

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 82/TT/2018

Coram:

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

Date of Hearing: 08.05.2018

Date of Order: 20.07.2018

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 for 6 assets for the period from 1.4.2009 to 31.3.2014 for Asset-I:-LILO of 220 kV Tanakpur-Bareilly Transmission Line (Ckt-II) at Sitarganj along with associated bays, Asset-II:- 220/132, 100 MVA ICT-I at Sitarganj along with associated bays, Asset-III:- 220/132, 100 MVA ICT-II at Sitarganj along with associated bays, Asset-IV:-220/132, 100 MVA ICT-I at Pithoragarh along with associated bays, Asset-V:- 220/132, 100 MVA ICT-II at Pithoragarh along with associated bays, Asset-VI:- LILO of one circuit of Dhauliganga- Bareilly Transmission Line at Pithoragarh along with associated bays associated with "System Strengthening Scheme in Uttaranchal" in NR 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 -122001(Haryana)

Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited
Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005
2. Ajmer Vidyut Vitran Nigam Ltd
400 Kv GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.



3. Jaipur Vidyut Vitran Nigam Ltd
400 Kv GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd
400 Kv GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
5. Himachal Pradesh State Electricity Board
Vidyut Bhawan
Kumar House Complex Building II
Shimla-171 004,
6. Punjab State Electricity Board
Thermal Shed Tia
Near 22 Phatak
Patiala-147001,
7. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) 134 109
Represented by its S.E. / C and R-1
8. Power Development Deptt.
Govt. of Jammu and Kashmir
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Ltd.
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg
Lucknow - 226 001
10. Delhi Transco Ltd
Shakti Sadan, Kotla Road,
New Delhi-110 002
11. BSES Yamuna Power Ltd,
BSES Bhawan, Nehru Plakhe ,
New Delhi,
12. BSES Rajdhani Power Ltd,
BSES Bhawan, Nehru Plakhe,
New Delhi,



13. North Delhi Power Ltd,
Power Trading and 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 Ltd.
Urja Bhawan, Kanwali Road
Dehradun,
16. North Central Railway
Allahabad.
17. New Delhi Municipal Council
Palika Kendra, Sansad Marg,
New Delhi-110002

Respondents

The following were present:-

For Petitioner:

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

For Respondent:

Shri R.B. Sharma, Advocate, BRPL

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for truing up of capital expenditure and determination of tariff for assets (06 Nos.) for the period from 1.4.2009 to 31.3.2014 under “System Strengthening Scheme in Uttaranchal” (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 COD of respective assets to 31.3.2014 and 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 period from 1.4.2014 to 31.3.2019 for Combined Assets.

2. The petitioner has made the following prayer:

- a) Approve the Trued up Transmission Tariff for the tariff block 2009-14 block for the assets covered under this petition, as per petition. The adjustment billing shall be raised.
- b) 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.
- c) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per petition.
- d) 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.
- e) 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.
- f) 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.
- g) Allow the initial spares as procured in the current project in full based on total project cost as given in petition under Regulation 8 of CERC tariff regulation, 2009.
- h) 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.
- i) 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.

- j) Allow reimbursement of tax if any on account of the proposed implementation of GST.
- k) 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 respondents are distribution licensees and power departments, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern Region.

4. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 8.5.2018. UPPCL and BRPL have filed replies to this petition vide affidavit dated 11.4.2018 and 3.5.2018 respectively. In response, the petitioner has submitted the rejoinders vide affidavit dated 3.5.2018 and 5.6.2018. The petitioner was directed to file certain information vide ROP dated 8.5.2018. In response, the petitioner has submitted the information vide affidavit dated 25.5.2018. The petitioner had earlier submitted details of additional capital expenditure vide affidavit dated 23.3.2018. Having heard the representatives of the petitioner as well as the respondent and upon perusal of the material on record, we proceed to dispose of the petition.

