

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 115/TT/2017

Coram:

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

Date of Order: 23.07.2018

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 of **Asset-1** : combined assets of 1500 MVA 765/400/33 kV ICT-I, ICT-II, ICT-III and ICT-IV along with associated bays at Jhattikara 765/400 kV new Sub-station; **Asset-2** : combined assets of 1500 MVA 765/400/33 kV ICT-I and ICT-II along with associated bays at Meerut Sub-station; **Asset-3** : associated bays for LILO of both circuits of 400 kV D/C Bamnoli-Mundka/Bawana at Jhattikara 765/400 kV New Sub-station; **Asset-4** : one no. 765 kV line bay for 765 kV Agra- Jhattikara line including 765 kV 240 MVAR switchable line reactor as bus reactor operation mode at 765/400 kV Jhattikara (New) Sub-station; **Asset-5** : Associated line bays for (765 kV S/C Agra – Jhattikara Transmission Line) at Agra Sub-station; **Asset-6** : One No. 765 kV line bay for 765 kV Agra-Meerut line along with 765 kV 240 MVAR switchable line reactor under bus reactor operation mode at 765/400/220 kV Meerut Sub-station; **Asset-7** : Associated line bays for 765 kV S/C Agra – Meerut Transmission Line at Agra Sub-station; **Asset-8** : 765 kV 240 MVAR Bus Reactor along with associated bays at 765/400/220 kV at Meerut Sub-station; **Asset-9** : 765 kV 240 MVAR Bus Reactor along with associated bays at 765/400/220 kV at Jhattikara Sub-station; **Asset-10** : Associated bays at Jhattikara for 765 kV Jhattikara – Bhiwani Line under 765 kV system for Central part of Northern Grid Part-II under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.



And in the matter of:

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

....Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited
Vidyut Bhawan, Vidyut Marg, Jaipur- 302005
2. Ajmer Vidyut Vitran Nigam Limited
400 kV GSS Building, Ajmer Road,
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited
400 kV GSS Building, Ajmer Road,
Heerapura, Jaipur
4. Jodpur Vidyut Vitran Nigam Limited
400 kV GSS Building, Ajmer Road,
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board
Vidut Bhawan, Kumar House Complex Building-II
Shimla-171004
6. Punjab State Electricity Board
Thermal Shed Tia,
Near 22 Phatak
Patiala-147001
7. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) -134109
8. Power Development Department
Government of Jammu & Kashmir
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited
Shakti Bhawan, 14, Ashok Marg
Lucknow- 226001



10. Delhi Transco Limited
Shakti Sadan, Kotla Road,
New Delhi
11. BSES Yamunna Power Limited
BSES Bhawan, Nehru Plakhe,
New Delhi
12. BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place,
New Delhi
13. North Delhi Power Limited
Power trading & Load Dispatch Group,
Cennet Building,
Adjacent to 66/11 kV Pitampura-3
Grid Building, Near PP Jewellers
Pitampura, new Delhi- 110034
14. Chandigarh Administration
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Limited
Urja Bhawan, Kanwali Road
Dehradun
16. North Central Railways
Allahabad
17. New Delhi Municipal Cuonil
Palika Kendra, Sansad marg,
New Delhi- 110002

...Respondents

For Petitioner : Shri V. P. Rastogi, PGCIL
Shri Abhay Choudhary, PGCIL
Shri B. Dash, PGCIL
Shri Rakesh Prasad, PGCIL
Shri S.S. Raju, PGCIL

For Respondents : Shri Abhishek Upadhyay, Advocate, TPDDL
Shri Varun Shankar, Advocate, TPDDL
Shri R. B. Sharma, Advocate, BRPL



ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for trueing up of capital expenditure for period 1.4.2012 to 31.3.2014 and determination of tariff for the 2014-19 tariff period for **Asset-1** : combined assets of 1500 MVA 765/400/33 kV ICT-I, ICT-II, ICT-III and ICT-IV along with associated bays at Jhattikara 765/400 kV new Sub-station; **Asset-2** : combined assets of 1500 MVA 765/400/33 kV ICT-I and ICT-II along with associated bays at Meerut Sub-station; **Asset-3** : associated bays for LILO of both circuits of 400 kV D/C Bamnoui-Mundka/Bawana at Jhattikara 765/400 kV New Sub-station; **Asset-4** : one no. 765 kV line bay for 765 kV Agra- Jhattikara line including 765 kV 240 MVAR switchable line reactor as bus reactor operation mode at 765/400 kV Jhattikara (New) Sub-station; **Asset-5** : Associated line bays for (765 kV S/C Agra – Jhattikara Transmission Line) at Agra Sub-station; **Asset-6** : One No. 765 kV line bay for 765 kV Agra- Meerut line along with 765 kV 240 MVAR switchable line reactor under bus reactor operation mode at 765/400/220 kV Meerut Sub-station; **Asset-7** : Associated line bays for 765 kV S/C Agra – Meerut Transmission Line at Agra Sub-station; **Asset-8** : 765 kV 240 MVAR Bus Reactor along with associated bays at 765/400/220 kV at Meerut Sub-station; **Asset-9** : 765 kV 240 MVAR Bus Reactor along with associated bays at 765/400/220 kV at Jhattikara Sub-station; **Asset-10** : Associated bays at Jhattikara for 765 kV Jhattikara – Bhiwani Line; (hereinafter referred as “transmission asset”) under 765 kV system for Central part of Northern Grid Part-II in Northern Region (hereinafter referred as “transmission



system”) under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the combined assets.

2. The petitioner has made the following prayers:-

1) “Approve the Trued up Transmission Tariff for the tariff block 2009-14 block for the assets covered under this petition, as per para-13 above. The adjustment billing shall be raised.

2) Admit the capital cost as on 31.03.2014 as claimed in the Petition and approve the Additional Capitalization incurred during 2009-14 period and projected to be incurred during the tariff block 2014-19 as claimed in the petition.

3) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per para- 16 above.

4) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause 25 of the Tariff regulations 2014.

5) Allow the Petitioner to approach Hon’ble Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.

6) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.

7) Allow the initial spares as procured in the current project in full based on total project cost as given in Para-12.2 under Regulation 8 of CERC tariff regulation,2009.

8) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.



9) Allow the petitioner to bill and recover 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. Further, any taxes and duties including cess etc. imposed by any statutory/Govt/municipal authorities shall be allowed to be recovered from the beneficiaries.

10) Allow reimbursement of tax if any on account of the proposed implementation of GST.

and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice “.

3. The petitioner has published the notice of this application in the newspapers in accordance with Section 64 of Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No. 9, has filed reply vide affidavit dated 19.6.2017, BSES Rajdhani Power Limited (BRPL), Respondent No. 12, has filed reply affidavit dated 24.7.2017 and Tata Power Delhi Distribution Limited (TPDDCL), Respondent No. 13, has filed reply affidavit dated 24.11.2017. The petitioner has filed its rejoinder to the reply vide affidavits dated 1.8.2017, 11.10.2017 and 26.2.2018. The issues raised by UPPCL, BRPL and TPDDCL and the clarifications given by the petitioner are dealt in relevant paragraphs of the order.

4. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

(i) The final tariff for the instant transmission assets was allowed by the Commission vide orders dated 20.1.2015, 6.5.2015 and 18.3.2016 in



Petition Nos. 100/TT/2012, 201/TT/2012 and 37/TT/2013 respectively; where the petitioner had submitted the Auditor's Certificates and Management Certificates for Capital Cost as on COD and details of projected capital expenditure during 2009-14 period. Subsequently, the petitioner filed Review Petition No. 6/RP/2015 in Petition No. 100/TT/2012 and Review Petition No. 14/RP/2015 in Petition No. 201/TT/2012, which have been disposed of by the Commission dated 15.9.2016 and 29.6.2016 respectively.

(ii) The petitioner has submitted the date of commercial operation of Assets I, III, IV, IX and X as 1.10.2012, Assets II, VI and VII as 1.6.2013, Asset V as 1.5.2013 and Asset VIII as 1.2.2013.

(iii) In the instant petition, the petitioner has submitted the capital expenditure incurred for the instant assets during the period 2009-14 vide Auditor certificate dated 10.4.2017 for the purpose of truing-up. The actual capital expenditure claimed by the petitioner is as under:-

Assets	Apportioned approved cost	Expenditure incurred up to COD	Actual Additional Capital Expenditure		Total completion cost (31.3.2014)
			2012-13	2013-14	
Asset I	57444.28	33217.60	6466.12	2054.72	41738.44
Asset II	27953.50	22148.56	0.00	-44.16	22104.40
Asset III	6618.32	4905.23	487.28	268.60	5661.11
Asset IV	7036.09	5664.07	0.00	385.85	6049.92
Asset V	1441.08	1055.85	0.00	106.54	1162.39
Asset VI	6493.21	5879.76	0.00	145.87	6025.63
Asset VII	1269.57	1077.82	0.00	84.57	1162.39
Asset VIII	6066.24	4492.38	482.64	279.38	5254.40
Asset IX	8041.96	5187.16	436.93	130.66	5754.75
Asset X	2500.11	2144.79	122.61	56.28	2323.68
Total	124864.40	85773.22	7995.58	3468.31	97237.11



(iv) The petitioner has claimed the following transmission charges for the instant assets:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III		Asset IV	Asset V
	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation	800.94	854.12	1125.45	86.40	186.68	247.88	54.03
Interest on Loan	1043.39	270.95	1168.68	168.53	341.10	316.68	40.31
Return on Equity	909.06	2069.55	1117.86	141.97	298.08	272.11	53.32
Interest on WC	79.80	177.30	95.89	15.98	33.47	27.89	7.86
O&M Expenses	297.20	628.40	314.20	123.84	261.84	168.00	84.00
Total	3130.39	7000.32	3822.08	536.72	1121.18	1032.56	239.51

(₹ in lakh)

Particulars	Asset-VI	Asset-VII	Asset-VIII		Asset IX		Asset X	
	2013-14 (pro-rata)	2013-14 (pro-rata)	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	256.56	49.60	40.81	267.53	127.03	271.51	43.80	93.22
Interest on Loan	298.58	57.19	45.29	285.39	162.97	329.08	70.50	141.83
Return on Equity	254.70	48.95	45.05	298.78	155.62	334.57	63.58	135.05
Interest on WC	26.46	7.63	3.82	24.67	12.65	26.59	6.49	13.58
O&M Expenses	152.73	76.37	14.45	91.64	43.34	91.64	43.34	91.64
Total	989.04	239.74	149.42	968.00	501.62	1053.39	227.71	475.33

(v) The petitioner has claimed the following Interest on Working Capital:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III		Asset IV	Asset V
	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2013-14 (pro-rata)
O&M Expenses	89.16	94.26	47.13	37.15	39.28	27.49	13.75
Maintenance Spares	49.53	52.37	26.18	20.64	21.82	15.27	7.64
Receivables	1043.46	1166.72	637.01	178.91	186.86	187.74	43.55
Total	1182.16	1313.35	1182.16	236.70	247.96	230.50	64.93
Interest	79.80	177.30	95.89	15.98	33.47	27.89	7.86
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.20%	13.20%

(₹ in lakh)

Particulars	Asset-VI	Asset-VII	Asset-VIII		Asset IX		Asset X	
	2013-14 (pro-rata)	2013-14 (pro-rata)	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
O&M Expenses	27.49	13.75	13.00	13.75	13.00	13.75	13.00	13.75
Maintenance	15.27	7.64	7.22	7.63	7.22	7.63	7.22	7.63



Receivables	197.81	47.95	149.42	161.33	167.21	175.57	75.90	79.22
Total	240.57	69.33	169.64	182.71	187.43	196.64	96.13	100.60
Interest	26.46	7.63	3.82	24.67	12.65	26.59	6.49	13.58
Rate of Interest	13.20%	13.20%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%

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

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

Capital Cost

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

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

a. the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

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

c. additional capital expenditure determined under regulation 9:

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

8. The petitioner has submitted the Auditor’s Certificate dated 10.4.2017 certifying the actual capital cost as on CODs and add-cap upto 31.3.2016, as mentioned above for all the assets.

