

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 27/TT/2015

Coram:

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

**Date of Hearing : 08.02.2016
Date of Order : 18.04.2016**

In the matter of:

Truing up of transmission tariff for the 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 for **Asset-I:** 400 kV D/C Maithon (RB) – Ranchi (PG) Transmission Line and associated bays at Ranchi, **Asset- II:** 400 kV D/C Maithon – Mejia Transmission Line, **Asset-III:** 400 kV D/C Biharsharif – Sasaram (Quad) Transmission Line under supplementary transmission system associated with DVC and Maithan (RB) projects in Eastern Region, under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

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

.....**Petitioner**

Versus

1. North Bihar Power Distribution Company Limited,
2nd Floor, VidyutBhawan, Bailey Road
Patna- 800 001

- 1(A) South Bihar Power Distribution Company Limited,
2nd Floor, VidyutBhawan, Bailey Road
Patna- 800 001



2. West Bengal State Electricity Distribution Company Limited
BidyutBhawan, Bidhan Nagar
Kolkata-700 091
 3. Grid Corporation of Orissa Ltd.
Shahid Nagar,
Bhubaneswar- 751 007
 4. Damodar Valley Corporation
DVC Tower, Maniktala
Kolkata- 700 054
 5. Power Department
Govt. of Sikkim, Gangtok- 737 101
 6. Jharkhand State Electricity Board
In front of Main Secretariat,
Doranda, Ranchi- 834002
 7. Rajasthan RajyaVidyutPrasaran Nigam Limited
VidyutBhawan, VidyutMarg,
Jaipur – 302 005
 8. Ajmer VidyutVitran Nigam Limited
400 KV GSS Building (Ground floor), Ajmer road,
Heerapura, Jaipur
 9. Jaipur VidyutVitran Nigam Limited
400 KV GSS Building (Ground floor), Ajmer road,
Heerapura, Jaipur
 10. Jodhpur VidyutVitran Nigam Limited
400 KV GSS Building (Ground floor), Ajmer road,
Heerapura, Jaipur
 11. Himachal Pradesh State Electricity Board
VidyutBhawan, Kumar House Complex Building II
Shimla – 171 004
 12. Punjab State Electricity Board
Thermal shed TIA, Near 22 Phatak,
Patiala – 147 001
 13. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) – 134 109
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14. Power Development Department
Government of Jammu & Kashmir,
Mini Secretariat, Jammu
 15. Uttar Pradesh Power Corporation Limited
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226 001
 16. Delhi Transco Limited
Shakti Sadan, Kotla Road,
New Delhi – 110 002
 17. BSES Yamuna Power Limited
BSES Bhawan, Nehru Place,
New Delhi
 18. BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place,
New Delhi
 19. 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 – 110 034
 20. Chandigarh Administration
Sector-9, Chandigarh
 21. Uttarakhand Power Corporation Limited
UrjaBhawan, Kanwali Road,
Dehradun
 22. North Central Railway
Allahabad
 23. New Delhi Municipal Council
Palika Kendra, SansadMarg,
New Delhi – 110 002
 24. Madhya Pradesh Power Trading Company Limited
Shakti Bhawan, Rampur
Jabalpur –482 008
 25. Maharashtra State Electricity Distribution Co. Limited
-



5th Floor, Prakashgad, Plot no. 9,
AnantKanekarMarg, Bandra (East),
Mumbai – 400 051

26. Gujarat UrjaVikas Nigam Limited
Sardar Patel VidyutBhawan,
Race Course Road, Vadodara – 390 007
27. Electricity Department
Govt. of Goa
VidyutBhawan, Panaji,
Near Mandvi Hotel, Goa – 403 001
28. Electricity Department
Administration of Daman & Diu
Daman – 396 210
29. Chhattisgarh State Electricity Board
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh – 492 013
30. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road,
Indore – 452 008

.....Respondents

The following were present:-

For Petitioner: Shri S. K. Venkatesan, PGCIL
 ShriSubhashC.Taneja, PGCIL
 Shri M. M. Mondal, PGCIL
ShriRakesh Prasad, PGCIL
Shri S. S. Raju, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. (“the petitioner”) for truing up of capital expenditure and tariff for **Asset-I: 400**



kV D/C Maithon (RB) – Ranchi (PG) Transmission Line and associated bays at Ranchi, **Asset- II:** 400 kV D/C Maithon – Mejia Transmission Line, **Asset-III:** 400 kV D/C Biharsharif – Sasaram (Quad) Transmission Line under supplementary transmission system associated with DVC and Maithan (RB) projects in Eastern Region,(hereinafter referred as “transmission asset”) under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on actual capital expenditure for the period from CODof the assets to 31.3.2014and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the assets for the period from 1.4.2014 to 31.3.2019.

2. The respondents are distribution licensees or centralised power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Eastern, Northern and Western Region.

3. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 8.2.2016.The petitioner was directed to file certain information vide letter dated 13.4.2016.The petitioner has submitted the information vide affidavit dated 21.4.2016.Having



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

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

(a) The investment approval for this scheme was accorded by Board of Directors of petitioner's company vide Memorandum No. C/CP/Suppl. Sch. for DVC and Maithon RB project, dated 29.8.2008 at an estimated cost of ₹236095 lakh including IDC of ₹23593 lakh (based on 1st Quarter, 2008 price level). Subsequently, Revised Cost Estimate (RCE) was accorded by Board of Directors of the petitioner's company vide the Memorandum No. C/CP/RCE-Suppl. DVC &Maithon RB dated 24.5.2013 at an estimated cost of ₹258090 lakh including IDC of ₹24441 lakh (based on December 2012 price level).The date of the commercial operation and approved apportioned cost of the instant assets is as follows:-

Asset	Date of commercial operation	Apportioned approved cost (₹ in lakh)
Asset-I	1.1.2012	25223.26
Asset-II	1.12.2011	9641.84
Asset-III(A)	1.2.2012	47174.25
Asset-III(B)	1.3.2012	3883.91

(b) As per investment approval the transmission project was to be commissioned within 48 months from the date of investment approval i.e. by 1.9.2012. It is observed from the above table that all the assets have been commissioned within 1.9.2012, hence there is no time over-run for the said assets.



(c) The tariff from COD to 31.3.2014 for Asset-I was allowed vide order dated 30.12.2011 in Petition No. 149/TT/2011, Asset-II vide order dated 25.10.2011 in Petition No. 98/TT/2011 and Asset-III vide order dated 14.11.2011 in Petition No. 174/TT/2011 in accordance with the 2009 Tariff Regulations. The tariff allowed for the 2009-14 tariff period is as under:-

(₹ in lakh)

Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	584.88	1254.73	1299.00
Interest on Loan	673.54	1364.83	1302.89
Return on Equity	580.51	1245.24	1289.09
Interest on Working Capital	45.50	95.74	97.32
O&M Expenses	182.91	386.72	408.76
Total	2067.35	4347.25	4397.05

(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	207.61	415.22	415.22
Interest on Loan	239.34	450.95	413.91
Return on Equity	206.20	412.40	412.40
Interest on Working Capital	14.04	27.64	27.02
O&M Expenses	20.74	43.85	46.34
Total	687.93	1350.06	1314.89

(₹ in lakh)

Asset-III	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	562.10	2305.31	2341.19
Interest on Loan	658.06	2571.25	2405.99
Return on Equity	558.27	2289.60	2325.23
Interest on Working Capital	38.03	153.73	152.46
O&M Expenses	52.26	220.97	233.50
Total	1868.72	7540.86	7458.37



(d) The above transmission charges were approved on the basis of cost projected to be incurred by the petitioner till anticipated COD and projected additional capitalisation. The petitioner has now claimed tariff on the basis of actual COD. The earlier anticipated COD and the actual COD achieved is as shown below:-

Asset	Scheduled COD as per Order	Actual COD as claimed
Asset-I	1.10.2011(Anticipated)	1.1.2012
Asset-II	1.5.2011 (Anticipated)	1.12.2011
Asset-III(A)	1.1.2012 (Anticipated)	1.2.2012
Asset-III(B)		1.3.2012

(e) The petitioner has further submitted that, commissioning of Asset-III as Asset- III A and III B was necessitated pursuant to the deliberation in the Standing Committee Meeting held on 8.2.2012 and subsequently in the 21st TCC and ERPC Meeting held on 20.4.2012 and 21.4.2012. The petitioner has submitted the minutes of meeting for the same.

(f) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.

TRUING UP OF ANNUAL FIXED CHARGES FOR TARIFF PERIOD 2009-14

5. The truing up of tariff for the 2009-14 tariff period for Asset-I, Asset-II, Asset- III A and Asset-III Bhas been determined as discussed below.



Capital Cost

6. The Commission had determined the tariff of Asset-I vide order dated 30.12.2011 in Petition No. 149/TT/2011, Asset-II vide order dated 25.10.2011 in Petition No. 98/TT/2011 and Asset-III vide order dated 14.11.2011 in Petition No. 174/TT/2011 considering the capital cost as on anticipated COD of ₹21369.04lakh, ₹7864.00 lakh and ₹41833.26 lakh for the Asset-I, Asset-II and Asset-III respectively. Since all the assets were not actually commissioned, the earlier orders determined transmission charges on the basis of anticipated COD. However, in the instant petition filed on 31.12.2014, the petitioner has claimed revised capital cost as on actual COD for the assets as ₹23090.32 lakh, ₹8215.44 lakh, ₹36697.32 lakh and ₹3130.17 lakh for Asset-I, Asset-II, Asset-III A and Asset-III B respectively.