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

- (a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide letter no. C/CP/N 79-00 dated 13th July 2004



for ₹76.42 Cr. including an IDC of ₹3.05Cr. RCE of the project was accorded by Board of Directors of the petitioner company vide memorandum dated 20th December 2010 for ₹142.58 Cr. including an IDC of ₹7.79 Cr. The details of the assets along with COD are as under:-

Assets name	Date of commercial operation
Asset-I :-LILO of 220 kV Tanakpur-Bareilly Transmission Line (Ckt-II) at Sitarganj along with associated bays (referred as " Asset-I ")	1.3.2009
220/132, 100 MVA ICT-I at Sitarganj along with associated bays (referred as " Asset-II ")	1.3.2009
220/132, 100 MVA ICT-II at Sitarganj along with associated bays (referred as " Asset-III ")	1.8.2009
220/132, 100 MVA ICT-I at Pithoragarh along with associated bays(referred as " Asset-IV ")	1.9.2010
220/132, 100 MVA ICT-II at Pithoragarh along with associated bays (referred as " Asset-V ")	1.12.2010
LILO of one circuit of Dhauliganga- Bareilly Transmission Line at Pithoragarh along with associated bays (" Asset-VI ")	1.8.2010

- (b) Petitions for the assets under System Strengthening Scheme in Uttaranchal were filed for the 2009-14 tariff period for determination of transmission tariff vide Petition No.-197/TT/2012, 117/2010 and 7/TT/2011. Tariff orders in these petition have been passed vide orders dated 25.5.2015, 16.3.2012 and 22.4.2013 respectively.
- (c) Before filing above mentioned petitions, Petition No. 1/2011 was filed for 2004-09 period for seeking approval of transmission tariff of (i) LILO of 220 kV, Tanakpur-Bareilly transmission line (Ckt.-II) at Sitarganj along with associated bays and (ii) 220/132 kV ICT-I at Sitarganj along with associated bays, under System Strengthening Scheme in Uttaranchal. The IDC and



IEDC for a period of six months (i.e. Sept. 2008 to Feb. 2009) was disallowed vide order dated 4.10.2011 in petition no. 1/2011.

- (d) Subsequently, an Appeal No. 43 of 2012 was filed by the petitioner before the Tribunal, challenging the decision with regard to disallowance of IDC and IEDC of 6 months in petition no. 1/2011 vide order dated 4.10.2011. Subsequently, based on the APTEL order dated 24.9.2013 in Appeal No. 43 of 2012, IDC of additional 3 months was allowed and tariff order in petition no.1/2011 was revised vide order dated 18.5.2015.
- (e) In addition to above, tariff order in Petition no. 117/2010 and 7/TT/2011 was revised vide order dated 8.6.2015 and 13.10.2015 respectively.
- (f) Present true up petition covers true up of tariff order in Petition Nos. 197/TT/2012, 117/2010 and 7/TT/2011 vide orders dated 25.5.2015, 8.6.2015 and 13.10.2015 respectively.
- (g) As regards the details of assets mentioned at paragraph 4, the tariff for 2009-14 tariff block was determined vide order dated 25.5.2015 for Asset-I and Asset-II in Petition No.197/TT/2012. For Asset-III, tariff was determined vide order dated 8.6.2015 in Petition No.117/2010. Tariff for Combined Assets III and IV and also for Combined Assets III, IV and V was determined vide order dated 13.10.2015 in Petition No.7/TT/2011. Likewise, tariff for Asset VI was determined vide order dated 22.4.2013 in Petition No.7/TT/2011. The tariff allowed vide earlier orders for the 2009-14 tariff period is as under:-



(₹ in lakh)

Sl. No	Name of Asset	2009-10	2010-11	2011-12	2012-13	2013-14
01	Asset-I	522.02	521.87	519.99	525.33	528.81
02	Asset-II	405.54	421.44	432.09	455.18	475.61
03	Asset-III	299.86	483.95	---	---	---
04	Combined Asset-III and IV (From 01.09.2010 to 30.11.2010)	---	198.75	---	---	---
05	Combined Asset-III, IV and V (From 01.12.2010 to 31.03.2014)	---	429.06	1388.57	1406.02	1404.07
06	Asset-VI	---	216.99	369.32	377.64	374.81

- (h) The capital cost of ₹2576.79 lakh for Asset-I, ₹1714.01 lakh for Asset-II vide order dated 25.5.2015 in Petition No. 197/TT/2012, ₹1775.43 lakh for Asset-III vide order dated 8.6.2015 in Petition No. 117/2010, and ₹3104.13 lakh for Asset –III and IV (combined), ₹4839.5 lakh for Asset–III, IV and V (combined), ₹1285.03 lakh for Asset-VI vide order dated 13.10.2015 in Petition No. 7/TT/2011 was considered as on 1.4.2009/CODs for determination of tariff.
- (i) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, is adjusted as per the actual MAT rate applicable for the respective year in this order.