9. UPPCL has submitted that in the process of truing up the capital cost has increased in general. However, in AFC the ROE has been revised as per the



enhanced MAT rate. Therefore, in general AFC has increased because of increase in capital cost as well as increased MAT rates. However, inconsistencies have been observed in case of Asset-III, VIII, IX & X, which needs to explained. In response, the petitioner has submitted that there is a difference in the tariff allowed in orders dated 20.1.2015, 6.5.2015 and 18.3.2016 in Petition Nos. 100/TT/2012, 201/TT/2012 and 37/TT/2013 respectively and tariff claimed in the present petition due to MAT rate, accrual IDC adjustment. Accrued IDC removed from COD cost and considered as part of Add-Cap for tariff purpose, actual cost as per the Auditor certificate. Further, relevant document and detailed calculation is submitted with the petition.

10. BRPL submitted that the Commission in its order dated 18.3.2016 in Petition No: 37/TT/2013 observed that the information submitted by the petitioner does not clearly show that the bus reactors at Meerut were able to mitigate the issue of high voltage. The petitioner in the instant petition has filed some data at 400 kV level but nothing has been mentioned about the voltage profile at 765 kV level. The same needs to submitted. In response, the petitioner submitted that the voltage profile of 765 kV level for the month of February, 2013, March, 2013, April, 2013 and May, 2013 was 38%, 29%, 22% and 6% respectively. Further, with the COD of Asset-VIII on 1.2.2013, over-voltage at 765 kV level was controlled.



Time Over-run

11. The schedule COD of the instant assets was 1.2.2012. The details of the COD of the instant assets as given above. The time over-run of 8 months and 12 months in case of Assets-I and II was condoned by the Commission vide order dated 15.9.2016 in Review Petition No. 6/RP/2015 in Petition No. 100/TT/2012. The time over-run of 8 to 16 months in case of Assets III to X was condoned by the Commission in order dated 6.5.2015 in Petition No. 201/TT/2012.

Interest During Construction (IDC)

12. The petitioner has submitted the information related to IDC and mentioned the year-wise discharge of the entire IDC claimed. The IDC has been worked out on cash basis up to COD, for all the assets, based on the available information, i.e. loan details mentioned in Form-13 and the working sheet of the IDC. These IDC amounts have been worked out after allowing time over-run in all the assets.

13. BRPL and TPDDL has submitted that actual IDC expenditure only upto COD only should be considered for the purpose of computation of tariff and the IDC accrued and disbursed after COD should not be considered. The petitioner has claimed the IDC expenditure after COD as additional capital expenditure and it should not be allowed as additional capital expenditure. In response, the petitioner submitted that under Assets-III, IV and VII entire amount of IDC was discharged upto COD. For the remaining assets, the accrued IDC as on COD



was not considered while calculating the tariff as the same was incurred, but not discharged upto COD. The accrued IDC has been taken out of COD expenditure and added in the additional capitalization, when it has been discharged.

14. The asset-wise details of IDC claimed as per Auditor's certificate and IDC worked out and considered for tariff purpose, are as follows:-

(₹ in lakh)					
	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-V
Total IDC (As per Auditor's Certificate)	2531.52	1742.45	113.58	543.09	118.77
IDC Claimed as on COD	2210.80	1028.77	113.58	543.09	95.49
IDC Allowed as on COD	2205.45	1025.95	113.58	543.09	91.51
IDC Claimed to be discharged in 2012-13	320.72	0.00	0.00	0.00	0.00
IDC Allowed to be discharged in 2012-13	320.72	0.00	0.00	0.00	0.00
IDC Claimed to be discharged in 2013-14	0.00	713.68	0.00	0.00	23.28
IDC Allowed to be discharged in 2013-14	0.00	710.26	0.00	0.00	6.91
Total IDC Allowed	2526.17	1736.21	113.58	543.09	98.42

(₹ in lakh)					
	Asset-VI	Asset-VII	Asset-VIII	Asset-IX	Asset-X
Total IDC (As per Auditor's Certificate)	476.74	118.77	322.53	248.61	108.49
IDC Claimed as on COD	292.84	118.77	227.21	150.98	71.28
IDC Allowed as on COD	292.38	118.77	226.25	150.37	71.00
IDC Claimed to be discharged in 2012-13	0.00	0.00	24.08	96.63	37.21
IDC Allowed to be discharged in 2012-13	0.00	0.00	24.08	96.63	37.21
IDC Claimed to be discharged in 2013-14	183.90	0.00	71.24	0.00	0.00
IDC Allowed to be discharged in 2013-14	184.36	0.00	71.24	0.00	0.00
Total IDC Allowed	476.74	118.77	321.57	247.00	108.21



Incidental Expenditure During Construction (IEDC)

15. The "IEDC limit" indicated in the "Abstract Cost Estimate", which is 5.00% of the hard cost is considered in the instant case. As the IEDC claimed for all the assets as on COD is within 5.00% of the hard cost, the IEDC claimed corresponding to individual assets has been allowed to be capitalised.

16. The capital cost considered as on COD after allowing the IDC and IEDC on cash basis is as follows:-

(₹ in lakh)

Assets	Capital cost claimed as on COD	Less: Total IDC claimed	Add: Allowable IDC as on COD (cash basis)	Capital Cost as on COD considering allowable IDC (cash basis) and IEDC
Asset I	33217.60	2531.52	2205.45	32891.53
Asset II	22148.56	1742.45	1025.95	21432.06
Asset III	4905.23	113.58	113.58	4905.23
Asset IV	5664.07	543.09	543.09	5664.07
Asset V	1055.85	118.77	91.51	1028.59
Asset VI	5879.76	476.74	292.38	5695.40
Asset VII	1077.82	118.77	118.77	1077.82
Asset VIII	4492.38	322.53	226.25	4396.10
Asset IX	5187.16	248.61	150.37	5088.92
Asset X	2144.79	108.49	71.00	2107.30

Initial spares

17. Regulation 8 (iv) of the 2009 tariff Regulations provides as under:-

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

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



18. BRPL and TPDDL submitted that initial spares are beyond the ceiling limits prescribed under Regulation 8 of the 2009 Tariff Regulations and that the initial spares are also beyond the cut-off date. In response, the petitioner submitted that as per actual completion cost, total initial spares claimed is under the ceiling limit considering combined spares claimed for all the assets and allowable limit as per the 2009 Tariff Regulations. The petitioner has further submitted that the initial spares may be treated for the entire project and not element wise.

19. The Initial Spares have been worked out considering the ceiling limits specified in the 2009 Tariff Regulations. Further, the cut-off dates for all the assets are beyond 2009-14 tariff block. Therefore, the allowable Initial Spares during 2009-14 has been worked out after considering the capital cost as on COD and additional capitalization during 2012-13 and 2013-14 i.e. capital cost up to 31.3.2014.

20. The Initial Spares claimed in case of Assets-II and VI is more than the ceiling limit provided in Regulation 8 of the 2009 Tariff Regulations. Accordingly, it is restricted. The details are as follows:-

(₹ in lakh)

Description	Total capital cost up to 31.3.2017	Total Initial Spares claimed	Capital Cost after considering IDC and IEDC on cash basis as on cut-off date (31.3.2014)	Initial Spares Claimed up to 31.3.2014	Ceiling limits	Initial Spares worked out	Excess Initial Spares claimed
Asset-II (Sub-station)	23597.52	599.82	22098.16	561.71	2.50%	552.22	9.49
Asset-VI (Sub-station)	6290.18	188.70	6025.63	180.76	2.50%	149.87	30.90



21. The year-wise break-up of Initial Spares for Assets – II and VI is as follows:-

(₹ in lakh)						
	Upto COD	2013-14	2014-15	2015-16	2016-17	Total
Asset-II	472.56	52.32	0.00	36.10	38.84	599.82
Asset-VI	150.31	14.81	0.00	11.36	12.22	188.70

22. The above mentioned Initial Spares being in excess have been reduced from the claimed additional capitalization and not from the capital cost as on COD, for both the assets. Therefore, ₹9.49 lakh and ₹30.90 lakh has been deducted from the add-cap of financial year 2013-14.

23. The allowable capital cost as on COD, after deducting excess initials spares is as follows:-

(₹ in lakh)			
Assets	Capital Cost as on COD after considering IDC & IEDC on cash basis	Less: Excess Initial Spares as on COD	Capital Cost after considering IDC & IEDC on cash basis and deducting Excess Initial Spares as on COD
Asset I	32891.53	0.00	32891.53
Asset II	21432.06	0.00	21432.06
Asset III	4905.23	0.00	4905.23
Asset IV	5664.07	0.00	5664.07
Asset V	1028.59	0.00	1028.59
Asset VI	5695.40	0.00	5695.40
Asset VII	1077.82	0.00	1077.82
Asset VIII	4396.10	0.00	4396.10
Asset IX	5088.92	0.00	5088.92
Asset X	2107.30	0.00	2107.30

Additional Capital Expenditure

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

“Additional Capitalisation.(1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after



the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Undischarged liabilities...;”

25. The additional capitalization worked out, after allowing IDC on cash basis and deducting excess Initial Spares from 2013-14 is mentioned below:-

(₹ in lakh)

Asset	2012-13			2013-14			Capital Cost as on 31.3.2014	
	Claimed Add cap	Add: Allowed IDC on cash basis	Add-cap Allowed	Claimed Addcap	Add: Allowed IDC on cash basis	Less: Exces Initial Spares		Add-cap Allowed
Asset I	6466.12	320.72	6786.84	2054.72	0.00	0.00	2054.72	41733.09
Asset II	0.00	0.00	0.00	-44.16	710.26	9.49	656.61	22088.67
Asset III	487.28	0.00	487.28	268.60	0.00	0.00	268.60	5661.11
Asset IV	0.00	0.00	0.00	385.85	0.00	0.00	385.85	6049.92
Asset V	0.00	0.00	0.00	106.54	6.91	0.00	113.45	1142.04
Asset VI	0.00	0.00	0.00	145.87	184.36	30.90	299.33	5994.73
Asset VII	0.00	0.00	0.00	84.57	0.00	0.00	84.57	1162.39
Asset VIII	482.64	24.08	506.72	279.38	71.24	0.00	350.62	5253.44
Asset IX	436.93	96.63	533.56	130.66	0.00	0.00	130.66	5753.14
Asset X	122.61	37.21	159.82	56.28	0.00	0.00	56.28	2323.40

Debt: Equity Ratio

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

“(1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

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

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

.....