7. Regulation 7(1) 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 26.9.2014 for Asset-I, Asset-III A and Asset-III B and Auditor's Certificate dated 24.9.2014 for Asset-II certifying the capital cost as on COD and additional capitalization claimed herein.

Initial Spares

9. The initial spares claimed by the petitioner for the instant assets are within the specified ceiling limits and accordingly the amount claimed by the petitioner towards initial spares is allowed.

10. The petitioner has claimed capital cost of ₹23090.32 lakh, ₹8215.44 lakh, ₹36697.32 lakh and ₹3130.17 lakh for Asset-I, Asset-II, Asset-III A and Asset-III B respectively as on COD (as per Auditor's Certificate) for the purpose of tariff.

11. We have considered the submissions of the petitioner. The tariff approved in orders dated 30.12.2011 in Petition No.149/2011 for Asset-I, 25.10.2011 in Petition No. 98/TT/2011 for Asset-II and 14.11.2011 in Petition No. 174/TT/2011 for Asset-III were based on anticipated COD. The petitioner has claimed revised capital cost as on actual COD, which is supported by Auditor's Certificate dated 26.9.2014 for Asset-I, Asset-III A, and Asset-III B and Auditor's Certificate dated 24.9.2014 for Asset- II. Hence, we have considered the revised submissions claimed by the petitioner as on COD of the assets to work out the capital cost and have accordingly trued up tariff for the 2009-14 tariff period. The capital cost considered for the instant assets is as follows:-



(₹ in lakh)		
Asset	Approved apportioned cost	Capital cost as on COD approved
Asset-I	25223.26	23090.32
Asset-II	9641.84	8215.44
Asset-III A	47174.25	36697.32
Asset-III B	3883.91	3130.17
Total	85923.26	71133.25

Additional Capital Expenditure

12. The petitioner has claimed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations.

13. 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...;”

14. The petitioner has claimed total additional capitalization of ₹936.66 lakh, ₹266.92 lakh, ₹1766.58 lakh, and ₹44.14 lakh for Asset-I, Asset-II, Asset-IIIA and Asset-IIIB respectively from COD to 31.3.2014 towards balance and retention payment for works executed within cut-off date.

15. We have considered the submissions of the petitioner. The total capital cost including additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations for the assets is within the approved apportioned cost and is allowed as shown below:-



(₹ in lakh)

Asset	Particulars	Approved Appportioned Cost	Capital cost as on COD	Additional Capital Expenditure (2009-14)				Total Additional capitalization	Capital Cost as on 31.3.2014
				2010-11	2011-12	2012-13	2013-14		
Asset-I	Approved in order dated 30.12.2011	FR 25546.26	21369.04	1539.39	1672.36	-	-	3211.75	24580.79
	Actual incurred as per Auditor's certificate dated 26.9.2014	RCE 25223.26	23090.32	-	346.55	547.94	42.17	936.66	24026.98
Asset-II	Approved in order dated 25.10.2011	FR 7864	7864.00	-	-	-	-	-	7864.00
	Actual incurred as per Auditor's certificate dated 24.9.2014	RCE 9641.84	8215.44	-	-	0.13	266.79	266.92	8482.36
Asset-III	Approved in order dated 14.11.2011	FR 47617.62	41833.26	-	1500.32	655.16	703.79	2859.27	44692.53
	Actual incurred as per Auditor's certificate dated 26.9.2014 (Asset- III A)	RCE	36697.32	-	365.90	1236.76	163.92	1766.58	38463.90
	Actual incurred as per Auditor's certificate dated 26.9.2014 (Asset- III B)	51058.16 (Asset-IIIA-47174.25 Asset- IIIB-3883.91)	3130.17	-	-	3.36	40.78	44.14	3174.31
Total Approved		81027.88	71066.30	1539.39	3172.68	655.16	703.79	6071.02	77137.32
Total Actual		85923.26	71133.25	-	712.45	1788.19	513.66	3014.30	74147.55

Debt: Equity

16. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provide that:-

“(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.”

17. The petitioner has claimed true up Annual Fixed Charge based on debt-equity ratio of 70:30 admitted in order dated 30.12.2011 in Petition No.149/2011 for Asset-I, in order dated 25.10.2011 in Petition No. 98/TT/2011 for Asset-II and in order dated 14.11.2011 in Petition No. 174/TT/2011 for Asset-III.

18. With respect to additional capitalization, the petitioner has claimed the debt:equity ratio of 70:30 as on COD for the instant assets. The petitioner was directed to confirm that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30%. In response, the petitioner vide affidavit dated 21.4.2016 has submitted that as per Form-13 of the assets, actual loans deployed for funding additional capitalization is 70%, accordingly, equity deployment is 30% as shown in Form-1A as per Regulation 12(3) of the 2009 Tariff Regulations.

19. The debt:equity ratio of 70:30 as on COD for the instant assets have been considered for the purpose of true up of the approved tariff of tariff period 2009-14, as given under:-



(₹ in lakh)

Particulars	Capital cost as on COD		Completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Asset-I				
Debt	16163.22	70.00	16818.89	70.00
Equity	6927.10	30.00	7208.09	30.00
Total	23090.32	100.00	24026.98	100.00
Asset- II				
Debt	5750.90	70.00	5937.74	70.00
Equity	2464.54	30.00	2544.62	30.00
Total	8215.44	100.00	8482.36	100.00
Asset- IIIA				
Debt	25944.25	70.00	27180.86	70.00
Equity	10753.07	30.00	11283.04	30.00
Total	36697.32	100.00	38463.90	100.00
Asset- IIIB				
Debt	2191.12	70.00	2222.02	70.00
Equity	939.05	30.00	952.29	30.00
Total	3130.17	100.00	3174.31	100.00

Interest on Loan (“IOL”)

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

21. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-



(₹ in lakh)

Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 30.12.2011	673.54	1364.83	1302.89
As claimed by the petitioner	361.76	1405.25	1310.40
Allowed after trued up	361.76	1405.25	1310.39

(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 25.10.2011	239.34	450.95	413.91
As claimed by the petitioner	167.80	477.64	448.12
Allowed after trued up	167.80	477.64	448.11

(₹ in lakh)

Asset-III	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 14.11.2011	658.06	2571.25	2405.99

(₹ in lakh)

Asset-III A	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	383.31	2247.87	2113.42
Allowed after trued up	383.31	2247.86	2113.42

(₹ in lakh)

Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	16.12	185.51	171.96
Allowed after trued up	16.12	185.51	171.96

22. The variation in interest on loan is due to variation in actual COD w.r.t. anticipated COD, capital cost as on actual COD and actual additional capitalization during the 2009-14 tariff period for the assets.



Return on Equity (“ROE”)

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

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

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

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

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

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

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

24. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the earlier orders. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate	Grossed up ROE (Base rate/(1-t))
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610



25. We have considered the revised MAT rate for grossing up ROE and the approved ROE is as shown in the table below:-

(₹ in lakh)

Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 30.12.2011	580.51	1245.24	1289.09
As claimed by the petitioner	338.08	1378.33	1412.27
Allowed after trued up	338.08	1378.33	1412.27

(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 25.10.2011	206.20	412.40	412.40
As claimed by the petitioner	159.18	477.56	491.15
Allowed after trued up	159.18	477.56	491.15

(₹ in lakh)

Asset-III	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 14.11.2011	558.27	2289.60	2325.23

(₹ in lakh)

Asset-III A	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	349.04	2140.84	2207.78
Allowed after trued up	349.04	2140.84	2207.78

(₹ in lakh)

Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	15.16	182.06	185.55
Allowed after trued up	15.16	182.06	185.55

26. The variation in return on equity is on account of increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity, actual



COD w.r.t. anticipated COD, variation in capital cost and actual additional capitalization for the assets.

Depreciation

27. 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”

28. 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.”

29. The weighted average useful life of the transmission asset has been considered as per Regulations 3 (42) and 17 (4) of the 2009 Tariff Regulations. For the purpose of calculation, the weighted average useful life of the asset as on COD has been considered as 34, 35, 35 and 35 years for Asset-I, Asset-II, Asset-III A and Asset-III B. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under:-



(₹ in lakh)

Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 30.12.2011	584.88	1254.73	1299.00
As claimed by the petitioner	307.29	1252.83	1268.41
Allowed after trued up	307.29	1252.84	1268.41

(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 25.10.2011	207.61	415.22	415.22
As claimed by the petitioner	144.59	433.78	440.83
Allowed after trued up	144.59	433.78	440.83

(₹ in lakh)

Asset-III	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 14.11.2011	562.10	2305.31	2341.19

(₹ in lakh)

Asset-III A	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	324.55	1989.59	2026.57
Allowed after trued up	324.55	1989.59	2026.57

(₹ in lakh)

Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	13.77	165.36	166.53
Allowed after trued up	13.77	165.36	166.53

30. The variation in depreciation is on account of actual COD w.r.t. anticipated COD, variation in capital cost as on COD and variation in additional capitalization.