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

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) capitalized 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 claimed the capital cost of ₹2624.93 lakh, ₹1742.99 lakh, ₹1867.40 lakh, ₹1337.98 lakh, ₹3205.38 lakh, ₹1742.43 lakh ₹4947.81 lakh and ₹1288.70 lakh as on respective COD/ 31.3.2009 for Assets-I, Asset-II, Asset-III, Asset-IV, Asset-III and IV (combined), Asset-V, Asset-III, IV and V (combined) and Asset-VI respectively vide Auditor's certificate dated 18.10.2017 indicating expenditure audited up to 31.3.2017.

Treatment of IDC and IEDC

9. IDC have been calculated as per details duly certified submitted by the petitioner up to scheduled COD. IDC and IEDC have been dealt with in the present petition in line with the order dated 25.5.2015, 8.6.2015 and 13.10.2015 in Petition No.197/TT/2012, 117/2010 and 7/TT/2011 respectively, which are as follows:

(₹ in lakh)

Particulars	IDC Disallowed as on COD	IEDC Disallowed	Total IDC AND IEDC Disallowed	IDC allowed as an Add Cap during 2009-10
Asset-I	14.60	33.53	48.13	0.00
Asset-II	8.42	20.57	28.99	0.00
Asset-III	111.26	40.29	151.55	0.12



Asset-IV	16.45	1.23	17.68	0.00
Combined Asset-III and IV	127.71	41.52	169.23	0.00
Asset-V	12.54	5.41	17.95	0.00
Combined Asset-III , IV and	140.25	46.93	187.18	0.00
Asset-VI	4.54	0.66	5.19	0.00

Initial Spares

10. The petitioner has claimed initial spares of ₹14.66 lakh, ₹30.33 lakh, ₹37.45 lakh and ₹47.57 lakh pertaining to the sub-station for Asset-I, Asset-II, Asset-III and Asset-IV respectively. In this regard, the petitioner has submitted that since the project is completed, the initial spares may be considered for the project as a whole. The cost of initial spares on overall basis is within the ceiling limit specified in the 2009 Tariff Regulations. The petitioner has indicated that expenditure for capital spares corresponding to the assets have been discharged on their respective CODs.

11. The petitioner has submitted actual capital expenditure for true up of tariff during 2009-14 tariff period as per the 2009 Tariff Regulations and also submitted the estimated capital expenditure for determination of tariff during 2014-19 tariff period in accordance with the 2014 Tariff Regulations. The initial spares have been worked out by considering the additional capital expenditure up to cut-off.

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

“Initial spares shall be capitalized 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%.....”



13. Petitioner has claimed initial spares against sub-station only. The details of the initial spares claimed for the assets covered in the instant petition are given below:-

(₹ in lakh)

Sr.No.	Asset Name		Total Capital Cost as on cut-off date after deducting IDC and IEDC	Spares claimed	TCC (Excl. spares)	Ceiling limit
1	Asset-I	SS	2749.30	14.66	2686.51	2.50 %
2	Asset-II	SS	1993.88	30.33	1934.56	2.50 %
3	Asset-III	SS	2176.81	37.45	2047.39	2.50 %
4	Asset-IV	SS	1751.9	47.57	1695.05	2.50 %
5	Asset-V	SS	2126.71	0.00	2119.65	2.50 %
6	Asset-VI	SS	1663.99	0.00	1660.32	2.50 %
	Total		12462.59	130.01	12143.48	2.50 %

14. It is noted that the total capital cost as on cut-off date indicated by petitioner as above in the petition is not the total capital cost after deducting the IDC and IEDC as indicated by the petitioner. The total capital cost considered as on cut-off date after deducting the IDC and IEDC, is as under:

(₹ in lakh)

Sr. No.	Asset Name		Total Cap. Cost as on Cutoff date	IDC and IEDC deducted	Total Cap. Cost as on Cutoff date after deducting IDC and IEDC	Spares claimed	TCC (Excl. spares)	Ceiling limit	Spares limit worked out	Excess claimed
1	Asset-I	SS	2749.30	48.13	2701.17	14.66	2686.51	2.50%	68.88	0.00
2	Asset-II	SS	1993.88	28.99	1964.89	30.33	1934.56	2.50%	49.60	0.00
3	Asset-III	SS	2176.81	151.55	2025.26	37.45	1987.81	2.50%	50.97	0.00
4	Asset-IV	SS	1758.28	17.68	1740.60	47.57	1693.03	2.50%	43.41	4.16
5	Asset-V	SS	2133.09	17.95	2115.14	0.00	2115.14	2.50%	54.23	0.00
6	Asset-VI	SS	1666.20	5.19	1661.01	0.00	1661.01	2.50%	42.59	0.00