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as



may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

27. The petitioner has claimed trued up Annual Fixed Charge based on debt-equity ratio of 70:30 admitted as on COD. The debt:equity ratio of 70:30 as on COD for the assets is in accordance with the 2009 Tariff Regulations and is considered for the purpose of truing up of the 2009-14 tariff. The details are given below:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	23024.07	70.00	15002.44	70.00	3433.66	70.00	3964.85	70.00
Equity	9867.46	30.00	6429.62	30.00	1471.57	30.00	1699.22	30.00
Total	32891.53	100.00	21432.06	100.00	4905.23	100.00	5664.07	100.00

(₹ in lakh)

Particulars	Asset-V		Asset-VI		Asset-VII		Asset-VIII	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	720.01	70.00	3986.78	70.00	754.47	70.00	3077.27	70.00
Equity	308.58	30.00	1708.62	30.00	323.35	30.00	1318.83	30.00
Total	1028.59	100.00	5695.40	100.00	1077.82	100.00	4396.10	100.00

(₹ in lakh)

Particulars	Asset-IX		Asset-X	
	Amount	(%)	Amount	(%)
Debt	3562.25	70.00	1475.11	70.00
Equity	1526.68	30.00	632.19	30.00
Total	5088.92	100.00	2107.30	100.00

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

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	29213.16	70.00	15462.07	70.00	3962.78	70.00	4234.94	70.00
Equity	12519.93	30.00	6626.60	30.00	1698.33	30.00	1814.98	30.00
Total	41733.09	100.00	22088.67	100.00	5661.11	100.00	6049.92	100.00



(₹ in lakh)

Particulars	Asset-V		Asset-VI		Asset-VII		Asset-VIII	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	799.43	70.00	4196.31	70.00	813.67	70.00	3677.41	70.00
Equity	342.61	30.00	1798.42	30.00	348.72	30.00	1576.03	30.00
Total	1142.04	100.00	5994.73	100.00	1162.39	100.00	5253.44	100.00

(₹ in lakh)

Particulars	Asset-IX		Asset-X	
	Amount	(%)	Amount	(%)
Debt	4027.20	70.00	1626.38	70.00
Equity	1725.94	30.00	697.02	30.00
Total	5753.14	100.00	2323.40	100.00

Return on Equity (“ROE”)

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

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

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

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

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

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

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

30. ROE has been worked out by considering year wise MAT rate submitted



by the petitioner in accordance with Regulation 15 of the 2009 Tariff Regulations. The tax rate for the year 2009-14 applicable to the petitioner for the purpose of grossing up of ROE is as under:-

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

31. We have considered the submissions of the petitioner. ROE is allowed in accordance with the provisions of the 2009 Tariff Regulations. The details of the trued up ROE allowed for the instant assets is shown in the table below:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III		Asset-IV	Asset-V	Asset-VI
	2012-13	2013-14	2013-14	2012-13	2013-14	2013-14	2013-14	2013-14
Opening Equity	9867.46	11903.51	6429.62	1471.57	1617.75	1699.22	308.58	1708.62
Addition due to Add Cap	2036.05	616.42	196.98	146.18	80.58	115.76	34.04	89.80
Closing Equity	11903.51	12519.93	6626.60	1617.75	1698.33	1814.98	342.61	1798.42
Average Equity	10885.49	12211.72	6528.11	1544.66	1658.04	1757.10	325.59	1753.52
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate	20.01%	20.96%	20.01%	20.01%	20.96%	20.96%	20.96%	20.96%
Rate of Return on Equity (Pre Tax)	19.377%	19.610%	19.377%	19.377%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	1054.64	2394.72	1054.13	149.65	325.14	315.85	58.53	286.55

(₹ in lakh)

Particulars	Asset-VII	Asset-VIII		Asset-IX		Asset-X	
	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Opening Equity	323.35	1318.83	1470.85	1526.68	1686.75	632.19	680.14
Addition due to Add Cap	25.37	152.02	105.19	160.07	39.20	47.95	16.88
Closing Equity	348.72	1470.85	1576.03	1686.75	1725.94	680.14	697.02
Average Equity	336.03	1394.84	1523.44	1606.71	1706.34	656.16	688.58



Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate	20.96%	20.01%	20.96%	20.01%	20.96%	20.01%	20.96%
Rate of Return on Equity (Pre Tax)	19.610%	19.377%	19.610%	19.377%	19.610%	19.377%	19.610%
Return on Equity (Pre Tax)	54.91	45.05	298.75	155.67	334.61	63.57	135.03

Interest on Loan (IOL)

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

33. UPPCL has submitted that the loans have been taken in shape of bonds. IFC loans which have fixed yearly rate of interest and therefore, there is no occasion for the petitioner to swap the loan portfolios with other loan portfolios have floating rate of interest. In response, the petitioner submitted that the loans are deployed in combination of fixed interest rate and floating interest rate (SBI and IFC). There is no swapping of loan portfolios after loan allocation.

34. We have considered the submissions of the petitioner and UPPCL. The IOL is worked out on the basis of the actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations which is as follows:-

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



b) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period;

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

35. The details of weighted average rate of interest are given in **Annexure-I to**

X. The IOL allowed under Regulation 16 of the 2009 Tariff Regulations is as follows:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III		Asset-IV	Asset-V	Asset-VI
	2012-13	2013-14	2013-14	2012-13	2013-14	2013-14	2013-14	2013-14
Gross Normative	23024.07	27774.86	15002.44	3433.66	3774.76	3964.85	720.01	3986.78
Cumulative Repayment up to	0.00	843.55	0.00	0.00	78.39	0.00	0.00	0.00
Net Loan-Opening	23024.07	26931.31	15002.44	3433.66	3696.37	3964.85	720.01	3986.78
Addition due to Additional Capitalization	4750.79	1438.30	459.63	341.10	188.02	270.10	79.42	209.53
Repayment during the year	843.55	1913.87	957.44	78.39	173.67	255.79	52.87	257.31
Net Loan-Closing	26931.31	26455.74	14504.64	3696.37	3710.72	3979.15	746.56	3939.00
Average Loan	24977.69	26693.52	14753.54	3565.02	3703.55	3972.00	733.29	3962.89
Weighted Average Rate of Interest on	8.7575%	8.7807%	8.2012%	9.0696%	9.0889%	9.0502%	5.8143%	9.08%
Interest	1093.72	2343.87	1008.31	161.67	336.61	329.52	39.08	299.77

(₹ in lakh)

Particulars	Asset-VII	Asset-VIII		Asset-IX		Asset-X	
	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	754.47	3077.27	3431.97	3562.25	3935.74	1475.11	1586.99
Cumulative Repayment up to Previous Year	0.00	0.00	40.81	0.00	127.07	0.00	43.82
Net Loan-Opening	754.47	3077.27	3391.16	3562.25	3808.67	1475.11	1543.16



Addition due to Additional Capitalization	59.20	354.70	245.43	373.49	91.46	111.87	39.40
Repayment during the year	49.60	40.81	267.50	127.07	271.56	43.82	93.27
Net Loan-Closing	764.08	3391.16	3369.09	3808.67	3628.57	1543.16	1489.28
Average Loan	759.27	3234.21	3380.13	3685.46	3718.62	1509.14	1516.22
Weighted Average Rate of Interest on	9.04%	8.38%	8.44%	8.84%	8.85%	9.33%	9.34%
Interest	57.19	45.18	285.17	162.83	329.01	70.40	141.67

Depreciation

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

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

.....

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

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

"17. Depreciation:

...

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

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

38. The assets would complete 12 years of life after 31.3.2014. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in the 2009 Tariff Regulations. The depreciation for the tariff



period 2009-14 has been tried up in accordance with Regulation 17 of the 2009

Tariff Regulations based on admitted capital expenditure as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III		Asset-IV	Asset-V	Asset-VI
	2012-13	2013-14	2013-14	2012-13	2013-14	2013-14	2013-14	2013-14
Opening Gross block	32891.53	39678.37	21432.06	4905.23	5392.51	5664.07	1028.59	5695.40
Additional Capitalization	6786.84	2054.72	656.61	487.28	268.60	385.85	113.45	299.33
Closing Gross block	39678.37	41733.09	22088.67	5392.51	5661.11	6049.92	1142.04	5994.73
Average gross block	36284.95	40705.73	21760.37	5148.87	5526.81	5857.00	1085.31	5845.07
Rate of Depreciation	4.6496%	4.7017%	5.2799%	3.0448%	3.1423%	4.7643%	5.3138%	5.2827%
Depreciable	28971.06	32850.24	19584.33	2750.14	3031.91	4775.34	976.78	5260.56
Remaining Depreciable Value	28971.06	32006.69	19584.33	2750.14	2953.52	4775.34	976.78	5260.56
Depreciation	843.55	1913.87	957.44	78.39	173.67	255.79	52.87	257.31

(₹ in lakh)

Particulars	Asset-VII	Asset-VIII		Asset-IX		Asset-X	
	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Opening Gross block	1077.82	4396.10	4902.82	5088.92	5622.48	2107.30	2267.12
Additional Capitalization	84.57	506.72	350.62	533.56	130.66	159.82	56.28
Closing Gross block	1162.39	4902.82	5253.44	5622.48	5753.14	2267.12	2323.40
Average gross block	1120.11	4649.46	5078.13	5355.70	5687.81	2187.21	2295.26
Rate of Depreciation	5.3135%	5.2667%	5.2677%	4.7453%	4.7744%	4.0074%	4.0637%
Depreciable Value	1008.09	4184.51	4570.31	4359.46	4658.36	1507.82	1605.06
Remaining Depreciable Value	1008.09	4184.51	4529.50	4359.46	4531.29	1507.82	1561.24
Depreciation	49.60	40.81	267.50	127.07	271.56	43.82	93.27

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

39. O & M Expenses allowed vide order dated 20.1.2015 in Petition No.

100/TT/2012, order dated 6.5.2015 in Petition No. 201/TT/2012 and Order dated



18.3.2016 in Petition No. 37/TT/2013 has been considered for the purpose of tariff calculation. However, as per Para 31 of Order dated 20.1.2015 in Petition No. 100/TT/2012, COD of Asset-II has to be considered as 1.6.2013. Therefore, O&M Expenses for Asset-II is considered as ₹261.83 lakh.

Interest on Working Capital (IWC)

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

(i) Maintenance Expenses

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

(ii) O & M Expenses

O&M expenses have been considered for one month

(iii) Receivables

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

(iv) Rate of interest on Working Capital

As per Proviso 3 of Regulation 28 of 2014 Tariff Regulation', in case of Assets-I, III, VIII, IX and X; SBI Base rate as on 1.4.2012 (i.e. 10.00%) plus 350 Bps i.e. 13.50% and in case of Assets-II, IV, V, VI and VII; SBI Base rate as on 1.4.2013 (i.e. 9.70%) plus 350 Bps i.e. 13.20% has been considered as the rate of interest on working capital.



41. The IWC trued up is as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III		Asset IV	Asset V
	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2013-14 (pro-rata)
Maintenance Spares	89.16	94.26	47.13	37.15	39.28	27.49	13.75
O&M Expenses	49.53	52.37	26.18	20.64	21.82	15.27	7.64
Receivables	1124.80	1244.78	672.75	176.45	188.49	199.73	44.07
Total	1263.49	1391.41	746.07	234.24	249.59	242.49	65.45
Interest	85.29	187.84	82.07	15.81	33.69	29.34	7.92
Rate of Interest	13.50%	13.50%	13.20%	13.50%	13.50%	13.20%	13.20%

(₹ in lakh)

Particulars	Asset-VI	Asset-VII	Asset-VIII		Asset IX		Asset X	
	2013-14 (pro-rata)	2013-14 (pro-rata)	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	27.49	13.75	13.00	13.75	13.00	13.75	13.00	13.75
O&M Expenses	15.27	7.64	7.22	7.64	7.22	7.64	7.22	7.64
Receivables	204.72	49.17	149.30	161.29	167.19	175.57	75.87	79.20
Total	247.49	70.55	169.53	182.67	187.41	196.95	96.10	100.58
Interest	27.22	7.76	3.81	24.66	12.65	26.59	6.49	13.58
Rate of Interest	13.20%	13.20%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%

Annual Transmission Charges

42. In view of the above, the annual fixed charges after truing up for the 2009-

14 tariff period is as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-III		Asset-VIII		Asset-IX	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Depreciation	843.55	1913.87	78.39	173.67	40.81	267.50	127.07	271.56
Interest on Loan	1093.72	2343.87	161.67	336.61	45.18	285.17	162.83	329.01
Return on Equity	1054.64	2394.72	149.65	325.14	45.05	298.75	155.67	334.61
Interest on Working Capital	85.29	187.84	15.81	33.69	3.81	24.66	12.65	26.59
O & M Expenses	297.20	628.40	123.84	261.84	14.45	91.64	43.34	91.64
Total	3374.40	7468.70	529.36	1130.96	149.30	967.71	501.56	1053.41



(₹ in lakh)

Particulars	Asset-II	Asset-IV	Asset-V	Asset-VI	Asset-VII	Asset X	
	2013-14					2012-13	2013-14
Depreciation	957.44	255.79	52.87	257.31	49.60	43.82	93.27
Interest on Loan	1008.31	329.52	39.08	299.77	57.19	70.40	141.67
Return on Equity	1054.13	315.85	58.53	286.55	54.91	63.57	135.03
Interest on Working Capital	82.07	29.34	7.92	27.22	7.76	6.49	13.58
O & M Expenses	261.83	168.01	84.00	152.73	76.37	43.34	91.64
Total	3363.77	1098.51	242.40	1023.60	245.83	227.62	475.19