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

31. The petitioner has computed O&M Expenses for the assets mentioned in the petition and in accordance with the O&M norms for lines and bays specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are as follows:-

(₹ in lakh)

Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 30.12.2011	182.91	386.72	408.76
As claimed by the petitioner	91.45	386.72	408.76
Allowed after trued up	91.45	386.72	408.76

(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 25.10.2011	20.74	43.85	46.34
As claimed by the petitioner	13.83	43.85	46.34
Allowed after trued up	13.83	43.85	46.34

(₹ in lakh)

Asset-III	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 14.11.2011	52.26	220.97	233.50

(₹ in lakh)

Asset-III A	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	31.80	201.93	213.38
Allowed after trued up	31.80	201.93	213.38

(₹ in lakh)

Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	3.99	50.66	53.53
Allowed after trued up	3.99	50.66	53.53



Interest on working capital("IWC")

32. 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.

33. The petitioner submitted the rate of interest on working capital as 11.75% for all the assets for the period COD to 31.3.2014 as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

34. Rate of interest in working capital is considered on normative basis in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations. It is calculated equal to State Bank of India Base Rate as applicable as on 1.4.2013 plus 350 basis points. State Bank of India Base Rate on 1.4.2011 was 8.25%. Hence, interest rate 11.75% (8.25% plus 350 basis points) for the assets has been considered to work out the interest on working capital in the instant case.

35. The IWC trued up is as under:-

Asset-I	(₹ in lakh)		
	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 30.12.2011	45.50	95.74	97.32
As claimed by the petitioner	24.50	99.16	99.31
Allowed after trued up	24.50	99.16	99.32



(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 25.10.2011	14.04	27.64	27.02
As claimed by the petitioner	10.08	29.85	29.79
Allowed after trued up	10.08	29.85	29.79

(₹ in lakh)

Asset-III	2011-12 (Pro-rata)	2012-13	2013-14
Approved vide order dated 14.11.2011	38.03	153.73	152.46

(₹ in lakh)

Asset-III A	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	22.64	137.08	137.02
Allowed after trued up	22.64	137.08	137.02

(₹ in lakh)

Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
As claimed by the petitioner	1.09	13.07	13.03
Allowed after trued up	1.09	13.07	13.03

36. The variation in IWC is on account of actual COD w.r.t. anticipated COD, variation in IOL, depreciation and ROE due to variation in capital cost, actual additional capitalization and further increase in ROE on account of applicable MAT rate during 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

37. The detailed computation of the various components of the trued up annual fixed charges for the assets for the tariff period 2009-14 is summarised below:-



(₹ in lakh)

Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Gross Block			
Opening Gross Block	23090.32	23436.87	23984.81
Additional Capitalization	346.55	547.94	42.17
Closing Gross block	23436.87	23984.81	24026.98
Average Gross block	23263.60	23710.84	24005.90
Depreciation			
Rate of Depreciation (%)	5.284	5.284	5.284
Depreciable Value	20937.24	21339.76	21605.31
Elapsed Life of the assets at beginning of the year	0	1	2
Weighted Balance Useful life of the assets	34	33	32
Remaining Depreciable Value	20937.24	21032.46	20045.18
Depreciation	307.29	1252.84	1268.41
Interest on Loan			
Gross Normative Loan	16163.22	16405.81	16789.37
Cumulative Repayment upto Previous Year	0.00	307.29	1560.13
Net Loan-Opening	16163.22	16098.52	15229.24
Additions	242.59	383.56	29.52
Repayment during the year	307.29	1252.84	1268.41
Net Loan-Closing	16098.52	15229.24	13990.34
Average Loan	16130.87	15663.88	14609.79
Weighted Average Rate of Interest on Loan (%)	8.9707	8.9713	8.9693
Interest	361.76	1405.25	1310.39
Return on Equity			
Opening Equity	6927.10	7031.06	7195.44
Additions	103.97	164.38	12.65
Closing Equity	7031.06	7195.44	7208.09
Average Equity	6979.08	7113.25	7201.77



Asset-I	2011-12 (Pro-rata)	2012-13	2013-14
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610
Return on Equity (Pre Tax)	338.08	1378.33	1412.27
Interest on Working Capital			
Maintenance Spares	13.72	58.01	61.31
O & M Expenses	7.62	32.23	34.06
Receivables	187.18	753.72	749.86
Total	208.52	843.95	845.24
Interest	24.50	99.16	99.32
Annual Transmission Charges			
Depreciation	307.29	1252.84	1268.41
Interest on Loan	361.76	1405.25	1310.39
Return on Equity	338.08	1378.33	1412.27
Interest on Working Capital	24.50	99.16	99.32
O & M Expenses	91.45	386.72	408.76
Total	1123.09	4522.31	4499.15

(₹ in lakh)

Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Gross Block			
Opening Gross Block	8215.44	8215.44	8215.57
Additional Capitalization	0.00	0.13	266.79
Closing Gross block	8215.44	8215.57	8482.36
Average Gross block	8215.44	8215.51	8348.97
Depreciation			
Rate of Depreciation (%)	5.280	5.280	5.280
Depreciable Value	7393.90	7393.95	7514.07
Elapsed Life of the assets at beginning of the year	0	1	2



Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Weighted Balance Useful life of the assets	35	34	33
Remaining Depreciable Value	7393.90	7249.36	6935.70
Depreciation	144.59	433.78	440.83
Interest on Loan			
Gross Normative Loan	5750.90	5750.90	5750.99
Cumulative Repayment upto Previous Year	0.00	144.59	578.37
Net Loan-Opening	5750.90	5606.31	5172.62
Additions	0.00	0.09	186.75
Repayment during the year	144.59	433.78	440.83
Net Loan-Closing	5606.31	5172.62	4918.55
Average Loan	5678.60	5389.46	5045.58
Weighted Average Rate of Interest on Loan (%)	8.8650	8.8625	8.8813
Interest	167.80	477.64	448.11
Return on Equity			
Opening Equity	2464.54	2464.54	2464.58
Additions	0.00	0.04	80.04
Closing Equity	2464.54	2464.58	2544.62
Average Equity	2464.54	2464.56	2504.60
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610
Return on Equity (Pre Tax)	159.18	477.56	491.15
Interest on Working Capital			
Maintenance Spares	2.07	6.58	6.95
O & M Expenses	1.15	3.65	3.86
Receivables	82.58	243.78	242.70
Total	85.81	254.01	253.52
Interest	10.08	29.85	29.79



Asset-II	2011-12 (Pro-rata)	2012-13	2013-14
Annual Transmission Charges			
Depreciation	144.59	433.78	440.83
Interest	167.80	477.64	448.11
Return on Equity (Pre Tax)	159.18	477.56	491.15
Interest	10.08	29.85	29.79
O & M Expenses	13.83	43.85	46.34
Total	495.49	1462.68	1456.22

(₹ in lakh)

Asset- III A	2011-12 (Pro-rata)	2012-13	2013-14
Gross Block			
Opening Gross Block	36697.32	37063.22	38299.98
Additional Capitalization	365.90	1236.76	163.92
Closing Gross block	37063.22	38299.98	38463.90
Average Gross block	36880.27	37681.60	38381.94
Depreciation			
Rate of Depreciation (%)	5.280	5.280	5.280
Depreciable Value	33192.24	33913.44	34543.75
Elapsed Life of the assets at beginning of the year	0	1	2
Weighted Balance Useful life of the assets	35	34	33
Remaining Depreciable Value	33192.24	33588.89	32229.61
Depreciation	324.55	1989.59	2026.57
Interest on Loan			
Gross Normative Loan	25944.25	26200.38	27066.11
Cumulative Repayment upto Previous Year	0.00	324.55	2314.13
Net Loan-Opening	25944.25	25875.83	24751.98
Additions	256.13	865.73	114.74
Repayment during the year	324.55	1989.59	2026.57
Net Loan-Closing	25875.83	24751.98	22840.15



Asset- III A	2011-12 (Pro-rata)	2012-13	2013-14
Average Loan	25910.04	25313.91	23796.07
Weighted Average Rate of Interest on Loan (%)	8.8764	8.8799	8.8814
Interest	383.31	2247.86	2113.42
Return on Equity			
Opening Equity	10753.07	10862.84	11233.87
Additions	109.77	371.03	49.18
Closing Equity	10862.84	11233.87	11283.04
Average Equity	10807.96	11048.35	11258.46
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610
Return on Equity (Pre Tax)	349.04	2140.84	2207.78
Interest on Working Capital			
Maintenance Spares	4.77	30.29	32.01
O & M Expenses	2.65	16.83	17.78
Receivables	185.22	1119.55	1116.36
Total	192.64	1166.67	1166.15
Interest	22.64	137.08	137.02
Annual Transmission Charges			
Depreciation	324.55	1989.59	2026.57
Interest on Loan	383.31	2247.86	2113.42
Return on Equity	349.04	2140.84	2207.78
Interest on Working Capital	22.64	137.08	137.02
O & M Expenses	31.80	201.93	213.38
Total	1111.34	6717.30	6698.17