15. The capital cost as on COD/ 31.3.2009 has been worked out by adjusting disallowed IDC AND IEDC and excess initial spares as under:-



(₹ in lakh)

Particulars	Capital cost claimed as on COD	IDC and IEDC Disallowed	Capital cost after adjusting disallowed IDC and IEDC	Excess initial spares	Capital cost of individual assets considered as on COD/ 31.03.2009
	(a)	(b)	(c)=(a)-(b)	(d)	(e)= (c)- (d)
Asset-I	2624.93	48.13	2576.79	0.00	2576.79
Asset-II	1742.99	28.99	1714.01	0.00	1714.01
Asset-III	1867.40	151.55	1715.85	0.00	1715.85
Asset-IV	1337.98	17.68	1320.30	4.16	1316.14
Combined Asset-III and	3205.38	169.23	3036.15	4.16	3031.99
Asset-V	1742.43	17.95	1724.48	0.00	1724.48
Combined Asset-III , IV and V	4947.81	187.18	4760.63	4.16	4756.47
Asset-VI	1288.70	5.19	1283.51	0.00	1283.51

Additional Capital Expenditure

16. The petitioner has claimed additional capitalization for tariff period from COD to 31.3.2014 for all the assets in the instant petition on account of balance and retention payment within cut-off date and after cutoff date under Regulation 9(1) (i) and 9 (2)(viii) of the 2009 Tariff Regulations.

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

“Additional Capitalization.(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...;”

18. The total capital cost (including actual additional capitalization) claimed by the petitioner is within the overall approved apportioned cost of the assets. The claim of additional capitalization falls within the meaning of Regulation 9(1) of the



2009 Tariff Regulations i.e. for balance and retention payments and hence, we have allowed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-

(₹ in lakh)

Name of the asset	Additional Capital Expenditure (2009-14)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-I	43.58	58.48	22.31	171.58	0.00
Asset-II	92.68	126.47	31.73	323.16	0.00
Asset-III	60.22	214.66	34.53	2.41	0.00
Asset-IV	0.00	234.78	34.53	150.99	0.00
Asset-V	0.00	234.78	34.53	121.35	0.00
Asset-VI	0.00	0.00	201.76	175.74	0.00
Combined Asset-III and IV	60.22	449.44	69.06	153.4	0.00
Combined Asset-III, IV and	60.22	684.22	103.59	274.75	0.00

Add-Cap considered from 1.4.2009 to 31.3.2014:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-I	43.58	58.48	22.31	171.58	0.00
Asset-II	92.68	126.47	31.73	323.16	0.00
Asset-III	60.22	214.66	34.53	2.41	0.00
IDC discharged as Add Cap	0.12	0.00	0.00	0.00	0.00
Asset-III (Total)	60.34	214.66	34.53	2.41	0.00
Asset-IV	0.00	234.78	34.53	150.99	0.00
Asset-V	0.00	234.78	34.53	121.35	0.00
Asset-VI	0.00	0.00	201.76	175.74	0.00

Capital Cost considered from CoD/31.3.2009 to 31.3.2014:

(₹ in lakh)

	Capital Cost as on CoD/ 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14	Capital Cost as on 31.3.2014
Asset-I	2576.79	43.58	58.48	22.31	171.58	0.00	2872.74
Asset-II	1714.01	92.68	126.47	31.73	323.16	0.00	2288.05
Asset-III	1715.85	60.34	214.66	34.53	2.41	0.00	2027.79
Asset-IV	1316.14	0.00	234.78	34.53	150.99	0.00	1736.44
Combined	3031.99	60.34	449.44	69.06	153.40	0.00	3764.23



Asset-III and IV							
Asset-V	1724.48	0.00	234.78	34.53	121.35	0.00	2115.14
Combined Asset-III, IV and V	4756.47	60.34	684.22	103.59	274.75	0.00	5879.37
Asset-VI	1283.51	0.00	0.00	201.76	175.74	0.00	1661.01

Debt: Equity Ratio

19. 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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

