedule	12 Annual instalments from 20.5.2017				
2	BOND XL					
	Gross loan opening	58.00	58.00	58.00	58.00	58.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.83	9.66
	Net Loan-Opening	58.00	58.00	58.00	53.17	48.34
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.83	4.83	4.83
	Net Loan-Closing	58.00	58.00	53.17	48.34	43.51
	Average Loan	58.00	58.00	55.59	50.76	45.93
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	5.39	5.39	5.17	4.72	4.27
	Rep Schedule	12 Annual instalments from 28.6.2016				
3	SBI (21.3.2012)					
	Gross loan opening	174.00	174.00	174.00	174.00	174.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	15.82	31.64
	Net Loan-Opening	174.00	174.00	174.00	158.18	142.36
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	15.82	15.82	15.82
	Net Loan-Closing	174.00	174.00	158.18	142.36	126.55
	Average Loan	174.00	174.00	166.09	150.27	134.45
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	17.84	17.84	17.02	15.40	13.78
	Rep Schedule	22 semi annual instalments from 31.8.2016				
4	Bond XLI					
	Gross loan opening	439.53	439.53	439.53	439.53	439.53
	Cumulative Repayment	0.00	0.00	0.00	36.63	73.26



	uptoDOCO/previous year					
	Net Loan-Opening	439.53	439.53	439.53	402.90	366.27
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	36.63	36.63	36.63
	Net Loan-Closing	439.53	439.53	402.90	366.27	329.64
	Average Loan	439.53	439.53	421.22	384.59	347.96
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	38.90	38.90	37.28	34.04	30.79
	Rep Schedule	12 annual instalments from 19.10.2016				
5	BOND XXXIX)					
	Gross loan opening	40.00	40.00	40.00	40.00	40.00
	Cumulative Repayment uptoDOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	40.00	40.00	40.00	40.00	40.00
	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	40.00	40.00	40.00	40.00	40.00
	Average Loan	40.00	40.00	40.00	40.00	40.00
	Rate of Interest	9.400%	9.400%	9.400%	9.400%	9.400%
	Interest	3.76	3.76	3.76	3.76	3.76
	Rep Schedule	29.3.2027 Bullet Payment				
6	IFC (IFC A Loan) (31419-00)					
	Gross loan opening	125.17	125.17	125.17	125.17	125.17
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	12.52
	Net Loan-Opening	125.17	125.17	125.17	125.17	112.65
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	12.52	12.52
	Net Loan-Closing	125.17	125.17	125.17	112.65	100.13
	Average Loan	125.17	125.17	125.17	118.91	106.39
	Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
	Interest	4.04	4.04	4.04	3.84	3.44
	Rep Schedule	20 Semi Annual Payment starting from 15-09-2017				
7	FC Bond (17.1.2013)					
	Gross loan opening	3.04	3.04	3.04	3.04	3.04
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	3.04	3.04	3.04	3.04	3.04
	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	3.04	3.04	3.04	3.04	3.04
	Average Loan	3.04	3.04	3.04	3.04	3.04
	Rate of Interest	3.875%	3.875%	3.875%	3.875%	3.875%
	Interest	0.12	0.12	0.12	0.12	0.12



	Rep Schedule	Bullet payment on 17.1.2023				
8	Bond XLIV					
	Gross loan opening	443.31	445.85	445.85	445.85	445.85
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	443.31	445.85	445.85	445.85	445.85
	Additions during the year	2.54	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	147.77
	Net Loan-Closing	445.85	445.85	445.85	445.85	298.08
	Average Loan	444.58	445.85	445.85	445.85	371.97
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	38.68	38.79	38.79	38.79	32.36
	Rep Schedule	3 equall instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
9	Bond XLV					
	Gross loan opening	0.00	25.00	25.00	25.00	25.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	2.08
	Net Loan-Opening	0.00	25.00	25.00	25.00	22.92
	Additions during the year	25.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	2.08	2.08
	Net Loan-Closing	25.00	25.00	25.00	22.92	20.84
	Average Loan	12.50	25.00	25.00	23.96	21.88
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	1.21	2.41	2.41	2.31	2.11
	Rep Schedule	12 annual instalments from 28.2.2018				
10	Bond XLVII ADD CAP					
	Gross loan opening	0.00	48.48	48.48	48.48	48.48
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	48.48	48.48	48.48	48.48
	Additions during the year	48.48	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	4.04
	Net Loan-Closing	48.48	48.48	48.48	48.48	44.44
	Average Loan	24.24	48.48	48.48	48.48	46.46
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	2.16	4.33	4.33	4.33	4.15
	Rep Schedule	12 annual instalments from 20.10.2018				
11	Bond XLVIII ADD CAP					
	Gross loan opening	0.00	301.88	301.88	301.88	301.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	301.88	301.88	301.88	301.88
	Additions during the year	301.88	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	301.88	301.88	301.88	301.88	301.88
Average Loan	150.94	301.88	301.88	301.88	301.88
Rate of Interest	8.2%	8.2%	8.2%	8.2%	8.2%
Interest	12.38	24.75	24.75	24.75	24.75
Rep Schedule	4 equal instalments on 23.1.2020, 23.1.2022, 23.1.2025 and 23.1.2030				
Total Loan					
Gross loan opening	1763.04	2092.46	2092.46	2092.46	2092.46
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	57.28	169.15
Net Loan-Opening	1763.04	2092.46	2092.46	2035.19	1923.31
Additions during the year	377.90	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	57.28	111.87	263.68
Net Loan-Closing	2140.94	2140.94	2083.67	1971.79	1708.11
Average Loan	1951.99	2140.94	2112.30	2027.73	1839.95
Weighted Average Rate of Interest	8.33%	8.33%	8.32%	8.31%	8.31%
Interest	162.54	178.40	175.74	168.54	152.84



Annexure XI