(₹ in lakh)

Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
Gross Block			



Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
Opening Gross Block	3130.17	3130.17	3133.53
Additional Capitalization	0.00	3.36	40.78
Closing Gross block	3130.17	3133.53	3174.31
Average Gross block	3130.17	3131.85	3153.92
Depreciation			
Rate of Depreciation (%)	5.280	5.280	5.280
Depreciable Value	2817.15	2818.67	2838.53
Elapsed Life of the assets at beginning of the year	0	1	2
Weighted Balance Useful life of the assets	35	34	33
Remaining Depreciable Value	2817.15	2804.89	2659.39
Depreciation	13.77	165.36	166.53
Interest on Loan			
Gross Normative Loan	2191.12	2191.12	2193.47
Cumulative Repayment upto Previous Year	0.00	13.77	179.13
Net Loan-Opening	2191.12	2177.35	2014.34
Additions	0.00	2.35	28.55
Repayment during the year	13.77	165.36	166.53
Net Loan-Closing	2177.35	2014.34	1876.36
Average Loan	2184.23	2095.84	1945.35
Weighted Average Rate of Interest on Loan (%)	8.8541	8.8514	8.8395
Interest	16.12	185.51	171.96
Return on Equity			
Opening Equity	939.05	939.05	940.06
Additions	0.00	1.01	12.23
Closing Equity	939.05	940.06	952.29
Average Equity	939.05	939.56	946.18
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the respective year (%)	20.008	20.008	20.961



Asset-III B	2011-12 (Pro-rata)	2012-13	2013-14
Rate of Return on Equity (Pre Tax) (%)	19.377	19.377	19.610
Return on Equity (Pre Tax)	15.16	182.06	185.55
Interest on Working Capital			
Maintenance Spares	0.60	7.60	8.03
O & M Expenses	0.33	4.22	4.46
Receivables	8.36	99.44	98.43
Total	9.29	111.26	110.92
Interest	1.09	13.07	13.03
Annual Transmission Charges			
Depreciation	13.77	165.36	166.53
Interest on Loan	16.12	185.51	171.96
Return on Equity	15.16	182.06	185.55
Interest on Working Capital	1.09	13.07	13.03
O & M Expenses	3.99	50.66	53.53
Total	50.13	596.66	590.60

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

(₹ in lakh)					
Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1274.80	1280.08	1280.08	1280.08	1280.08
Interest on Loan	1204.36	1096.53	981.66	866.81	751.96
Return on equity	1419.39	1425.27	1425.27	1425.27	1425.27
Interest on Working Capital	110.39	108.86	106.92	105.01	103.12
O & M Expenses	373.86	386.37	399.15	412.40	426.08
Total	4382.80	4297.11	4193.08	4089.57	3986.51

(₹ in lakh)					
Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	449.30	450.73	450.73	450.73	450.73
Interest on Loan	419.61	381.40	341.32	301.15	260.98



Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Return on equity	500.59	502.19	502.19	502.19	502.19
Interest on Working Capital	33.84	33.10	32.26	31.42	30.58
O & M Expenses	41.84	43.26	44.68	46.16	47.70
Total	1445.18	1410.68	1371.18	1331.65	1292.18

(₹ in lakh)

Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2033.31	2035.72	2035.72	2035.72	2035.72
Interest on Loan	1940.92	1763.60	1582.67	1401.78	1220.93
Return on equity	2215.30	2217.99	2217.99	2217.99	2217.99
Interest on Working Capital	153.12	149.52	145.71	141.93	138.15
O & M Expenses	192.71	199.39	205.75	212.74	219.74
Total	6535.36	6366.22	6187.84	6010.16	5832.53

(₹ in lakh)

Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	167.60	167.60	167.60	167.60	167.60
Interest on Loan	158.29	143.47	128.63	113.80	98.98
Return on equity	186.74	186.74	186.74	186.74	186.74
Interest on Working Capital	14.47	14.22	13.97	13.72	13.48
O & M Expenses	48.35	50.02	51.62	53.37	55.13
Total	575.45	562.05	548.56	535.23	521.93

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

(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	56.08	57.96	59.87	61.86	63.91
O & M expenses	31.16	32.20	33.26	34.37	35.51
Receivables	730.47	716.19	698.85	681.60	664.42
Total	817.71	806.35	791.98	777.83	763.84
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	110.39	108.86	106.92	105.01	103.12

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	6.28	6.49	6.70	6.92	7.16
O & M expenses	3.49	3.61	3.72	3.85	3.98
Receivables	240.86	235.11	228.53	221.94	215.36
Total	250.63	245.21	238.95	232.71	226.50
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Interest	33.84	33.10	32.26	31.42	30.58

(₹ in lakh)

Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	28.91	29.91	30.86	31.91	32.96
O & M expenses	16.06	16.62	17.15	17.73	18.31
Receivables	1089.23	1061.04	1031.31	1001.69	972.09
Total	1134.20	1107.57	1079.32	1051.33	1023.36
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	153.12	149.52	145.71	141.93	138.15

(₹ in lakh)

Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	7.25	7.50	7.74	8.01	8.27
O & M expenses	4.03	4.17	4.30	4.45	4.59
Receivables	95.91	93.68	91.43	89.21	86.99
Total	107.19	105.35	103.47	101.67	99.85
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	14.47	14.22	13.97	13.72	13.48

Capital Cost

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

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

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

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



41. The petitioner has claimed capital cost of ₹24026.98lakh, ₹8482.36lakh, ₹38463.90lakh and ₹3174.31lakhas on 31.3.2014 and additional capitalization of ₹200.00lakh, ₹54.21lakh, ₹91.46lakh and ₹0.00lakh for Asset-I, Asset-II, Asset-III A and Asset- III B respectively for the 2014-19 tariff period.

42. We have considered the submissions of the petitioner. Accordingly, the trued up capital cost of ₹24026.98lakh, ₹8482.36lakh, ₹38463.90lakh and ₹3174.31lakh for Asset-I, Asset-II, Asset-III A and Asset- III B as on 31.3.2014 has been considered to workout the tariff for the 2014-19 tariff period.

Additional Capital Expenditure

43. The petitioner has proposed additional capitalization of ₹200.00lakh, ₹54.21lakh, ₹91.46lakh for Asset-I, Asset-II and Asset-III A respectively towards balance and retention payments under Clause 1, sub-clause (i) of Regulation 14 of the 2014 Tariff Regulations. The petitioner has not projected any additional capitalisation for Asset- III B.

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

“(1) 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;

.....

45. The petitioner was directed vide affidavit dated 13.4.2016 was directed to submit the amount of balance and retention amount yet to be made, details of



contract for which payment has been retained along with the amount retained. In response the petitioner vide affidavit dated 21.4.2016 submitted the balance and retention amount to be made.

46. The total capital cost of the transmission asset including additional capitalization incurred during the 2014-19 tariff period works out to ₹24226.98 lakh, ₹8536.57 lakh, ₹38555.36 lakh and ₹3174.31 lakh for Asset-I, Asset-II, Asset-III A and Asset- III B. We have considered the petitioner's submission. It is observed that the additional capitalization proposed is mainly towards balance and retention payments due to undischarged liabilities for works executed within cut-off date. Further, the total completion cost considering proposed additional capitalisation is within the approved apportioned cost of the instant assets. Accordingly, the capital cost claimed by the petitioner is allowed in accordance with Clause 1, sub-clause(i) of Regulation 14 of the 2014 Tariff Regulations. The additional capitalisation for tariff period 2014-19 shall be finally approved after the detailed scrutiny of additional capitalisation while carrying out the true up for 2014-19 tariff period.

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

Particulars	Approved Apportioned Cost	Admitted capital cost as on 31.3.2014	Additional capitalization		Total capital cost including additional capitalization
			2014-15		
Asset-I	25223.26	24026.98	200.00		24226.98



Particulars	Approved Apportioned Cost	Admitted capital cost as on 31.3.2014	Additional capitalization	Total capital cost including additional capitalization
			2014-15	
Asset-II	9641.84	8482.36	54.21	8536.57
Asset-III A	47174.25	38463.90	91.46	38555.36
Asset-III B	3883.91	3174.31	-	3174.31
Total	85923.26	74147.55	345.67	74493.22

Debt:EquityRatio

48. 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.”