20. The debt equity ratio determined in Petition Nos. 197/TT/2012, 117/2010 and 7/TT/2011 vide orders dated 25.5.2015, 8.6.2015 and 13.10.2015 respectively has been considered for the purpose of truing up for the tariff period 2009-14, as given under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1872.49	72.67	1320.51	77.04	1201.25	70.00
Equity	704.30	27.33	393.50	22.96	514.60	30.00
Total	2576.79	100.00	1714.01	100.00	1715.85	100.00

(₹ in lakh)

Particulars	Asset-III and IV		Asset-III, IV and V		Asset-VI	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	2164.63	70.00	3371.77	70.00	898.46	70.00



Equity	927.70	30.00	1445.04	30.00	385.04	30.00
Total	3092.33	100.00	4816.81	100.00	1283.51	100.00

21. 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 31.3.2014 is as follows:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	Amount	(%)	Amount	(%)
Debt	2079.66	72.39	1722.34	75.28
Equity	793.09	27.61	565.71	24.72
Total	2872.74	100.00	2288.05	100.00

(₹ in lakh)

Particulars	Asset-III, IV and V		Asset-VI	
	Amount	(%)	Amount	(%)
Debt	4115.56	70.00	1162.71	70.00
Equity	1763.81	30.00	498.29	30.00
Total	5879.37	100.00	1661.01	100.00

Interest on Loan (IOL)

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

23. 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:-

Asset-I

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross loan opening	1872.49	1903.00	1943.93	1959.55	2079.66



Cumulative Repayment upto COD/previous year	6.05	141.53	279.22	418.44	562.33
Net Loan-Opening	1866.45	1761.47	1664.72	1541.11	1517.33
Additions during the year	30.51	40.94	15.62	120.11	0.00
Repayment during the year	135.48	137.69	139.22	143.89	148.09
Net Loan-Closing	1761.47	1664.72	1541.11	1517.33	1369.24
Average Loan	1813.96	1713.09	1602.91	1529.22	1443.29
Rate of Interest	9.38%	9.36%	9.36%	9.34%	9.32%
Interest	170.10	160.41	149.97	142.85	134.57

Asset-II

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross loan opening	1320.51	1385.39	1473.92	1496.13	1722.34
Cumulative Repayment upto COD/previous year	4.50	90.18	180.44	273.45	374.22
Net Loan-Opening	1316.02	1295.21	1293.48	1222.68	1348.13
Additions during the year	64.88	88.53	22.21	226.21	0.00
Repayment during the year	85.68	90.26	93.01	100.77	107.95
Net Loan-Closing	1295.21	1293.48	1222.68	1348.13	1240.17
Average Loan	1305.62	1294.35	1258.08	1285.40	1294.15
Rate of Interest	9.33%	9.29%	9.27%	9.27%	9.26%
Interest	121.78	120.24	116.62	119.14	119.88

Asset-III

(₹ in lakh)

	2009-10	2010-11
Gross loan opening	1201.25	1243.49
Cumulative Repayment upto COD/previous year	0.00	56.38
Net Loan-Opening	1201.25	1187.11
Additions during the year	42.23	150.26
Repayment during the year	56.38	91.53
Net Loan-Closing	1187.11	1245.84
Average Loan	1194.18	1216.48
Rate of Interest	9.41%	9.40%
Interest	74.93	114.34

Combined Asset-III and IV

(₹ in lakh)

	2010-11
Gross loan opening	2164.63
Cumulative Repayment upto COD/previous year	101.39
Net Loan-Opening	2063.24
Additions during the year	314.33
Repayment during the year	37.86
Net Loan-Closing	2339.71
Average Loan	2201.47
Rate of Interest	9.17%
Interest	50.49



Combined Asset-III, IV and V

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Gross loan opening	3371.77	3850.72	3923.23	4115.56
Cumulative Repayment upto COD/previous year	138.63	215.78	468.03	730.26
Net Loan-Opening	3233.14	3634.94	3455.21	3385.30
Additions during the year	478.95	72.51	192.33	0.00
Repayment during the year	77.15	252.25	262.24	269.49
Net Loan-Closing	3634.94	3455.21	3385.30	3115.81
Average Loan	3434.04	3545.07	3420.25	3250.55
Rate of Interest	9.02%	9.00%	9.01%	9.01%
Interest	103.21	319.16	308.10	292.85

Asset-VI

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Gross loan opening	898.46	898.46	1039.70	1162.71
Cumulative Repayment upto COD/previous year	0.00	41.17	108.25	185.30
Net Loan-Opening	898.46	857.29	931.44	977.41
Additions during the year	0.00	141.23	123.02	0.00
Repayment during the year	41.17	67.08	77.05	81.69
Net Loan-Closing	857.29	931.44	977.41	895.73
Average Loan	877.88	894.37	954.43	936.57
Rate of Interest	8.85%	8.88%	8.93%	8.95%
Interest	51.77	79.43	85.24	83.82

Return on Equity ("ROE")

24. 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.”

25. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 25.5.2015 in Petition No. 197/TT/2012 for Asset-I and II, 13.10.2015 in Petition No. 7/TT/2011 for Asset-III, Combined Asset-III and IV, Combined Asset III, IV and V and 22.4.213 in Petition No. 7/TT/2011 for Asset-VI. However, for truing up purpose, the computation of RoE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Year	MAT Rate	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

26. We have considered the submissions of the petitioner and have approved ROE in accordance with the provisions of the 2009-14 Tariff Regulations. Accordingly, the ROE as trued up in accordance with the 2009 Tariff Regulations is shown in the table below:-



Asset-I

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	704.30	717.38	734.92	741.61	793.09
Addition due to Add Cap	13.07	17.54	6.69	51.47	0.00
Closing Equity	717.38	734.92	741.61	793.09	793.09
Average Equity	710.84	726.15	738.27	767.35	793.09
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate	16.995%	19.931%	20.008%	20.008%	20.961%
Rate of Return on Equity (Pre Tax)	18.674%	19.358%	19.377%	19.377%	19.610%
Return on Equity (Pre Tax)	132.74	140.57	143.05	148.69	155.52

Asset-II

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	393.50	421.30	459.24	468.76	565.71
Addition due to Add Cap	27.80	37.94	9.52	96.95	0.00
Closing Equity	421.30	459.24	468.76	565.71	565.71
Average Equity	407.40	440.27	464.00	517.23	565.71
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate	16.995%	19.931%	20.008%	20.008%	20.961%
Rate of Return on Equity (Pre Tax)	18.674%	19.358%	19.377%	19.377%	19.610%
Return on Equity (Pre Tax)	76.08	85.23	89.91	100.22	110.94

Asset-III

(₹ in lakh)

	2009-10	2010-11
Opening Equity	514.60	532.70
Addition due to Add Cap	18.10	64.40
Closing Equity	532.70	597.10
Average Equity	523.65	564.90
Return on Equity (Base Rate)	15.500%	15.500%
Tax rate	16.995%	19.931%
Rate of Return on Equity (Pre Tax)	18.674%	19.358%
Return on Equity (Pre Tax)	65.19	109.35

Combined Asset-III and IV

(₹ in lakh)

	2010-11
Opening Equity	927.70
Addition due to Add Cap	134.71
Closing Equity	1062.41
Average Equity	995.05
Return on Equity (Base Rate)	15.500%
Tax rate	19.931%
Rate of Return on Equity (Pre Tax)	19.358%
Return on Equity (Pre Tax)	48.16

Combined Asset-III, IV and V

(₹ in lakh)



	2010-11	2011-12	2012-13	2013-14
Opening Equity	1445.04	1650.31	1681.39	1763.81
Addition due to Add Cap	205.27	31.08	82.43	0.00
Closing Equity	1650.31	1681.39	1763.81	1763.81
Average Equity	1547.68	1665.85	1722.60	1763.81
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%
Tax rate	19.931%	20.008%	20.008%	20.961%
Rate of Return on Equity (Pre Tax)	19.358%	19.377%	19.377%	19.610%
Return on Equity (Pre Tax)	99.87	322.79	333.79	345.88

Asset-VI

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Opening Equity	385.04	385.04	445.57	498.29
Addition due to Add Cap	0.00	60.53	52.72	0.00
Closing Equity	385.04	445.57	498.29	498.29
Average Equity	385.04	415.31	471.93	498.29
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%
Tax rate	19.931%	20.008%	20.008%	20.961%
Rate of Return on Equity (Pre Tax)	19.358%	19.377%	19.377%	19.610%
Return on Equity (Pre Tax)	49.69	80.47	91.45	97.72

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. Depreciation was worked out in order dated 25.5.2015 in Petition No. 197/TT/2012 for Asset-I and II, 13.10.2015 in Petition No. 7/TT/2011 for Asset-III, Combined Asset-III and IV, Combined Asset III, IV and V and 22.4.2013 in Petition No. 7/TT/2011 for Asset-VI in accordance with Regulation 17 of the 2009 Tariff Regulations.