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

43. The true-up tariff for the instant transmission system up to 2009-14 tariff period has been granted based on the actual COD/tariff COD of individual assets irrespective of the fact whether project as a whole is completed or not. This leads to granting of multiple tariffs for the assets covered under the single project/transmission system. The Commission, vide Regulation 6 of the 2014 Tariff Regulations has brought in the concept of a single consolidated petition to be submitted by the petitioner where it is provided that if all the elements of a transmission system have been declared under commercial operation prior to 1.4.2014, then a single tariff can be granted for all the assets covered under such a single project/transmission system. However, to determine a single transmission tariff for different assets after combining them, as per the 2014 Tariff Regulations, the concept of effective date of commercial operation and weighted average life has also been introduced in Regulation 27 pertaining to Depreciation of the 2014 Tariff Regulations. The relevant portions of Regulation 6 and Regulation 27 of the 2014 Tariff Regulations are as follows:-

“6. Tariff determination



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

Provided that:

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

Xxx
Xxx”

“27. Depreciation:

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

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

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

Xxx
Xxx”

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

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



assets.
Xxx
Xxx”

Effective Date of Commercial Operation (E-COD)

44. The Effective Date of Commercial Operation (E-COD) for the combined asset has been worked out based on the combined admitted capital cost of individual Assets as on 31.3.2014 and the actual COD of individual assets. Accordingly, the Effective Date of Commercial Operation (E-COD) for the combined asset has been worked out as 4.1.2013. The details are as under: -

Asset No.	Actual COD	Admitted Capital Cost as on 31.3.2014	Weight of the cost	No. of days from last COD	Weighted days	(₹ in lakh)
						Effective COD (Latest COD - Total Weighted days)
Asset I	1.10.2012	41733.09	42.95%	243	104.37	4.1.2013
Asset II	1.6.2013	22088.67	22.73%	0	0.00	
Asset III	1.10.2012	5661.11	5.83%	243	14.16	
Asset IV	1.10.2012	6049.92	6.23%	31	1.93	
Asset V	1.5.2013	1142.04	1.18%	31	0.36	
Asset VI	1.6.2013	5994.73	6.17%	0	0.00	
Asset VII	1.6.2013	1162.39	1.20%	0	0.00	
Asset VIII	1.2.2013	5253.44	5.41%	120	6.49	
Asset IX	1.10.2012	5753.14	5.92%	243	14.39	
Asset X	1.10.2012	2323.40	2.39%	243	5.81	
Total		97161.95	100.00%		147.51	



45. The E-COD has been used to determine the lapsed life of the combined asset as on 1.4.2014 as 1 year. (i.e. the number of completed years as on 1.4.2014 from E-COD).

Weighted Average Life (WAL)

46. A transmission asset has multiple elements (i.e. land, building, transmission line, sub-station and PLCC) and each element has different span of life. Therefore, in the 2014 Tariff Regulations, the concept of Weighted Average Life (WAL) has been introduced which has been used as the useful life of the project/ combined asset as a whole.

47. The Weighted Average Life (WAL) has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective lives as stipulated in the 2014 Tariff Regulations. The element wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, the Weighted Average Life (WAL) of the project as whole has been worked out as 23 years as shown below:-

(₹ in lakh)

Determination of Weighted Average Life of the Project							
Admitted Capital Cost as on 31.3.2014							
Particulars	Asset I	Asset II	Asset III	Asset IV	Asset V	Asset VI	Asset VII
Freehold Land	4316.04	0.00	2158.02	551.06	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	683.29	1.32	301.14	83.65	0.00	0.33	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Sub-Station Equipment	36733.76	22087.35	3039.11	5364.58	1106.98	5978.65	1126.64
PLCC	0.00	0.00	162.84	50.63	35.06	15.75	35.75
Total	41733.09	22088.67	5661.11	6049.92	1142.04	5994.73	1162.39

Asset VIII	Asset IX	Asset X	Combined Cost (a)	Life as per 2014 Regulation (b)	Weight (a) x (b)
0.00	511.86	511.86	8048.84	0	0.00
0.00	0.00	0.00	0.00	25	0.00
32.47	89.11	85.77	1277.08	25	31927.04
0.00	0.00	0.00	0.00	35	0.00
5220.96	5152.17	1652.12	87462.33	25	2186558.35
0.00	0.00	73.66	373.69	15	5605.34
5253.44	5753.14	2323.40	97161.95	23	2224090.73
Weighted Average life			23	Years	

48. The WAL has been used to determine the remaining useful life of the combined asset as on 31.3.2014, as 23 years.

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4720.22	4759.25	4879.97	4993.59	4993.59
Interest on Loan	5272.11	4914.49	4627.08	4325.40	3901.74
Return on equity	5756.94	5808.98	5945.02	6071.58	6071.58
Interest on Working Capital	465.78	463.07	465.91	468.16	462.18
O & M Expenses	1869.30	1931.30	1995.50	2061.75	2130.10
Total	18084.35	17877.09	17913.48	17920.48	17559.19

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



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	280.40	289.70	299.33	309.26	319.52
O & M expenses	155.78	160.94	166.29	171.81	177.51
Receivables	3014.06	2979.52	2985.58	2986.75	2926.53
Total	3450.24	3430.16	3451.20	3467.82	3423.56
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	465.78	463.07	465.91	468.16	462.18

Capital Cost

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

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

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

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

52. UPPCL submitted that the COD of the combined assets is 1.1.2013. However, the capital cost on 1.1.2013 is ₹97134 lakh as back calculated from Form-8, but the details have not been furnished by the petitioner. In response, the petitioner has submitted that the effective date is calculated in order to decide the life of all the assets as a whole. Further, tariff for the combined asset is calculated considering total cost, loan, equity, repayment and depreciation of the all the asset as on 31.3.2014.



53. The admitted capital cost of ₹97161.95 lakh as on 31.3.2014 as trued up in above paragraphs is considered as the capital cost as on 1.4.2014 for the purpose of determination of tariff for the 2014-19 tariff period. The total of combined estimated completion cost of the combined asset as on 31.3.2019 is ₹103231.50 lakh. The details of element wise capital cost (land, building, transmission line, sub-station and PLCC) as on 1.4.2014 are as under:-

Particulars	Combined admitted capital cost as on 31.3.2014	Additional capital expenditure				(₹ in lakh)	
		2014-15	2015-16	2016-17	Total	Admitted cost as 31.3.2019	
Capital Expenditure as on 31.3.2014							
Freehold Land	8048.84	0.00	55.30	0.00	55.30	8104.14	
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	
Building & Other Civil Works	1277.08	646.30	0.00	0.00	646.30	1923.38	
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-station Equipment	87462.33	797.28	261.46	4292.42	5351.16	92813.50	
PLCC	373.69	2.96	5.89	7.94	16.79	390.48	
Total	97161.95	1446.54	322.65	4300.36	6069.55	103231.50	

Initial Spares

54. The petitioner has claimed initial spares for each asset and has also indicated year wise payment made against the initial spares.

55. The total estimated completion cost up to 31.3.2017 has been considered, for each asset individually, and the ceiling limits have been considered as per 2009 Tariff Regulation. The details of the initial spares claimed and allowed for Assets II and VI are as follows:-



(₹ In lakh)

Assets	Total cost upto 31.3.17 (Inclusive of land cost, civil building, PLCC etc.)	Initial spares claimed up to 31.3.17	Capital cost after considering the allowable IDC & IEDC upto cut-off date i.e. 31.3.17	Spares claimed in proportion to adjusted capital cost	Ceiling limits	Initial Spares worked out up to 31.3.17	Excess Initial Spares to be deducted	Excess Initial Spares deducted upto 31.3.14	Excess Initial Spares to be deducted during 2014-17 period
Asset-II	23597.52	599.82	23591.28	599.66	2.50%	589.53	10.13	9.49	0.64
Asset-VI	6290.18	188.70	6290.18	188.70	2.50%	156.45	32.25	30.90	1.36

The claimed Initial Spares for rest of the Assets are within their ceiling limits.

56. The combined excess Initial Spares to be deducted upto 31.3.2017 from the combined capital cost of the instant assets is ₹42.38 lakh. However, the combined asset's excess Initial Spares of amount ₹40.39 lakh, up to 31.3.2014, has already been deducted during 2009-14 period. The remaining excess Initial Spares of the combined asset is ₹2.00 lakh, which is to be deducted from the respective asset's Add-cap for 1.4.2014 to 31.3.2017 period. The details are given below:-

(₹ In lakh)	
Assets	Excess Initial Spares reduced
	2016-17
Asset-II	0.64
Asset-VI	1.36
TOTAL	2.00

57. The allowed/disallowed excess initial spares would be reviewed at the time of true-up of the 2014-19 tariff on submission of audited capital costs of the assets up to 31.3.2017.



Additional Capital Expenditure

58. Clause 1, sub-clause (i) of Regulation 14 of the 2014 Tariff Regulations provides as follows:-

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

.....

(i) Undischarged liabilities recognized to be payable at a future date;

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

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

59. The petitioner has claimed the following projected additional capital expenditure during the 2014-19 tariff period and has submitted the Auditor Certificate dated 10.4.2017 in support, which is as under:-

Assets	Projected Expenditure			Estimated capital cost
	2014-15	2015-16	2016-17	
Asset I	835.88	55.52	1450.00	44079.84
Asset II	199.18	93.94	1200.00	23597.52
Asset III	43.92	17.62	400.00	6122.65
Asset IV	21.81	34.46	240.00	6346.19
Asset V	17.04	30.57	82.18	1292.18
Asset VI	19.88	4.67	240.00	6290.18
Asset VII	17.04	30.57	40.18	1250.18
Asset VIII	189.44	0.00	240.00	5683.84
Asset IX	68.24	27.65	310.00	6160.64
Asset X	34.11	27.65	100.00	2485.44
Total	1446.54	322.65	4302.36	103308.66

60. The petitioner has claimed the additional capital expenditure incurred during 2014-15 in case of Assets I, III, IX and X and during 2014-15 and 2015-



16 in case of Assets II, IV, V, VI, VII and VIII are before the cut-off date and is covered under Regulation 14 (1) (i) of the 2014 Tariff Regulation. The additional capital expenditure during 2015-16 and 2016-17 in case of Assets I, III, IX and X and during 2016-17 in case of Assets II, IV, V, VI, VII and VIII are after the cut-off date and is covered under Regulation 14(3)(iv) of the 2014 Tariff Regulations.

61. UPPCL has submitted that the petitioner has not provided any details on the additional capitalization of combined assets, except that the additional capitalization has been shown due to balance and retention payment. In response, the petitioner submitted that the additional capitalization claimed in 2014-19 is balance and retention payment duly audited as per the auditor certificate.

62. The allowable additional capitalization from 1.4.2014 to 31.3.2017 after deducting excess initial spares from 2016-17 is as under:-

(₹ In lakh)

Asset	2016-17			Additional capitalization Allowed
	Claimed Add-cap	Less: Excess Initial Spares	Add: Balance IDC as on COD	
Combined Asset	4302.36	2.00	0.00	4300.36

63. The Additional Capitalization claimed for the combined assets during 2014-15 and 2015-16, has been allowed as there is no deduction of Excess Initial Spares and no addition of IDC during this period. The combined allowable Add- cap from 1.4.2014 to 31.3.2017, with the completion cost as on 31.03.2017



is as under:-

				(₹ in lakh)
Combined Admitted Capital Cost as on 1.4.2014	Addcap during 2014-15 (Allowed)	Addcap during 2015-16 (Allowed)	Addcap during 2016-17 (Allowed)	Total Completion Cost upto 31.03.2017/ 31.03.2019
97161.95	1446.54	322.65	4300.36	103231.50

64. The allowable Additional Capitalization for period 2014-19, mentioned above, is subject to review on the submission of the Audited Additional Capitalization, at the time of true-up.

Debt:Equity Ratio

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

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

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

			(₹ in lakh)
Particulars	Amount	(%)	
Debt	68013.36	70.00	
Equity	29148.59	30.00	
Total	97161.95	100.00	

67. For additional capitalization, the petitioner has proposed normative



debt:equity ratio of 70:30 and the same has been considered. The details of the debt: equity including additional capitalization as on 31.3.2019 is as follows:-

(₹ in lakh)

Particulars	Amount	(%)
Debt	72262.04	70.00
Equity	30969.45	30.00
Total	103231.50	100.00

Interest on Loan (“IOL”)

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

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

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

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

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

69. We have considered the weighted average rate of interest on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations.