49. 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	Capital cost as on 31.3.2014		Completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Asset-I				
Debt	16818.89	70.00	16958.89	70.00
Equity	7208.09	30.00	7268.09	30.00
Total	24026.98	100.00	24226.98	100.00
Asset- II				
Debt	5937.74	70.00	5975.69	70.00
Equity	2544.62	30.00	2560.88	30.00
Total	8482.36	100.00	8536.57	100.00



Particulars	Capital cost as on 31.3.2014		Completion cost including additional capitalization	
Asset- IIIA				
Debt	27180.86	70.00	27244.88	70.00
Equity	11283.04	30.00	11310.48	30.00
Total	38463.90	100.00	38555.36	100.00
Asset- IIIB				
Debt	2222.02	70.00	2222.02	70.00
Equity	952.29	30.00	952.29	30.00
Total	3174.31	100.00	3174.31	100.00

Interest on Loan ("IOL")

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

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

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

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

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

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



(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	16818.89	16958.89	16958.89	16958.89	16958.89
Cumulative Repayment up to previous year	2828.54	4103.35	5383.44	6663.52	7943.61
Net Loan-Opening	13990.34	12855.54	11575.45	10295.36	9015.27
Additions during the year	140.00	0.00	0.00	0.00	0.00
Repayment during the year	1274.81	1280.09	1280.09	1280.09	1280.09
Net Loan-Closing	12855.54	11575.45	10295.36	9015.27	7735.19
Average Loan	13422.94	12215.49	10935.41	9655.32	8375.23
Rate of Interest (%)	8.9724	8.9765	8.9769	8.9775	8.9783
Interest	1204.36	1096.52	981.66	866.80	751.96

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	5937.74	5975.69	5975.69	5975.69	5975.69
Cumulative Repayment up to previous year	1019.20	1468.50	1919.23	2369.96	2820.69
Net Loan-Opening	4918.55	4507.20	4056.46	3605.73	3155.00
Additions during the year	37.95	0.00	0.00	0.00	0.00
Repayment during the year	449.30	450.73	450.73	450.73	450.73
Net Loan-Closing	4507.20	4056.46	3605.73	3155.00	2704.27
Average Loan	4712.87	4281.83	3831.10	3380.37	2929.64
Rate of Interest (%)	8.9035	8.9073	8.9093	8.9089	8.9084
Interest	419.61	381.39	341.32	301.15	260.98

(₹ in lakh)

Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	27180.86	27244.88	27244.88	27244.88	27244.88
Cumulative Repayment up to previous year	4340.70	6374.01	8409.73	10445.46	12481.18
Net Loan-Opening	22840.15	20870.87	18835.15	16799.42	14763.70
Additions during the year	64.02	0.00	0.00	0.00	0.00
Repayment during the year	2033.31	2035.72	2035.72	2035.72	2035.72
Net Loan-Closing	20870.87	18835.15	16799.42	14763.70	12727.98
Average Loan	21855.51	19853.01	17817.28	15781.56	13745.84
Rate of Interest (%)	8.8807	8.8833	8.8829	8.8827	8.8826
Interest	1940.92	1763.60	1582.70	1401.82	1220.99



(₹ in lakh)					
Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	2222.02	2222.02	2222.02	2222.02	2222.02
Cumulative Repayment up to previous year	345.66	513.26	680.87	848.47	1016.08
Net Loan-Opening	1876.36	1708.75	1541.15	1373.54	1205.94
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	167.60	167.60	167.60	167.60	167.60
Net Loan-Closing	1708.75	1541.15	1373.54	1205.94	1038.34
Average Loan	1792.55	1624.95	1457.35	1289.74	1122.14
Rate of Interest (%)	8.8302	8.8290	8.8261	8.8232	8.8203
Interest	158.29	143.47	128.63	113.80	98.98

Return on Equity("ROE")

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

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

"25. Tax on Return on Equity:

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

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

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

53. The petitioner has submitted ROE at the rate of 20.243% after grossing up the ROE of 15.50% with MAT rate as per the above Regulation. The petitioner



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

54. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

55. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE allowed is given below:-



(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	7208.09	7268.09	7268.09	7268.09	7268.09
Additional Capitalization	60.00	0.00	0.00	0.00	0.00
Closing Equity	7268.09	7268.09	7268.09	7268.09	7268.09
Average Equity	7238.09	7268.09	7268.09	7268.09	7268.09
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)	1419.39	1425.27	1425.27	1425.27	1425.27

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2544.62	2560.88	2560.88	2560.88	2560.88
Additional Capitalization	16.26	0.00	0.00	0.00	0.00
Closing Equity	2560.88	2560.88	2560.88	2560.88	2560.88
Average Equity	2552.75	2560.88	2560.88	2560.88	2560.88
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)	500.59	502.19	502.19	502.19	502.19

(₹ in lakh)

Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	11283.04	11310.48	11310.48	11310.48	11310.48
Additional Capitalization	27.44	0.00	0.00	0.00	0.00
Closing Equity	11310.48	11310.48	11310.48	11310.48	11310.48
Average Equity	11296.76	11310.48	11310.48	11310.48	11310.48
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



Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity (Pre Tax)	2215.30	2217.99	2217.99	2217.99	2217.99

(₹ in lakh)

Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	952.29	952.29	952.29	952.29	952.29
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	952.29	952.29	952.29	952.29	952.29
Average Equity	952.29	952.29	952.29	952.29	952.29
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)	186.74	186.74	186.74	186.74	186.74

Depreciation

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

"27. Depreciation:

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

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

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

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



57. The petitioner has computed depreciation considering capital expenditure of ₹24026.98lakh, ₹8482.36lakh, ₹38463.90lakh and ₹3174.31lakh as on 31.3.2014 and additional capitalization of ₹200.00lakh, ₹54.21lakh, ₹91.46lakh and ₹0.00 lakh for Asset-I, Asset-II, Asset-III A and Asset- III B respectively for the 2014-19 tariff period.

58. We have considered the submissions of the petitioner. Depreciation is allowed considering the trued up capital expenditure of the assets as on 31.3.2014 under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	24026.98	24226.98	24226.98	24226.98	24226.98
Additional Capitalization	200.00	0.00	0.00	0.00	0.00
Gross block at the end of the year	24226.98	24226.98	24226.98	24226.98	24226.98
Average gross block	24126.98	24226.98	24226.98	24226.98	24226.98
Rate of Depreciation (%)	5.284	5.284	5.284	5.284	5.284
Depreciable Value	21714.28	21804.28	21804.28	21804.28	21804.28
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	18885.74	17700.93	16420.85	15140.76	13860.67
Depreciation	1274.81	1280.09	1280.09	1280.09	1280.09

(₹ in lakh)					
Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	8482.36	8536.57	8536.57	8536.57	8536.57
Additional Capitalization	54.21	0.00	0.00	0.00	0.00
Gross block at the end of the year	8536.57	8536.57	8536.57	8536.57	8536.57
Average gross block	8509.47	8536.57	8536.57	8536.57	8536.57



Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	7658.52	7682.91	7682.91	7682.91	7682.91
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	32	31	30	29	28
Remaining Depreciable Value	6639.32	6214.42	5763.69	5312.96	4862.22
Depreciation	449.30	450.73	450.73	450.73	450.73

(₹ in lakh)

Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	38463.90	38555.36	38555.36	38555.36	38555.36
Additional Capitalization	91.46	0.00	0.00	0.00	0.00
Gross block at the end of the year	38555.36	38555.36	38555.36	38555.36	38555.36
Average gross block	38509.63	38555.36	38555.36	38555.36	38555.36
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	34658.67	34699.82	34699.82	34699.82	34699.82
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	32	31	30	29	28
Remaining Depreciable Value	30317.97	28325.81	26290.09	24254.37	22218.65
Depreciation	2033.31	2035.72	2035.72	2035.72	2035.72

(₹ in lakh)

Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	3174.31	3174.31	3174.31	3174.31	3174.31
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Gross block at the end of the year	3174.31	3174.31	3174.31	3174.31	3174.31
Average gross block	3174.31	3174.31	3174.31	3174.31	3174.31
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	2856.88	2856.88	2856.88	2856.88	2856.88
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	32	31	30	29	28



Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Remaining Depreciable Value	2511.22	2343.61	2176.01	2008.41	1840.80
Depreciation	167.60	167.60	167.60	167.60	167.60

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

59. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M Expenses has been worked out as given hereunder:-

(₹ in lakh)

Particulars	Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Norms as per Regulation	Double Circuit (Twin Conductor) (in ₹lakh/km)	0.707	0.731	0.755	0.78	0.806
	400 kV Bays (in ₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
Actual	Double Circuit (Twin Conductor) (km)	187.642	187.642	187.642	187.642	187.642
	400 kV Bays (Nos.)	4	4	4	4	4
Total O&M Expenses		373.86	386.37	399.15	412.40	426.08

(₹ in lakh)

Particulars	Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Norms as per Regulation	Double Circuit (Twin Conductor) (in ₹lakh/km)	0.707	0.731	0.755	0.78	0.806
Actual	Double Circuit (Twin Conductor) (km)	59.182	59.182	59.182	59.182	59.182
Total O&M Expenses		41.84	43.26	44.68	46.16	47.70



(₹ in lakh)

Particulars	Asset-III(A)	2014-15	2015-16	2016-17	2017-18	2018-19
Norms as per Regulation	Single Circuit (Bundled Conductor) (in ₹lakh/km)	0.606	0.627	0.647	0.669	0.691
Actual	Single Circuit (Bundled Conductor) (km)	318	318	318	318	318
Total O&M Expenses		192.71	199.39	205.75	212.74	219.74

(₹ in lakh)

Particulars	Asset-III(B)	2014-15	2015-16	2016-17	2017-18	2018-19
Norms as per Regulation	Single Circuit (Bundled Conductor) (in ₹lakh/km)	0.606	0.627	0.647	0.669	0.691
Actual	Single Circuit (Bundled Conductor) (km)	79.78	79.78	79.78	79.78	79.78
Total O&M Expenses		48.35	50.02	51.62	53.37	55.13

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

61. The norms for O&M Expenses for transmission system has been specified under Regulation 29(3)(a) of the 2014 Tariff Regulations after considering (i)



normalized actual O&M expenses of the petitioner on its various projects and various regions during the year 2008-13.