70. The weighted average rate of interest for IFC-A loan has been considered as for period 2013-14 as 3.3103% and it has been considered for whole of 2014-19 period, which would be reviewed at the time of truing-up subject to submission of weighted average rate of interest for IFC-A loan for



2014-19 period. The normative loan as on 1.4.2014 for the combined asset has been worked out by deducting the cumulative repayment of individual Assets as admitted by the Commission up to 31.3.2014, from the gross normative loan of individual assets as shown below:-

(₹ in lakh)	
Asset (1.4.2014)	TOTAL
Gross Loan	68013.36
Cumulative Re-payment of Loan	5426.53
Normative Loan Outstanding	62586.83

71. The details of weighted average rate of interest are placed at **Annexure-XI** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	68013.36	69025.94	69251.79	72262.04	72262.04
Cumulative Repayment up to previous year	5426.53	10142.78	14898.06	19774.00	24763.51
Net Loan-Opening	62586.83	58883.15	54353.73	52488.04	47498.53
Additions during the year	1012.58	225.86	3010.25	0.00	0.00
Repayment during the year	4716.26	4755.28	4875.94	4989.51	4989.51
Net Loan-Closing	58883.15	54353.73	52488.04	47498.53	42509.02
Average Loan	60734.99	56618.44	53420.88	49993.28	45003.77
Rate of Interest (%)	8.676%	8.675%	8.657%	8.647%	8.664%
Interest	5269.28	4911.76	4624.63	4323.06	3899.30

Return on Equity("ROE")

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

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



“25. Tax on Return on Equity:

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

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

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

73. The petitioner has submitted ROE at the rate of 19.610% after grossing up the ROE of 20.961% with MAT rate as per the above regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under- recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

74. 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.

75. The Gross Normative Equity as on 31.3.2014 of individual assets as admitted by Commission has been added together and such amount has been considered as Gross Normative Equity of the Combined Asset as on 1.4.2014 is ₹29148.58 lakh.



76. BRPL submitted that the petitioner has not mentioned the effective tax rate for each year of tariff period for all the assets. The petitioner may be directed to furnish details in the working of effective tax rate along with tax audit report for financial year 2014-15 and the reasons for opting MAT. The petitioner may also be directed to submit the details of deferred tax liability and its treatment in the books of account for the period 2014-19. Since, the petitioner is entitled for Tax Holiday for new transmission project, the petitioner may be directed to supply the information from the date the petitioner intends to claim the benefits of section 80 IA of the Income Tax Act, 1961. In response the petitioner submitted that rate of return of equity have been calculated as per clause 25 of 2014 Tariff Regulation and indicated in form-8. As per Regulation 25 (2) of 2014 Tariff Regulation, the MAT rate shall be considered as the effective tax rate. The final assessment of tax for 2014-15 is yet to be finalized. As per Regulation 25 (3) of 2014 Tariff Regulation, any over/under recovery of grossed up rate on ROE shall be adjusted at the time of truing up on the basis of actual tax paid. Further as per clause 49 of 2014 Tariff Regulation the deferred tax liability before 1.4.2009 shall be recovered from the beneficiaries or long term transmission customers/DICs. The petitioner further submitted that regarding claiming tax benefits under section 80 IA of Income Tax Act, the petitioner is claiming tax benefits as applicable under relevant provision of the Income Tax Act. The petitioner has not opt for MAT, but liable for payment of MAT under section 115 JB of the Income Tax Act.

77. We have considered the submissions made by the petitioner and BRPL. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for



grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE allowed is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	29148.59	29582.55	29679.34	30969.45	30969.45
Additional Capitalization	433.96	96.80	1290.11	0.00	0.00
Closing Equity	29582.55	29679.34	30969.45	30969.45	30969.45
Average Equity	29365.57	29630.95	30324.40	30969.45	30969.45
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the year(%)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	5758.59	5810.63	5946.61	6073.11	6073.11

Depreciation

78. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year,



depreciation shall be charged on pro rata basis”

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

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

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

79. We have considered the submissions of the petitioner. The cumulative depreciation recovered is ₹5426.53 lakh as on 31.3.2014 under Regulation 27 of the 2014 Tariff Regulations.

80. The capital cost, E-COD and WAL for the combined asset, as determined in above paragraphs, have been considered for determination of depreciation during the tariff period 2014-19. Therefore, depreciation for the entire tariff period 2014-19 is worked out based on straight line method and at rates specified in Appendix–II to the 2014 Tariff Regulations.

81. The details of the depreciation allowed are given hereunder:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	97161.95	98608.49	98931.14	103231.50	103231.50
Additional Capitalization	1446.54	322.65	4300.36	0.00	0.00
Closing Gross block	98608.49	98931.14	103231.50	103231.50	103231.50
Average gross block	97885.22	98769.81	101081.32	103231.50	103231.50
Rate of Depreciation (%)	4.8181%	4.8145%	4.8238%	4.8333%	4.8333%
Depreciable Value	80852.74	81623.99	83679.46	85614.62	85614.62
Remaining Depreciable Value	75426.21	71481.20	68781.39	65840.62	60851.11
Depreciation	4716.26	4755.28	4875.94	4989.51	4989.51



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

82. The petitioner's entitlement to O&M Expenses has been worked out for combined assets as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations and considered as O&M Expenses of project as a whole for the purpose of computation of tariff.

83. The elements covered in the combined assets in the present transmission system are as follows:-

Srl. No.	Name of Sub-station	No. of Bays	
		765 kV	400 kV
1	Agra-Merrut Bay	1	
2	Agra-Jhatikara Bay	1	
3	Jhatikara-Mundka bay		1
4	Jhatikara-Bawana bay		1
5	Jhatikara-Bamnauli I bay		1
6	Jhatikara-Bamnauli II bay		1
7	Jhatikara-Bus Reactor Bay	1	
8	Jhatikara-765kV Bhiwani Bay	1	
9	Jhatikara-ICT-ICT-II ICT-III ICT-IV bays		4
10	Jhatikara-ICT-ICT-II ICT-III ICT-IV bays	4	
11	Jhatikara-switchable Line reactor bay	1	
12	Jhatikara-765 kV line bay for Agra-Jhatikara TL at Jhatikara	1	
13	Meerut-Bus Reactor	1	
14	Meerut-Agra bay at Meerut S/s	1	
15	Meerut-Switchable Line reactor bay	1	
16	Meerut-765/400/33 kV ICT-I & II at Meerut	2	
17	Meerut-765/400/33 kV ICT-I & II at Meerut		2
	Total	15	10

84. The O&M Expenses as per Regulation 29(4) of the 2014 Tariff Regulations Specify normative O&M charges for transmission elements. The normative O&M for asset covered in the petition is given below:-



(₹ in lakh)					
Element	2014-15	2015-16	2016-17	2017-18	2018-19
765kV bay	84.42	87.22	90.12	93.11	96.20
400kV bay	60.30	62.30	64.37	66.51	68.71

85. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

86. BRPL and TPDDL has submitted that any increase in the employee cost due to wage revision must be taken care by increasing the productivity levels of the petitioner company and the beneficiaries should not be burdened over and above the provisions in the 2014 Tariff Regulations. The petitioner in its rejoinder has submitted that the wage revision of the employees of the petitioner company is due with effect from 1.1.2017 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rates prescribed for the tariff block 2014-19. The scheme of wage revision applicable to CPSUs is binding on the petitioner and hence the petitioner would approach the Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike from 1.1.2017 onwards.



87. We have considered the submissions made by the petitioner and respondents. 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, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

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

	(₹ in lakh)				
Element	2014-15	2015-16	2016-17	2017-18	2018-19
15nos 765kV bays	1266.30	1308.30	1351.80	1396.65	1443.00
10nos 400kV bays	603.00	623.00	643.70	665.10	687.10
Total	1869.30	1931.30	1995.50	2061.75	2130.10

Interest on Working Capital (“IWC”)

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

“28. Interest on Working Capital

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

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

(iii) Operation and maintenance expenses for one month”

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



90. The petitioner has submitted that it has computed IWC for the tariff period 2014-19 @ 13.50% considering the SBI Base Rate at 10.00% as on 1.4.2014 plus 350 basis points.

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	280.40	289.70	299.33	309.26	319.52
O & M Expenses	155.78	160.94	166.29	171.81	177.51
Receivables	3013.18	2978.65	2984.75	2985.91	2925.68
Total	3449.35	3429.29	3450.36	3466.99	3422.70
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	465.66	462.95	465.80	468.04	462.07

Annual Transmission Charges

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4716.26	4755.28	4875.94	4989.51	4989.51
Interest on Loan	5269.28	4911.76	4624.63	4323.06	3899.30
Return on Equity	5758.59	5810.63	5946.61	6073.11	6073.11
Interest on Working Capital	465.66	462.95	465.80	468.04	462.07
O & M Expenses	1869.30	1931.30	1995.50	2061.75	2130.10
Total	18079.09	17871.93	17908.48	17915.48	17554.08

93. The petitioner has submitted that the claim for transmission charges and other charges is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess and charges or any other kind of impositions etc. The



same if imposed shall be borne and additionally paid by the respondents. BRPL has submitted that there are no provision in 2014 Tariff Regulations for such payments as these charges are generally included in O&M Expenses. In response the petitioner submitted that it is entitled for transmission tariff based upon the services provided by its transmission system. It was further submitted that taxes, duties, licensee fee etc. are being claimed as per the order issued by the Commission. The petitioner is entitled to FERV as provided under Regulation 50 of the 2014 Tariff Regulations and the petitioner can make other claims as per the 2014 Tariff Regulations.

Filing Fee and Publication Expenses

94. 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. BRPL has submitted that filing fee and other expenses may not be allowed. The petitioner is entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

95. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. TPDDL has submitted that filing fee and other expenses may not be allowed. Further as per Commissions order dated 11.9.2008 in Petition No. 129/2005, the Central Power Sector undertakings are statutory required to approach the Commission for



determination and approval of the tariff. 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

96. The petitioner has sought to recover Service Tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.

Goods and Services Tax

97. The petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission at present and we are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

98. The billing, collection and disbursement of the transmission charges approved in this order 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.



99. This order disposes of Petition No. 115/TT/2017.

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

sd/-
(A. S. Bakshi)
Member

sd/-
(A. K. Singhal)
Member

sd/-
(P. K. Pujari)
Chairperson



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

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	IFC-A (Exch. Rate - 53.39)		
	Gross loan opening	1942.97	1942.97
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1942.97	1942.97
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1942.97	1942.97
	Average Loan	1942.97	1942.97
	Rate of Interest	3.58%	3.31%
	Interest	69.56	64.32
	Rep Schedule	20 half yearly instalments from 15.9.2017	
2	Bond XXIX		
	Gross loan opening	11.00	11.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.92
	Net Loan-Opening	11.00	10.08
	Additions during the year	0.00	0.00
	Repayment during the year	0.92	0.92
	Net Loan-Closing	10.08	9.17
	Average Loan	10.54	9.63
	Rate of Interest	9.20%	9.20%
	Interest	0.97	0.89
	Rep Schedule	12 annual instalments from 12.3.2013	
3	Bond XXXI		
	Gross loan opening	3254.12	3254.12
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3254.12	3254.12
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	271.18
	Net Loan-Closing	3254.12	2982.94
	Average Loan	3254.12	3118.53



	Rate of Interest	8.90%	8.90%
	Interest	289.62	277.55
	Rep Schedule	12 annual instalments from 25.2.2014	
4	Bond XXXIV		
	Gross loan opening	4700.00	4700.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4700.00	4700.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4700.00	4700.00
	Average Loan	4700.00	4700.00
	Rate of Interest	8.84%	8.84%
	Interest	415.48	415.48
	Rep Schedule	12 annual instalments from 21.10.2014	
5	Bond XXXV		
	Gross loan opening	1124.00	1124.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1124.00	1124.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1124.00	1124.00
	Average Loan	1124.00	1124.00
	Rate of Interest	9.64%	9.64%
	Interest	108.35	108.35
	Rep Schedule	12 annual instalments from 31.05.2015.	
6	Bond XXXVI		
	Gross loan opening	11719.02	11719.02
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	11719.02	11719.02
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	11719.02	11719.02
	Average Loan	11719.02	11719.02
	Rate of Interest	9.35%	9.35%
	Interest	1095.73	1095.73
	Rep Schedule	15 annual instalments from 29.08.2016.	
7	Bond XXXVII		



	Gross loan opening	105.80	105.80
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	105.80	105.80
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	105.80	105.80
	Average Loan	105.80	105.80
	Rate of Interest	9.25%	9.25%
	Interest	9.79	9.79
	Rep Schedule	12 annual instalments from 26.12.2015.	
8	Bond XXXVIII (Addcap)		
	Gross loan opening	0.00	723.04
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	723.04
	Additions during the year	723.04	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	723.04	723.04
	Average Loan	361.52	723.04
	Rate of Interest	9.25%	9.25%
	Interest	33.44	66.88
	Rep Schedule	Bullet Payment as on 9.3.2027	
9	Bond XXXVIII		
	Gross loan opening	170.91	170.91
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	170.91	170.91
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	170.91	170.91
	Average Loan	170.91	170.91
	Rate of Interest	9.25%	9.25%
	Interest	15.81	15.81
	Rep Schedule	Bullet Payment as on 9.3.2027	
10	Bond XXXIX (Addcap)		
	Gross loan opening	0.00	939.79
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	939.79
	Additions during the year	939.79	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	939.79	939.79
	Average Loan	469.90	939.79
	Rate of Interest	9.40%	9.40%



	Interest	44.17	88.34
	Rep Schedule	Bullet Payment as on 29.3.2027	
11	Bond XL (Add Cap 2012-13)		
	Gross loan opening	0.00	2268.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	2268.00
	Additions during the year	2268.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2268.00	2268.00
	Average Loan	1134.00	2268.00
	Rate of Interest	9.30%	9.30%
	Interest	105.46	210.92
	Rep Schedule	12 annual instalments from 28.6.2016	
12	Bond XLI (Addcap)		
	Gross loan opening	0.00	819.95
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	819.95
	Additions during the year	819.95	1438.30
	Repayment during the year	0.00	0.00
	Net Loan-Closing	819.95	2258.25
	Average Loan	409.98	1539.10
	Rate of Interest	8.85%	8.85%
	Interest	36.28	136.21
	Rep Schedule	12 annual instalments from 19.10.2016	
	Total Loan		
	Gross loan opening	23027.82	27778.60
	Cumulative Repayment upto DOCO/previous year	0.00	0.92
	Net Loan-Opening	23027.82	27777.68
	Additions during the year	4750.78	1438.30
	Repayment during the year	0.92	272.09
	Net Loan-Closing	27777.68	28943.89
	Average Loan	25402.75	28360.79
	Rate of Interest	8.7575%	8.7807%
	Interest	2224.66	2490.27



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

(₹ in lakh)

	Details of Loan	2013-14
1	IFC-A (Exch. Rate - 53.79)	
	Gross loan opening	2600.32
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2600.32
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2600.32
	Average Loan	2600.32
	Rate of Interest	3.35%
	Interest	86.98
	Rep Schedule	20 half yearly instalments from 15.9.2017
2	Bond XXIX	
	Gross loan opening	308.00
	Cumulative Repayment upto DOCO/previous year	25.67
	Net Loan-Opening	282.33
	Additions during the year	0.00
	Repayment during the year	25.67
	Net Loan-Closing	256.67
	Average Loan	269.50
	Rate of Interest	9.20%
	Interest	24.79
	Rep Schedule	12 annual instalments from 12.3.2013
3	Bond XXXI	
	Gross loan opening	500.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	500.00
	Additions during the year	0.00
	Repayment during the year	41.67
	Net Loan-Closing	458.33
	Average Loan	479.17
	Rate of Interest	8.90%
	Interest	42.65
	Rep Schedule	12 annual instalments from 25.2.2014



4	Bond XXXIV	
	Gross loan opening	100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	8.84%
	Interest	8.84
	Rep Schedule	12 annual instalments from 21.10.2014
5	Bond XXXV	
	Gross loan opening	1000.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1000.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1000.00
	Average Loan	1000.00
	Rate of Interest	9.64%
	Interest	96.40
	Rep Schedule	12 annual instalments from 31.5.2015.
6	Bond XXXVI	
	Gross loan opening	5140.32
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5140.32
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5140.32
	Average Loan	5140.32
	Rate of Interest	9.35%
	Interest	480.62
	Rep Schedule	15 annual instalments from 29.8.2016.
7	Bond XXXVII	
	Gross loan opening	400.00
	Cumulative Repayment upto DOCO/previous year	0.00



	Net Loan-Opening	400.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	400.00
	Average Loan	400.00
	Rate of Interest	9.25%
	Interest	37.00
	Rep Schedule	12 annual instalments from 26.12.2015.
9	Bond XLII	
	Gross loan opening	1361.96
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1361.96
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1361.96
	Average Loan	1361.96
	Rate of Interest	8.80%
	Interest	119.85
	Rep Schedule	13.3.2023 Bullet Payment
10	Bond XLII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	499.59
	Repayment during the year	0.00
	Net Loan-Closing	499.59
	Average Loan	249.80
	Rate of Interest	8.80%
	Interest	21.98
	Rep Schedule	13.3.2023 Bullet Payment
11	Bond XL	
	Gross loan opening	2000.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2000.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2000.00
	Average Loan	2000.00
	Rate of Interest	9.30%
	Interest	186.00
	Rep Schedule	12 annual instalments from 28.6.2016



12	Bond XLI	
	Gross loan opening	1593.82
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1593.82
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1593.82
	Average Loan	1593.82
	Rate of Interest	8.85%
	Interest	141.05
	Rep Schedule	12 annual instalments from 19.10.2016
	Total Loan	
	Gross loan opening	15004.42
	Cumulative Repayment upto DOCO/previous year	25.67
	Net Loan-Opening	14978.75
	Additions during the year	499.59
	Repayment during the year	67.33
	Net Loan-Closing	15411.01
	Average Loan	15194.88
	Rate of Interest	8.2012%
	Interest	1246.17



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

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
1	BOND-XXXI		
	Gross loan opening	545.88	545.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	545.88	545.88
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	45.49
	Net Loan-Closing	545.88	500.39
	Average Loan	545.88	523.14
	Rate of Interest	8.90%	8.90%
	Interest	48.58	46.56
	Rep Schedule	12 Annual Instalments from 25.2.2014	
2	Bond XXXIV		
	Gross loan opening	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1500.00	1500.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1500.00	1500.00
	Average Loan	1500.00	1500.00
	Rate of Interest	8.84%	8.84%
	Interest	132.60	132.60
	Rep Schedule	12 Annual Instalments from 21.10.2014	
3	Bond XXXVI (Addcap)		
	Gross loan opening	0.00	341.10
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	341.10
	Additions during the year	341.10	113.17
	Repayment during the year	0.00	0.00
	Net Loan-Closing	341.10	454.27
	Average Loan	170.55	397.69
	Rate of Interest	9.35%	9.35%
	Interest	15.95	37.18
	Rep Schedule	15 Annual Instalments from 29.8.2016	



4	Bond XXXVI		
	Gross loan opening	1387.78	1387.78
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1387.78	1387.78
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1387.78	1387.78
	Average Loan	1387.78	1387.78
	Rate of Interest	9.35%	9.35%
	Interest	129.76	129.76
	Rep Schedule	15 Annual Instalments from 29.8.2016	
5	Bond XXXVII (Addcap)		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	74.85
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	74.85
	Average Loan	0.00	37.43
	Rate of Interest	9.25%	9.25%
	Interest	0.00	3.46
	Rep Schedule	12 Annual Instalments from 26.12.2015	
	Total Loan		
	Gross loan opening	3433.66	3774.76
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3433.66	3774.76
	Additions during the year	341.10	113.17
	Repayment during the year	0.00	45.49
	Net Loan-Closing	3774.76	3917.29
	Average Loan	3604.21	3846.03
	Rate of Interest	9.0696%	9.0889%
	Interest	326.89	349.56



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

(₹ in lakh)

Details of Loan		2013-14
1	Bond XXIX	
	Gross loan opening	10.00
	Cumulative Repayment upto DOCO/previous year	0.83
	Net Loan-Opening	9.17
	Additions during the year	0.00
	Repayment during the year	0.83
	Net Loan-Closing	8.33
	Average Loan	8.75
	Rate of Interest	9.20%
	Interest	0.81
	Rep Schedule	12 annual instalments from 12.3.2013
2	Bond XXXVIII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	144.72
	Repayment during the year	0.00
	Net Loan-Closing	144.72
	Average Loan	72.36
	Rate of Interest	9.25%
	Interest	6.69
	Rep Schedule	Bullet payment on 9.3.2027
3	BOND-XXXI	
	Gross loan opening	900.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	900.00
	Additions during the year	0.00
	Repayment during the year	75.00
	Net Loan-Closing	825.00
	Average Loan	862.50
	Rate of Interest	8.90%
	Interest	76.76
	Rep Schedule	12 Annual Instalments from 25.2.2014



4	Bond XXXIV	
	Gross loan opening	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1500.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1500.00
	Average Loan	1500.00
	Rate of Interest	8.84%
	Interest	132.60
	Rep Schedule	12 Annual Instalments from 21.10.2014
5	Bond XXXVII	
	Gross loan opening	494.14
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	494.14
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	494.14
	Average Loan	494.14
	Rate of Interest	9.25%
	Interest	45.71
	Rep Schedule	12 Annual Instalments from 26.12.2015
6	Bond XXXVI	
	Gross loan opening	1060.71
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1060.71
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1060.71
	Average Loan	1060.71
	Rate of Interest	9.35%
	Interest	99.18
	Rep Schedule	15 Annual Instalments from 29.8.2016
7	Bond XXXVII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	125.38
	Repayment during the year	0.00
	Net Loan-Closing	125.38



Average Loan	62.69
Rate of Interest	9.25%
Interest	5.80
Rep Schedule	12 Annual Instalments from 26.12.2015
Total Loan	
Gross loan opening	3964.85
Cumulative Repayment upto DOCO/previous year	0.83
Net Loan-Opening	3964.02
Additions during the year	270.10
Repayment during the year	75.83
Net Loan-Closing	4158.28
Average Loan	4061.15
Rate of Interest	9.05%
Interest	367.54



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

		(₹ in lakh)
Details of Loan		2013-14
1	BOND-XXXI (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	16.30
	Repayment during the year	1.36
	Net Loan-Closing	14.94
	Average Loan	7.47
	Rate of Interest	8.90%
	Interest	0.66
	Rep Schedule	12 Annual Instalments from 25.2.2014
2	BOND-XXXI	
	Gross loan opening	312.74
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	312.74
	Additions during the year	0.00
	Repayment during the year	26.06
	Net Loan-Closing	286.68
	Average Loan	299.71
	Rate of Interest	8.90%
	Interest	26.67
	Rep Schedule	12 Annual Instalments from 25.2.2014
3	Bond XLIII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	74.58
	Repayment during the year	0.00
	Net Loan-Closing	74.58
	Average Loan	37.29
	Rate of Interest	7.93%
	Interest	2.96



	Rep Schedule	12 annual instalments from 20.5.2017
4	IFC-A (Exch. Rate - 54.24)	
	Gross loan opening	410.05
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	410.05
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	410.05
	Average Loan	410.05
	Rate of Interest	3.31%
	Interest	13.57
	Rep Schedule	20 half yearly instalments from 15.9.2017
	Total Loan	
	Gross loan opening	722.79
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	722.79
	Additions during the year	90.88
	Repayment during the year	27.42
	Net Loan-Closing	786.25
	Average Loan	754.52
	Rate of Interest	5.814%
	Interest	43.87



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

(₹ in lakh)