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

63. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)					
O&M Expenses Allowed	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	373.86	386.37	399.15	412.40	426.08
Asset-II	41.84	43.26	44.68	46.16	47.70
Asset-III A	192.71	199.39	205.75	212.74	219.74
Asset-III B	48.35	50.02	51.62	53.37	55.13
Total	656.76	679.04	701.20	724.68	748.65

Interest on Working Capital (“IWC”)

64. 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;”



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

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

(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	56.08	57.95	59.87	61.86	63.91
O & M Expenses	31.16	32.20	33.26	34.37	35.51
Receivables	730.47	716.18	698.85	681.60	664.42
Total	817.70	806.34	791.98	777.82	763.84
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	110.39	108.86	106.92	105.01	103.12

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	6.28	6.49	6.70	6.92	7.16
O & M Expenses	3.49	3.61	3.72	3.85	3.98
Receivables	240.86	235.11	228.53	221.94	215.36
Total	250.63	245.21	238.96	232.71	226.49
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	33.83	33.10	32.26	31.42	30.58

(₹ in lakh)

Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	28.91	29.91	30.86	31.91	32.96
O & M Expenses	16.06	16.62	17.15	17.73	18.31
Receivables	1089.23	1061.04	1031.31	1001.70	972.10
Total	1134.19	1107.56	1079.32	1051.34	1023.37
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



Asset-III A	2014-15	2015-16	2016-17	2017-18	2018-19
Interest	153.12	149.52	145.71	141.93	138.16

(₹ in lakh)

Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	7.25	7.50	7.74	8.01	8.27
O & M Expenses	4.03	4.17	4.30	4.45	4.59
Receivables	95.91	93.68	91.43	89.21	86.99
Total	107.19	105.35	103.47	101.66	99.85
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	14.47	14.22	13.97	13.72	13.48

Annual Transmission Charges

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

(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	24026.98	24226.98	24226.98	24226.98	24226.98
Additional Capitalization	200.00	0.00	0.00	0.00	0.00
Closing Gross block	24226.98	24226.98	24226.98	24226.98	24226.98
Average Gross block	24126.98	24226.98	24226.98	24226.98	24226.98
Depreciation					
Rate of Depreciation (%)	5.284	5.284	5.284	5.284	5.284
Depreciable Value	21714.28	21804.28	21804.28	21804.28	21804.28
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	18885.74	17700.93	16420.85	15140.76	13860.67
Depreciation	1274.81	1280.09	1280.09	1280.09	1280.09
Interest on Loan					
Gross Normative Loan	16818.89	16958.89	16958.89	16958.89	16958.89



Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Cumulative Repayment upto Previous Year	2828.54	4103.35	5383.44	6663.52	7943.61
Net Loan-Opening	13990.34	12855.54	11575.45	10295.36	9015.27
Additions	140.00	0.00	0.00	0.00	0.00
Repayment during the year	1274.81	1280.09	1280.09	1280.09	1280.09
Net Loan-Closing	12855.54	11575.45	10295.36	9015.27	7735.19
Average Loan	13422.94	12215.49	10935.41	9655.32	8375.23
Weighted Average Rate of Interest on Loan (%)	8.9724	8.9765	8.9769	8.9775	8.9783
Interest	1204.36	1096.52	981.66	866.80	751.96
Return on Equity					
Opening Equity	7208.09	7268.09	7268.09	7268.09	7268.09
Additions	60.00	0.00	0.00	0.00	0.00
Closing Equity	7268.09	7268.09	7268.09	7268.09	7268.09
Average Equity	7238.09	7268.09	7268.09	7268.09	7268.09
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective 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)	1419.39	1425.27	1425.27	1425.27	1425.27
Interest on Working Capital					
Maintenance Spares	56.08	57.95	59.87	61.86	63.91
O & M Expenses	31.16	32.20	33.26	34.37	35.51
Receivables	730.47	716.18	698.85	681.60	664.42
Total	817.70	806.34	791.98	777.82	763.84
Interest	110.39	108.86	106.92	105.01	103.12
Annual Transmission Charges					
Depreciation	1274.81	1280.09	1280.09	1280.09	1280.09
Interest on Loan	1204.36	1096.52	981.66	866.80	751.96
Return on Equity	1419.39	1425.27	1425.27	1425.27	1425.27
Interest on Working Capital	110.39	108.86	106.92	105.01	103.12
O & M Expenses	373.86	386.37	399.15	412.40	426.08
Total	4382.81	4297.11	4193.09	4089.57	3986.51



(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	8482.36	8536.57	8536.57	8536.57	8536.57
Additional Capitalization	54.21	0.00	0.00	0.00	0.00
Closing Gross block	8536.57	8536.57	8536.57	8536.57	8536.57
Average Gross block	8509.47	8536.57	8536.57	8536.57	8536.57
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	7658.52	7682.91	7682.91	7682.91	7682.91
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	32	31	30	29	28
Remaining Depreciable Value	6639.32	6214.42	5763.69	5312.96	4862.22
Depreciation	449.30	450.73	450.73	450.73	450.73
Interest on Loan					
Gross Normative Loan	5937.74	5975.69	5975.69	5975.69	5975.69
Cumulative Repayment upto Previous Year	1019.20	1468.50	1919.23	2369.96	2820.69
Net Loan-Opening	4918.55	4507.20	4056.46	3605.73	3155.00
Additions	37.95	0.00	0.00	0.00	0.00
Repayment during the year	449.30	450.73	450.73	450.73	450.73
Net Loan-Closing	4507.20	4056.46	3605.73	3155.00	2704.27
Average Loan	4712.87	4281.83	3831.10	3380.37	2929.64
Weighted Average Rate of Interest on Loan (%)	8.9035	8.9073	8.9093	8.9089	8.9084
Interest	419.61	381.39	341.32	301.15	260.98
Return on Equity					
Opening Equity	2544.62	2560.88	2560.88	2560.88	2560.88
Additions	16.26	0.00	0.00	0.00	0.00
Closing Equity	2560.88	2560.88	2560.88	2560.88	2560.88
Average Equity	2552.75	2560.88	2560.88	2560.88	2560.88
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961	20.961



Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	500.59	502.19	502.19	502.19	502.19
Interest on Working Capital					
Maintenance Spares	6.28	6.49	6.70	6.92	7.16
O & M Expenses	3.49	3.61	3.72	3.85	3.98
Receivables	240.86	235.11	228.53	221.94	215.36
Total	250.63	245.21	238.96	232.71	226.49
Interest	33.83	33.10	32.26	31.42	30.58
Annual Transmission Charges					
Depreciation	449.30	450.73	450.73	450.73	450.73
Interest	419.61	381.39	341.32	301.15	260.98
Return on Equity (Pre Tax)	500.59	502.19	502.19	502.19	502.19
Interest	33.83	33.10	32.26	31.42	30.58
O & M Expenses	41.84	43.26	44.68	46.16	47.70
Total	1445.18	1410.68	1371.18	1331.65	1292.18

(₹ in lakh)

Asset-III (A)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	38463.90	38555.36	38555.36	38555.36	38555.36
Additional Capitalization	91.46	0.00	0.00	0.00	0.00
Closing Gross block	38555.36	38555.36	38555.36	38555.36	38555.36
Average Gross block	38509.63	38555.36	38555.36	38555.36	38555.36
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	34658.67	34699.82	34699.82	34699.82	34699.82
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	32	31	30	29	28
Remaining Depreciable Value	30317.97	28325.81	26290.09	24254.37	22218.65
Depreciation	2033.31	2035.72	2035.72	2035.72	2035.72
Interest on Loan					



Asset-III (A)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	27180.86	27244.88	27244.88	27244.88	27244.88
Cumulative Repayment upto Previous Year	4340.70	6374.01	8409.73	10445.46	12481.18
Net Loan-Opening	22840.15	20870.87	18835.15	16799.42	14763.70
Additions	64.02	0.00	0.00	0.00	0.00
Repayment during the year	2033.31	2035.72	2035.72	2035.72	2035.72
Net Loan-Closing	20870.87	18835.15	16799.42	14763.70	12727.98
Average Loan	21855.51	19853.01	17817.28	15781.56	13745.84
Weighted Average Rate of Interest on Loan (%)	8.8807	8.8833	8.8829	8.8827	8.8826
Interest	1940.92	1763.60	1582.70	1401.82	1220.99
Return on Equity					
Opening Equity	11283.04	11310.48	11310.48	11310.48	11310.48
Additions	27.44	0.00	0.00	0.00	0.00
Closing Equity	11310.48	11310.48	11310.48	11310.48	11310.48
Average Equity	11296.76	11310.48	11310.48	11310.48	11310.48
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective 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)	2215.30	2217.99	2217.99	2217.99	2217.99
Interest on Working Capital					
Maintenance Spares	28.91	29.91	30.86	31.91	32.96
O & M Expenses	16.06	16.62	17.15	17.73	18.31
Receivables	1089.23	1061.04	1031.31	1001.70	972.10
Total	1134.19	1107.56	1079.32	1051.34	1023.37
Interest	153.12	149.52	145.71	141.93	138.16
Annual Transmission Charges					
Depreciation	2033.31	2035.72	2035.72	2035.72	2035.72
Interest on Loan	1940.92	1763.60	1582.70	1401.82	1220.99
Return on Equity	2215.30	2217.99	2217.99	2217.99	2217.99
Interest on Working Capital	153.12	149.52	145.71	141.93	138.16
O & M Expenses	192.71	199.39	205.75	212.74	219.74
Total	6535.35	6366.22	6187.86	6010.20	5832.59