	Details of Loan	2013-14
1	Bond XXXIX	
	Gross loan opening	163.25
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	163.25
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	163.25
	Average Loan	163.25
	Rate of Interest	9.40%
	Interest	15.35
	Rep Schedule	29.3.2027 Bullet Payment
2	Bond XXXI	
	Gross loan opening	121.96
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	121.96
	Additions during the year	0.00
	Repayment during the year	10.16
	Net Loan-Closing	111.80
	Average Loan	116.88
	Rate of Interest	8.90%
	Interest	10.40
	Rep Schedule	12 annual instalments from 25.2.2014
3	Bond XXXIV	
	Gross loan opening	1277.53
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1277.53
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1277.53
	Average Loan	1277.53
	Rate of Interest	8.84%
	Interest	112.93
	Rep Schedule	12 annual instalments from 21.10.2014



4	Bond XLIII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	5.63
	Repayment during the year	0.00
	Net Loan-Closing	5.63
	Average Loan	2.82
	Rate of Interest	7.93%
	Interest	0.22
	Rep Schedule	12 annual instalments from 20.5.2017
5	Bond XXXVI	
	Gross loan opening	199.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	199.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	199.00
	Average Loan	199.00
	Rate of Interest	9.35%
	Interest	18.61
	Rep Schedule	15 annual instalments from 29.8.2016.
6	Bond XLII	
	Gross loan opening	297.35
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	297.35
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	297.35
	Average Loan	297.35
	Rate of Interest	8.80%
	Interest	26.17
	Rep Schedule	13.3.2023 Bullet Payment
7	Bond XLII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00



	Net Loan-Opening	0.00
	Additions during the year	225.21
	Repayment during the year	0.00
	Net Loan-Closing	225.21
	Average Loan	112.61
	Rate of Interest	8.80%
	Interest	9.91
	Rep Schedule	13.3.2023 Bullet Payment
8	Bond XL	
	Gross loan opening	1717.09
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1717.09
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1717.09
	Average Loan	1717.09
	Rate of Interest	9.30%
	Interest	159.69
	Rep Schedule	12 annual instalments from 28.06.2016
9	Bond XLI	
	Gross loan opening	210.92
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	210.92
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	210.92
	Average Loan	210.92
	Rate of Interest	8.85%
	Interest	18.67
	Rep Schedule	12 annual instalments from 19.10.2016
	Total Loan	
	Gross loan opening	3987.10
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3987.10
	Additions during the year	230.84
	Repayment during the year	10.16
	Net Loan-Closing	4207.78
	Average Loan	4097.44
	Rate of Interest	9.08%
	Interest	371.94



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

(₹ in lakh)

	Details of Loan	2013-14
1	Bond XXIX	
	Gross loan opening	10.00
	Cumulative Repayment upto DOCO/previous year	0.83
	Net Loan-Opening	9.17
	Additions during the year	0.00
	Repayment during the year	0.83
	Net Loan-Closing	8.33
	Average Loan	8.75
	Rate of Interest	9.20%
	Interest	0.81
	Rep Schedule	12 annual instalments from 12.3.2013
2	Bond XXXI	
	Gross loan opening	210.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	210.00
	Additions during the year	0.00
	Repayment during the year	17.50
	Net Loan-Closing	192.50
	Average Loan	201.25
	Rate of Interest	8.90%
	Interest	17.91
	Rep Schedule	12 annual instalments from 25.2.2014
3	Bond XXXIV	
	Gross loan opening	179.47
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	179.47
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	179.47
	Average Loan	179.47
	Rate of Interest	8.84%
	Interest	15.87



	Rep Schedule	12 annual instalments from 21.10.2014
4	Bond XXXVI	
	Gross loan opening	55.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	55.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	55.00
	Average Loan	55.00
	Rate of Interest	9.35%
	Interest	5.14
	Rep Schedule	15 annual instalments from 29.8.2016.
5	Bond XXXVII	
	Gross loan opening	100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	9.25%
	Interest	9.25
	Rep Schedule	12 annual instalments from 26.12.2015.
6	Bond XXXVIII	
	Gross loan opening	100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	9.25%
	Interest	9.25
	Rep Schedule	Bullet Payment as on 9.3.2027
7	Bond XXXIX	
	Gross loan opening	100.00



	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	9.40%
	Interest	9.40
	Rep Schedule	Bullet Payment as on 29.3.2027
8	Bond XLIII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	59.20
	Repayment during the year	0.00
	Net Loan-Closing	59.20
	Average Loan	29.60
	Rate of Interest	7.93%
	Interest	2.35
	Rep Schedule	12 annual instalments from 20.5.2017
	Total Loan	
	Gross loan opening	754.47
	Cumulative Repayment upto DOCO/previous year	0.83
	Net Loan-Opening	753.64
	Additions during the year	59.20
	Repayment during the year	18.33
	Net Loan-Closing	794.50
	Average Loan	774.07
	Rate of Interest	9.0394%
	Interest	69.97



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

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	IFC-A (Exch. Rate - 53.79)		
	Gross loan opening	527.30	527.30
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	527.30	527.30
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	527.30	527.30
	Average Loan	527.30	527.30
	Rate of Interest	3.58%	3.31%
	Interest	18.88	17.46
	Rep Schedule	20 half yearly instalments from 15.9.2017	
2	Bond XXXVI		
	Gross loan opening	1914.60	1914.60
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1914.60	1914.60
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1914.60	1914.60
	Average Loan	1914.60	1914.60
	Rate of Interest	9.35%	9.35%
	Interest	179.02	179.02
	Rep Schedule	15 annual instalments from 29.8.2016.	
3	Bond XXXVII		
	Gross loan opening	500.00	500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	500.00	500.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	500.00	500.00
	Average Loan	500.00	500.00
	Rate of Interest	9.25%	9.25%



	Interest	46.25	46.25
	Rep Schedule	12 annual instalments from 26.12.2015.	
4	Bond XXXVIII (Addcap)		
	Gross loan opening	0.00	16.86
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	16.86
	Additions during the year	16.86	47.10
	Repayment during the year	0.00	0.00
	Net Loan-Closing	16.86	63.96
	Average Loan	8.43	40.41
	Rate of Interest	9.25%	9.25%
	Interest	0.78	3.74
	Rep Schedule	Bullet Payment as on 9.3.2027	
5	Bond XXXVIII		
	Gross loan opening	136.04	136.04
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	136.04	136.04
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	136.04	136.04
	Average Loan	136.04	136.04
	Rate of Interest	9.25%	9.25%
	Interest	12.58	12.58
	Rep Schedule	Bullet Payment as on 9.3.2027	
6	Bond XXXIX (Addcap)		
	Gross loan opening	0.00	164.60
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	164.60
	Additions during the year	164.60	2.76
	Repayment during the year	0.00	0.00
	Net Loan-Closing	164.60	167.36
	Average Loan	82.30	165.98
	Rate of Interest	9.40%	9.40%
	Interest	7.74	15.60
	Rep Schedule	Bullet Payment as on 29.3.2027	
7	SBI (21.3.2012) (Addcap)		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	195.57



	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	195.57
	Average Loan	0.00	97.79
	Rate of Interest	10.29%	10.29%
	Interest	0.00	10.06
	Rep Schedule	22 half yearly instalment from 31.8.2016	
8	Bond XLII (Addcap)		
	Gross loan opening	0.00	173.25
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	173.25
	Additions during the year	173.25	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	173.25	173.25
	Average Loan	86.63	173.25
	Rate of Interest	8.80%	8.80%
	Interest	7.62	15.25
	Rep Schedule	Bullet Payment as on 13.3.2023	
	Total Loan		
	Gross loan opening	3077.94	3432.65
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3077.94	3432.65
	Additions during the year	354.71	245.43
	Repayment during the year	0.00	0.00
	Net Loan-Closing	3432.65	3678.08
	Average Loan	3255.30	3555.37
	Rate of Interest	8.38%	8.44%
	Interest	272.87	299.95



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

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	IFC-A		
	Gross loan opening	318.15	318.15
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	318.15	318.15
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	318.15	318.15
	Average Loan	318.15	318.15
	Rate of Interest	3.58%	3.31%
	Interest	11.39	10.53
	Rep Schedule	20 half yearly instalments from 15.9.2017	
2	Bond XXXVI		
	Gross loan opening	1601.94	1601.94
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1601.94	1601.94
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1601.94	1601.94
	Average Loan	1601.94	1601.94
	Rate of Interest	9.35%	9.35%
	Interest	149.78	149.78
	Rep Schedule	15 annual instalments from 29.8.2016.	
3	Bond XXXVII		
	Gross loan opening	600.00	600.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	600.00	600.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	600.00	600.00
	Average Loan	600.00	600.00
	Rate of Interest	9.25%	9.25%



	Interest	55.50	55.50
	Rep Schedule	12 annual instalments from 26.12.2015.	
4	Bond XXXVIII		
	Gross loan opening	600.00	600.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	600.00	600.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	600.00	600.00
	Average Loan	600.00	600.00
	Rate of Interest	9.25%	9.25%
	Interest	55.50	55.50
	Rep Schedule	Bullet Payment as on 9.3.2027	
5	Bond XXXIX & Addcap		
	Gross loan opening	442.58	774.86
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	442.58	774.86
	Additions during the year	332.28	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	774.86	774.86
	Average Loan	608.72	774.86
	Rate of Interest	9.40%	9.40%
	Interest	57.22	72.84
	Rep Schedule	Bullet Payment as on 29.3.2027	
6	SBI (21.3.2012) (Addcap)		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	12.65
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	12.65
	Average Loan	0.00	6.33
	Rate of Interest	10.29%	10.29%
	Interest	0.00	0.65
	Rep Schedule	22 half yearly instalment from 31.8.2016	
7	Bond XL (Addcap)		
	Gross loan opening	0.00	41.91
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	41.91
	Additions during the year	41.91	78.81



	Repayment during the year	0.00	0.00
	Net Loan-Closing	41.91	120.72
	Average Loan	20.96	81.32
	Rate of Interest	9.30%	9.30%
	Interest	1.95	7.56
	Rep Schedule	12 annual instalments from 28.6.2016	
	Total Loan		
	Gross loan opening	3562.67	3936.86
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3562.67	3936.86
	Additions during the year	374.19	91.46
	Repayment during the year	0.00	0.00
	Net Loan-Closing	3936.86	4028.32
	Average Loan	3749.77	3982.59
	Rate of Interest	8.84%	8.85%
	Interest	331.34	352.36



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

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXVI		
	Gross loan opening	759.40	759.40
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	759.40	759.40
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	759.40	759.40
	Average Loan	759.40	759.40
	Rate of Interest	9.35%	9.35%
	Interest	71.00	71.00
	Rep Schedule	15 annual instalments from 29.8.2016.	
2	Bond XXXVII		
	Gross loan opening	205.15	205.15
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	205.15	205.15
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	205.15	205.15
	Average Loan	205.15	205.15
	Rate of Interest	9.25%	9.25%
	Interest	18.98	18.98
	Rep Schedule	12 annual instalments from 26.12.2015.	
3	Bond XXXVIII		
	Gross loan opening	261.33	261.33
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	261.33	261.33
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	261.33	261.33
	Average Loan	261.33	261.33
	Rate of Interest	9.25%	9.25%
	Interest	24.17	24.17



	Rep Schedule	Bullet Payment as on 9.3.2027	
4	Bond XXXIX & Addcap		
	Gross loan opening	249.42	361.30
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	249.42	361.30
	Additions during the year	111.88	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	361.30	361.30
	Average Loan	305.36	361.30
	Rate of Interest	9.40%	9.40%
	Interest	28.70	33.96
	Rep Schedule	Bullet Payment as on 29.3.2027	
5	SBI (21.3.2012) (Addcap)		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	39.40
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	39.40
	Average Loan	0.00	19.70
	Rate of Interest	10.29%	10.29%
	Interest	0.00	2.03
	Rep Schedule	22 half yearly instalment from 31.8.2016	
	Total Loan		
	Gross loan opening	1475.30	1587.18
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1475.30	1587.18
	Additions during the year	111.88	39.40
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1587.18	1626.58
	Average Loan	1531.24	1606.88
	Rate of Interest	9.33%	9.34%
	Interest	142.86	150.14



Annexure-XI

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

(₹ in lakh)

	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond XXXVIII					
	Gross loan opening	2200.00	2200.00	2200.00	2200.00	2200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2200.00	2200.00	2200.00	2200.00	2200.00
	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	2200.00	2200.00	2200.00	2200.00	2200.00
	Average Loan	2200.00	2200.00	2200.00	2200.00	2200.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	203.50	203.50	203.50	203.50	203.50
	Rep Schedule	9.3.2027 Bullet Payment				
2	Bond XXXIX					
	Gross loan opening	2506.56	2506.56	2506.56	2506.56	2506.56
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2506.56	2506.56	2506.56	2506.56	2506.56
	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	2506.56	2506.56	2506.56	2506.56	2506.56
	Average Loan	2506.56	2506.56	2506.56	2506.56	2506.56
	Rate of Interest	9.40%	9.40%	9.40%	9.40%	9.40%
	Interest	235.62	235.62	235.62	235.62	235.62
	Rep Schedule	29.3.2027 Bullet Payment				
3	IFC-A Loan					
	Gross loan opening	5798.79	5798.79	5798.79	5798.79	5798.79
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	579.88
	Net Loan-Opening	5798.79	5798.79	5798.79	5798.79	5218.91
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	579.88	579.88
	Net Loan-Closing	5798.79	5798.79	5798.79	5218.91	4639.03
	Average Loan	5798.79	5798.79	5798.79	5508.85	4928.97
	Rate of Interest	3.31%	3.31%	3.31%	3.31%	3.31%
	Interest	191.96	191.96	191.96	182.36	163.16
	Rep Schedule	20 half yearly instalments from 15.9.2017				



4	Bond XLIX (Addcap 2015-16)					
	Gross loan opening	0.00	0.00	24.23	24.23	24.23
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	24.23	24.23	24.23
	Additions during the year	0.00	24.23	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	24.23	24.23	24.23	24.23
	Average Loan	0.00	12.12	24.23	24.23	24.23
	Rate of Interest	8.15%	8.15%	8.15%	8.15%	8.15%
	Interest	0.00	0.99	1.97	1.97	1.97
	Rep Schedule	Redeemable at par in 3 equal instalments on 9.3.2020, 9.3.2025 & 9.3.2030				
5	Bond LI (Addcap 2015-16)					
	Gross loan opening	0.00	0.00	0.57	0.57	0.57
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	0.57	0.57	0.57
	Additions during the year	0.00	0.57	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	0.57	0.57	0.57	0.57
	Average Loan	0.00	0.29	0.57	0.57	0.57
	Rate of Interest	8.40%	8.40%	8.40%	8.40%	8.40%
	Interest	0.00	0.02	0.05	0.05	0.05
	Rep Schedule	12 Equal Annual instalments from 14.9.2019				
6	Bond XXIX					
	Gross loan opening	339.00	339.00	339.00	339.00	339.00
	Cumulative Repayment upto DOCO/previous year	56.50	84.75	113.00	141.25	169.50
	Net Loan-Opening	282.50	254.25	226.00	197.75	169.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	28.25	28.25	28.25	28.25	28.25
	Net Loan-Closing	254.25	226.00	197.75	169.50	141.25
	Average Loan	268.38	240.13	211.88	183.63	155.38
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	24.69	22.09	19.49	16.89	14.29
	Rep Schedule	12 annual instalments from 12.3.2013				
7	Bond XXXI					
	Gross loan opening	5861.00	5861.00	5861.00	5861.00	5861.00
	Cumulative Repayment upto DOCO/previous year	488.42	976.83	1465.25	1953.67	2442.08
	Net Loan-Opening	5372.58	4884.17	4395.75	3907.33	3418.92
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	488.42	488.42	488.42	488.42	488.42
	Net Loan-Closing	4884.17	4395.75	3907.33	3418.92	2930.50



	Average Loan	5128.38	4639.96	4151.54	3663.13	3174.71
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	456.43	412.96	369.49	326.02	282.55
	Rep Schedule	12 annual instalments from 25.2.2014				
8	Bond XXXIV					
	Gross loan opening	9257.00	9257.00	9257.00	9257.00	9257.00
	Cumulative Repayment upto DOCO/previous year	0.00	771.42	1542.83	2314.25	3085.67
	Net Loan-Opening	9257.00	8485.58	7714.17	6942.75	6171.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	771.42	771.42	771.42	771.42	771.42
	Net Loan-Closing	8485.58	7714.17	6942.75	6171.33	5399.92
	Average Loan	8871.29	8099.88	7328.46	6557.04	5785.63
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	784.22	716.03	647.84	579.64	511.45
	Rep Schedule	12 annual instalments from 21.10.2014				
9	SBI (21.3.2012)					
	Gross loan opening	247.62	247.62	247.62	247.62	247.62
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	22.51	45.02
	Net Loan-Opening	247.62	247.62	247.62	225.11	202.60
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	22.51	22.51	22.51
	Net Loan-Closing	247.62	247.62	225.11	202.60	180.09
	Average Loan	247.62	247.62	236.36	213.85	191.34
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	25.38	25.38	24.23	21.92	19.61
	Rep Schedule	22 half yearly instalment from 31.8.2016				
10	SBI (2014-15) Addcap for 2014-15 and 2015-16					
	Gross loan opening	0.00	348.14	531.20	531.20	531.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	348.14	531.20	531.20	531.20
	Additions during the year	348.14	183.06	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	348.14	531.20	531.20	531.20	531.20
	Average Loan	174.07	439.67	531.20	531.20	531.20
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	17.84	45.07	54.45	54.45	54.45
	Rep Schedule	20 half yearly instalment from 15.6.2019				
11	Bond XXXV					
	Gross loan opening	2124.00	2124.00	2124.00	2124.00	2124.00
	Cumulative Repayment upto	0.00	0.00	177.00	354.00	531.00



	DOCO/previous year					
	Net Loan-Opening	2124.00	2124.00	1947.00	1770.00	1593.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	177.00	177.00	177.00	177.00
	Net Loan-Closing	2124.00	1947.00	1770.00	1593.00	1416.00
	Average Loan	2124.00	2035.50	1858.50	1681.50	1504.50
	Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%
	Interest	204.75	196.22	179.16	162.10	145.03
	Rep Schedule	12 annual instalments from 31.5.2015.				
12	Bond XLIII					
	Gross loan opening	139.41	139.41	139.41	139.41	139.41
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	11.62
	Net Loan-Opening	139.41	139.41	139.41	139.41	127.79
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	11.62	11.62
	Net Loan-Closing	139.41	139.41	139.41	127.79	116.18
	Average Loan	139.41	139.41	139.41	133.60	121.98
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	11.06	11.06	11.06	10.59	9.67
	Rep Schedule	12 annual instalments from 20.5.2017				
13	Bond XLV					
	Gross loan opening	78.81	78.81	78.81	78.81	78.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	6.57
	Net Loan-Opening	78.81	78.81	78.81	78.81	72.24
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	6.57	6.57
	Net Loan-Closing	78.81	78.81	78.81	72.24	65.68
	Average Loan	78.81	78.81	78.81	75.53	68.96
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	7.61	7.61	7.61	7.29	6.65
	Rep Schedule	12 annual instalments from 28.2.2018				
14	Bond XLVI (Addcap)					
	Gross loan opening	0.00	189.10	189.10	189.10	189.10
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	189.10	189.10	189.10	189.10
	Additions during the year	189.10	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	189.10	189.10	189.10	189.10	189.10
	Average Loan	94.55	189.10	189.10	189.10	189.10
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	8.79	17.59	17.59	17.59	17.59
	Rep Schedule	Redeemable at par in 3 equal instalments on 4.9.2019, 4.9.2024				



		& 4.9.2029				
15	Bond XLVIII (Addcap)					
	Gross loan opening	0.00	475.36	475.36	475.36	475.36
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	475.36	475.36	475.36	475.36
	Additions during the year	475.36	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	475.36	475.36	475.36	475.36	475.36
	Average Loan	237.68	475.36	475.36	475.36	475.36
	Rate of Interest	8.20%	8.20%	8.20%	8.20%	8.20%
	Interest	19.49	38.98	38.98	38.98	38.98
	Rep Schedule	Redeemable at par in 4 equal instalments on 23.1.2020, 23.1.2022, 23.1.2025 & 23.1.2030				
16	Bond L (Addcap 2015-16)					
	Gross loan opening	0.00	0.00	18.00	18.00	18.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	18.00	18.00	18.00
	Additions during the year	0.00	18.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	18.00	18.00	18.00	18.00
	Average Loan	0.00	9.00	18.00	18.00	18.00
	Rate of Interest	8.40%	8.40%	8.40%	8.40%	8.40%
	Interest	0.00	0.76	1.51	1.51	1.51
	Rep Schedule	12 Equal Annual instalments from 27.5.2019				
17	Bond XLI					
	Gross loan opening	4062.99	4062.99	4062.99	4062.99	4062.99
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	338.58	677.17
	Net Loan-Opening	4062.99	4062.99	4062.99	3724.41	3385.83
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	338.58	338.58	338.58
	Net Loan-Closing	4062.99	4062.99	3724.41	3385.83	3047.24
	Average Loan	4062.99	4062.99	3893.70	3555.12	3216.53
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	359.57	359.57	344.59	314.63	284.66
	Rep Schedule	12 annual instalments from 19.10.2016				
18	Bond XLII					
	Gross loan opening	2557.35	2557.35	2557.35	2557.35	2557.35
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2557.35	2557.35	2557.35	2557.35	2557.35



	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	2557.35	2557.35	2557.35	2557.35	2557.35
	Average Loan	2557.35	2557.35	2557.35	2557.35	2557.35
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	225.05	225.05	225.05	225.05	225.05
	Rep Schedule	Bullet Payment as on 13.3.2023				
19	Bond XXXVI					
	Gross loan opening	24292.04	24292.04	24292.04	24292.04	24292.04
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	1619.47	3238.94
	Net Loan-Opening	24292.04	24292.04	24292.04	22672.57	21053.10
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1619.47	1619.47	1619.47
	Net Loan-Closing	24292.04	24292.04	22672.57	21053.10	19433.63
	Average Loan	24292.04	24292.04	23482.31	21862.84	20243.37
	Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%
	Interest	2271.31	2271.31	2195.60	2044.18	1892.75
	Rep Schedule	15 annual instalments from 29.8.2016.				
20	Bond XXXVII					
	Gross loan opening	2605.32	2605.32	2605.32	2605.32	2605.32
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	217.11	434.22	651.33
	Net Loan-Opening	2605.32	2605.32	2388.21	2171.10	1953.99
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	217.11	217.11	217.11	217.11
	Net Loan-Closing	2605.32	2388.21	2171.10	1953.99	1736.88
	Average Loan	2605.32	2496.77	2279.66	2062.55	1845.44
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	240.99	230.95	210.87	190.79	170.70
	Rep Schedule	12 annual instalments from 26.12.2015.				
21	Bond XL					
	Gross loan opening	6027.00	6027.00	6027.00	6027.00	6027.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	502.25	1004.50
	Net Loan-Opening	6027.00	6027.00	6027.00	5524.75	5022.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	502.25	502.25	502.25
	Net Loan-Closing	6027.00	6027.00	5524.75	5022.50	4520.25
	Average Loan	6027.00	6027.00	5775.88	5273.63	4771.38
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	560.51	560.51	537.16	490.45	443.74
	Rep Schedule	12 annual instalments from 28.6.2016				
	Total Loan					



Gross loan opening	68096.89	69109.49	69335.35	69335.35	69335.35
Cumulative Repayment upto DOCO/previous year	544.92	1833.00	3515.19	7680.20	12443.27
Net Loan-Opening	67551.97	67276.49	65820.16	61655.15	56892.08
Additions during the year	1012.60	225.86	0.00	0.00	0.00
Repayment during the year	1288.08	1682.19	4165.01	4763.07	4763.07
Net Loan-Closing	67276.49	65820.16	61655.15	56892.08	52129.01
Average Loan	67414.23	66548.32	63737.65	59273.62	54510.55
Rate of Interest	8.68%	8.68%	8.66%	8.65%	8.66%
Interest	5848.76	5773.20	5517.74	5125.56	4723.00