Asset-III (B)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	3174.31	3174.31	3174.31	3174.31	3174.31
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	3174.31	3174.31	3174.31	3174.31	3174.31
Average Gross block	3174.31	3174.31	3174.31	3174.31	3174.31
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	2856.88	2856.88	2856.88	2856.88	2856.88
Elapsed Life of the assets at beginning of the year	3	4	5	6	7
Weighted Balance Useful life of the assets	32	31	30	29	28
Remaining Depreciable Value	2511.22	2343.61	2176.01	2008.41	1840.80
Depreciation	167.60	167.60	167.60	167.60	167.60
Interest on Loan					
Gross Normative Loan	2222.02	2222.02	2222.02	2222.02	2222.02
Cumulative Repayment upto Previous Year	345.66	513.26	680.87	848.47	1016.08
Net Loan-Opening	1876.36	1708.75	1541.15	1373.54	1205.94
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	167.60	167.60	167.60	167.60	167.60
Net Loan-Closing	1708.75	1541.15	1373.54	1205.94	1038.34
Average Loan	1792.55	1624.95	1457.35	1289.74	1122.14
Weighted Average Rate of Interest on Loan (%)	8.8302	8.8290	8.8261	8.8232	8.8203
Interest	158.29	143.47	128.63	113.80	98.98
Return on Equity					
Opening Equity	952.29	952.29	952.29	952.29	952.29
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	952.29	952.29	952.29	952.29	952.29
Average Equity	952.29	952.29	952.29	952.29	952.29
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective 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)	186.74	186.74	186.74	186.74	186.74



Asset-III (B)	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
Maintenance Spares	7.25	7.50	7.74	8.01	8.27
O & M Expenses	4.03	4.17	4.30	4.45	4.59
Receivables	95.91	93.68	91.43	89.21	86.99
Total	107.19	105.35	103.47	101.66	99.85
Interest	14.47	14.22	13.97	13.72	13.48
Annual Transmission Charges					
Depreciation	167.60	167.60	167.60	167.60	167.60
Interest on Loan	158.29	143.47	128.63	113.80	98.98
Return on Equity	186.74	186.74	186.74	186.74	186.74
Interest on Working Capital	14.47	14.22	13.97	13.72	13.48
O & M Expenses	48.35	50.02	51.62	53.37	55.13
Total	575.45	562.06	548.56	535.24	521.93

Filing Fee and Publication Expenses

68. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations.

69. 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

70. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We have considered the submissions of the petitioner and respondent submissions.



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

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

Sharing of Transmission Charges

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

73. This order disposes of Petition No. 27/TT/2015.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2009-14**

(₹ in lakh)

Asset-I	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO DRAWL ON 01-	9.33	1122.00	0.00	1122.00
BOND XXIX-DOCO DRAWL ON 01-JAN - 2012-	9.20	921.00	0.00	921.00
BOND XXX-DOCO DRAWL ON 01-JAN-2012-	8.80	3039.00	0.00	3039.00
BOND XXXI-DOCO DRAWL ON 01-JAN-2012-	8.90	2460.00	0.00	2460.00
BOND XXXIII-DOCO DRAWL ON 01-JAN-2012-	8.64	3064.00	0.00	3064.00
BOND XXXII- DOCO DRAWL ON 01-JAN-2012-	8.84	539.00	0.00	539.00
BOND XXXIV-DOCO DRAWL ON 01-JAN-2012-	8.84	1808.00	0.00	1808.00
BOND XXXV-DOCO DRAWL ON 01-JAN-2012-	9.64	1200.00	0.00	1200.00
BOND XXXVII- ADD CAP FOR 2011-12 Add Cap Funding	9.25	0.00	242.59	242.59
BOND XXXVII- DOCO DRAWL ON 01-JAN-2012	9.25	2010.22	0.00	2010.22
BOND XL-ADD CAP FOR 2012-13 Add Cap Funding-	9.30	0.00	111.76	111.76
BOND XLI-ADD CAP FOR 2012-13 Add cap funding-	8.85	0.00	251.14	251.14
BOND - XLII-ADDCAP FOR 2012-2013 Add cap funding-	8.80	0.00	20.66	20.66
BOND - XLIII-ADD CAP FOR 2013-2014 ADD CAP FUNDING	7.93	0.00	29.52	29.52
Total		16163.22	655.67	16818.89



(₹ in lakh)

Asset-II	Interest Rate (%)	Loan deployed as on COD (1.8.2011)	Additions during the tariff period	Total
BOND XXVIII-DOCO Funding	9.33	468.00	0.00	468.00
BOND XXIX-DOCO Funding-	9.20	384.00	0.00	384.00
BOND XXX-DOCO Funding-	8.80	1267.00	0.00	1267.00
BOND XXXI-DOCO Funding-	8.90	1376.00	0.00	1376.00
BOND XXXIII-DOCO Funding-	8.64	1277.00	0.00	1277.00
BOND XXXII- DOCO Funding-	8.84	225.00	0.00	225.00
BOND XXXIV-DOCO Funding-	8.84	753.90	0.00	753.90
SBI (21.3.2012)- ADD CAP FOR 2013-2014 Add cap Funding-	10.29	0.00	186.75	186.75
		5750.90	186.75	5937.65

(₹ in lakh)

Asset-III A	Interest Rate (%)	Loan deployed as on COD (1.8.2011)	Additions during the tariff period	Total
BOND XXVIII-DOCO Funding-	9.33	1300.00	0.00	1300.00
BOND XXIX- DOCO Funding-	9.20	1300.00	0.00	1300.00
BOND XXX- DOCO Funding-	8.80	4400.00	0.00	4400.00
BOND XXXI-DOCO Funding-	8.90	4700.00	0.00	4700.00
BOND XXXIII-ADD CAP FOR 2011-12 Add cap Funding-	8.64	0.00	250.00	250.00
BOND XXXIII- DOCO Funding-	8.64	8850.00	0.00	8850.00
BOND XXXII- DOCO Funding-	8.84	100.00	0.00	100.00
BOND XXXIV- ADD CAP FOR 2011-2012 Add Cap Funding-	8.84	0.00	6.13	6.13
		25944.25	1236.60	27180.85



(₹ in lakh)

Asset-IIIB	Interest Rate (%)	Loan deployed as on COD (1.8.2011)	Additions during the tariff period	Total
BOND XXVIII-DOCO Funding-	9.33	200.00	0.00	200.00
BOND XXIX- DOCO Funding-	9.20	200.00	0.00	200.00
BOND XXX- DOCO Funding-	8.80	600.00	0.00	600.00
BOND XXXI-DOCO Funding-	8.90	200.00	0.00	200.00
BOND XXXIII-DOCO Funding-	8.64	900.00	0.00	900.00
BOND-XXXIV-DOCO Funding-	8.84	25.00	0.00	25.00
BOND XXXV ADD CAP FOR 2012-2013 Add cap funding	9.64	0.00	2.35	2.35
BOND XXXV-DOCO Funding-	9.64	66.12	0.00	66.12
BOND XLIII ADD CAP FOR 2013-2014 ADD CAP Funding-	7.93	0.00	28.55	28.55
		2191.12	30.90	2222.02

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

(₹ in lakh)

Asset-I	2011-12	2012-13	2013-14
Gross Opening Loan	16163.22	16405.81	16789.37
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	170.25
Net Loans Opening	16163.22	16405.81	16619.12
ADD: Drawl(s) During the year	242.59	383.56	29.52
Less: Repayment(s) of Loan During the year	0.00	170.25	673.42
Net Closing Loan	16405.81	16619.12	15975.22
Average Net Loan	16284.52	16512.47	16297.17
Rate of Interest on Loan(%)	8.9707	8.9713	8.9693
Interest on Loan	1460.84	1481.38	1461.74

Asset-II	2011-12	2012-13	2013-14
Gross Opening Loan	5750.90	5750.90	5750.90
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	71.00
Net Loans Opening	5750.90	5750.90	5679.90
ADD: Drawl(s) During the year	0.00	0.00	186.75
Less: Repayment(s) of Loan During the year	0.00	71.00	310.00



Asset-II	2011-12	2012-13	2013-14
Net Closing Loan	5750.90	5679.90	5556.65
Average Net Loan	5750.90	5715.40	5618.28
Rate of Interest on Loan (%)	8.8650	8.8625	8.8813
Interest on Loan	509.82	506.53	498.98

Asset- III A	2011-12	2012-13	2013-14
Gross Opening Loan	25944.25	26200.38	27066.11
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	216.66
Net Loans Opening	25944.25	26200.38	26849.45
ADD: Drawl(s) During the year	256.13	865.73	114.74
Less: Repayment(s) of Loan During the year	0.00	216.66	983.33
Net Closing Loan	26200.38	26849.45	25980.86
Average Net Loan	26072.32	26524.92	26415.16
Rate of Interest on Loan	8.8764	8.8799	8.8814
Interest on Loan	2314.27	2355.40	2346.04

Asset-III B	2011-12	2012-13	2013-14
Gross Opening Loan	2191.12	2191.12	2193.47
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	33.34
Net Loans Opening	2191.12	2191.12	2160.13
ADD: Drawl(s) During the year	0.00	2.35	28.55
Less: Repayment(s) of Loan During the year	0.00	33.34	100.01
Net Closing Loan	2191.12	2160.13	2088.67
Average Net Loan	2191.12	2175.63	2124.40
Rate of Interest on Loan (%)	8.8541	8.8514	8.8395
Interest on Loan	194.00	192.57	187.79



ANNEXURE-II**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)****(₹ in lakh)**

Asset-I	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO DRAWL ON 01-	9.33	1122.00	0.00	1122.00
BOND XXIX-DOCO DRAWL ON 01-JAN -2012-	9.20	921.00	0.00	921.00
BOND XXX-DOCO DRAWL ON 01-JAN-2012-	8.80	3039.00	0.00	3039.00
BOND XXXI-DOCO DRAWL ON 01-JAN-2012-	8.90	2460.00	0.00	2460.00
BOND XXXIII-DOCO DRAWL ON 01-JAN-2012-	8.64	3064.00	0.00	3064.00
BOND XXXII- DOCO DRAWL ON 01-JAN-2012-	8.84	539.00	0.00	539.00
BOND XXXIV-DOCO DRAWL ON 01-JAN-2012-	8.84	1808.00	0.00	1808.00
BOND XXXV-DOCO DRAWL ON 01-JAN-2012-	9.64	1200.00	0.00	1200.00
BOND XXXVII- ADD CAP FOR 2011-12 Add Cap Funding	9.25	242.59	0.00	242.59
BOND XXXVII- DOCO DRAWL ON 01-JAN-2012	9.25	2010.22	0.00	2010.22
BOND XL-ADD CAP FOR 2012-13 Add Cap Funding-	9.30	111.76	0.00	111.76
BOND XLI-ADD CAP FOR 2012-13 Add cap funding-	8.85	251.14	0.00	251.14
BOND - XLII-ADDCAP FOR 2012-2013 Add cap funding-	8.80	20.66	0.00	20.66
BOND - XLIII-ADD CAP FOR 2013-2014 ADD CAP FUNDING	7.93	29.52	0.00	29.52
Total		16818.89	0.00	16818.89

(₹ in lakh)

Asset-II	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO Funding	9.33	468.00	0.00	468.00
BOND XXIX-DOCO Funding-	9.20	384.00	0.00	384.00
BOND XXX-DOCO Funding-	8.80	1267.00	0.00	1267.00
BOND XXXI-DOCO Funding-	8.90	1376.00	0.00	1376.00
BOND XXXIII-DOCO Funding-	8.64	1277.00	0.00	1277.00



BOND XXXII- DOCO Funding-	8.84	225.00	0.00	225.00
BOND XXXIV-DOCO Funding-	8.84	753.90	0.00	753.90
SBI (21.3.2012)- ADD CAP FOR 2013-2014 Add cap Funding-	10.25	186.75	0.00	186.75
		5937.65	0.00	5937.65

(₹ in lakh)

Asset-III A	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO Funding-	9.33	1300.00	0.00	1300.00
BOND XXIX- DOCO Funding-	9.20	1300.00	0.00	1300.00
BOND XXX- DOCO Funding-	8.80	4400.00	0.00	4400.00
BOND XXXI-DOCO Funding-	8.90	4700.00	0.00	4700.00
BOND XXXIII-ADD CAP FOR 2011-12 Add cap Funding-	8.64	250.00	0.00	250.00
BOND XXXIII- DOCO Funding-	8.64	8850.00	0.00	8850.00
BOND XXXII- DOCO Funding-	8.84	100.00	0.00	100.00
BOND XXXIV- ADD CAP FOR 2011-2012 Add Cap Funding-	8.84	6.13	0.00	6.13
BOND-XXXIV- DOCO Funding-	8.84	3379.13	0.00	3379.13
BOND-XXXV- ADD CAP FOR 2012-2013 Add cap funding-	0.00	361.30	0.00	361.30
BOND XXXV-DOCO Funding-	9.64	1915.12	0.00	1915.12
BOND XXXVI- ADD CAP FOR 2012-13 Add Cap Funding-	9.35	92.06	0.00	92.06
BOND XXXVII- ADD CAP FOR 2012-13 Add Cap Funding-	9.25	101.62	0.00	101.62
BOND-XLII- ADD CAP FOR 2012-13 Add cap funding-	8.80	310.75	0.00	310.75
BOND-XLIII- ADD CAP FOR 2013-14 Add cap funding	7.93	114.74	0.00	114.74
		27180.85	0.00	27180.85

(₹ in lakh)

Asset-III B	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXVIII-DOCO Funding-	9.33	200.00	0.00	200.00
BOND XXIX- DOCO Funding-	9.20	200.00	0.00	200.00
BOND XXX- DOCO Funding-	8.80	600.00	0.00	600.00



Asset-IIIB	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXI-DOCO Funding-	8.90	200.00	0.00	200.00
BOND XXXIII-DOCO Funding-	8.64	900.00	0.00	900.00
BOND-XXXIV-DOCO Funding-	8.84	25.00	0.00	25.00
BOND XXXV ADD CAP FOR 2012-2013 Add cap funding	9.64	2.35	0.00	2.35
BOND XXXV-DOCO Funding-	9.64	66.12	0.00	66.12
BOND XLIII ADD CAP FOR 2013-2014 ADD CAP Funding-	7.93	28.55	0.00	28.55
		2222.02	0.00	2222.02

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

(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	16818.89	16818.89	16818.89	16818.89	16818.89
Cumulative Repayments of Loans upto Previous Year	843.67	1923.09	3290.25	4687.65	6087.51
Net Loans Opening	15975.22	14895.80	13528.64	12131.24	10731.38
ADD: Drawl(s) During the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan During the year	1079.42	1367.16	1397.40	1399.86	1399.86
Net Closing Loan	14895.80	13528.64	12131.24	10731.38	9331.52
Average Net Loan	15435.51	14212.22	12829.94	11431.31	10031.45
Rate of Interest on Loan	8.9724	8.9765	8.9769	8.9775	8.9783
Interest on Loan	1384.93	1275.76	1151.73	1026.24	900.66

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	5937.65	5937.65	5937.65	5937.65	5937.65
Cumulative Repayments of Loans upto Previous Year	381.00	860.25	1339.50	1835.73	2331.96
Net Loans Opening	5556.65	5077.40	4598.15	4101.92	3605.69
ADD: Drawl(s) During the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan During the year	479.25	479.25	496.23	496.23	496.23
Net Closing Loan	5077.40	4598.15	4101.92	3605.69	3109.46
Average Net Loan	5317.03	4837.78	4350.04	3853.81	3357.58



Rate of Interest on Loan	8.9035 %	8.9073%	8.9093 %	8.9089 %	8.9084%
Interest on Loan	473.40	430.91	387.56	343.33	299.11

(₹ in lakh)

Asset- III A	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	27180.85	27180.85	27180.85	27180.85	27180.85
Cumulative Repayments of Loans upto Previous Year	1199.99	3223.75	5445.68	7667.61	9899.10
Net Loans Opening	25980.86	23957.10	21735.17	19513.24	17281.75
ADD: Drawl(s) During the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan During the year	2023.76	2221.93	2221.93	2231.49	2231.49
Net Closing Loan	23957.10	21735.17	19513.24	17281.75	15050.26
Average Net Loan	24968.98	22846.14	20624.21	18397.50	16166.01
Rate of Interest on Loan(%)	8.8807	8.8833	8.8829	8.8827	8.8826
Interest on Loan	2217.42	2029.49	1832.03	1634.19	1435.97

(₹ in lakh)

Asset-III B	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	2222.02	2222.02	2222.02	2222.02	2222.02
Cumulative Repayments of Loans upto Previous Year	133.35	310.44	493.24	676.04	861.22
Net Loans Opening	2088.67	1911.58	1728.78	1545.98	1360.80
ADD: Drawl(s) During the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan During the year	177.09	182.80	182.80	185.18	185.18
Net Closing Loan	1911.58	1728.78	1545.98	1360.80	1175.62
Average Net Loan	2000.13	1820.18	1637.38	1453.39	1268.21
Rate of Interest on Loan (%)	8.8302	8.8290	8.8261	8.8232	8.8203
Interest on Loan	176.61	160.70	144.52	128.23	111.86