30. 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 31 years for Asset-I, 25 years for Asset-II to III, 25 years for combined Asset-III and IV, 25 years for combined Asset-III, IV and V and 27 years for Asset- VI. 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 asunder.

Asset-I

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	2576.79	2620.37	2678.85	2701.16	2872.74
Addition Capitalization	43.58	58.48	22.31	171.58	0.00
Closing Gross Block	2620.37	2678.85	2701.16	2872.74	2872.74
Average Gross Block	2598.58	2649.61	2690.01	2786.95	2872.74
Rate of Depreciation	5.2137%	5.1965%	5.1756%	5.1629%	5.1549%
Depreciable Value	2314.52	2360.44	2396.80	2484.05	2561.26
Remaining Depreciable Value	2308.47	2172.99	2035.30	1896.08	1752.19
Depreciation	135.48	137.69	139.22	143.89	148.09

Asset-II

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	1714.01	1806.69	1933.16	1964.89	2288.05
Addition Capitalization	92.68	126.47	31.73	323.16	0.00
Closing Gross Block	1806.69	1933.16	1964.89	2288.05	2288.05
Average Gross Block	1760.35	1869.92	1949.02	2126.47	2288.05
Rate of Depreciation	4.8672%	4.8270%	4.7721%	4.7389%	4.7180%
Depreciable Value	1535.89	1634.51	1623.44	1783.14	1928.56



Remaining Depreciable Value	1531.40	1445.72	1355.46	1262.45	1161.68
Depreciation	85.68	90.26	93.01	100.77	107.95

Asset-III

(₹ in lakh)

	2009-10	2010-11
Opening Gross Block	1715.85	1776.19
Addition Capitalization	60.34	214.66
Closing Gross Block	1776.19	1990.85
Average Gross Block	1746.02	1883.52
Rate of Depreciation	4.8433%	4.8595%
Depreciable Value	1523.00	1646.75
Remaining Depreciable Value	1523.00	1590.37
Depreciation	56.38	91.53

Combined Asset-III and IV

(₹ in lakh)

	2010-11
Opening Gross Block	3092.33
Addition Capitalization	449.04
Closing Gross Block	3541.37
Average Gross Block	3316.85
Rate of Depreciation	4.5654%
Depreciable Value	2647.59
Remaining Depreciable Value	2546.20
Depreciation	37.86

Combined Asset-III, IV and V

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	4816.81	5501.03	5604.62	5879.37
Addition Capitalization	684.22	103.59	274.75	0.00
Closing Gross Block	5501.03	5604.62	5879.37	5879.37
Average Gross Block	5158.92	5552.82	5741.99	5879.37
Rate of Depreciation	4.49%	4.54%	4.57%	4.58%
Depreciable Value	4420.43	4774.94	4945.20	5068.83
Remaining Depreciable Value	4281.80	4559.16	4477.17	4338.57
Depreciation	77.15	252.25	262.24	269.49

Asset-VI

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	1283.51	1283.51	1485.27	1661.01
Addition Capitalization	0.00	201.76	175.74	0.00
Closing Gross Block	1283.51	1485.27	1661.01	1661.01
Average Gross Block	1283.51	1384.39	1573.14	1661.01
Rate of Depreciation	4.81%	4.85%	4.90%	4.92%
Depreciable Value	1111.61	1202.41	1372.28	1451.36
Remaining Depreciable Value	1111.61	1161.23	1264.03	1266.06
Depreciation	41.17	67.08	77.05	81.69



Operation and 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. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 25.5.2015 in Petition No. 197/TT/2012 for Asset-I and II, 13.10.2015 in Petition No. 7/TT/2011 for Asset-III, Combined Asset-III and IV, Combined Asset III, IV and V and 22.4.213 in Petition No. 7/TT/2011 for Asset-VI.

32. The O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

(₹ in lakh)

Particulars	Asset-I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 25.5.2015 in petition no. 197/TT/2012	79.25	83.78	88.59	93.65	99.00
As claimed by the petitioner	79.25	83.78	88.59	93.65	99.00
Allowed After True up	79.25	83.78	88.59	93.65	99.00

(₹ in lakh)

Particulars	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 25.5.2015 in petition no. 197/TT/2012	115.28	121.88	128.84	136.22	144.01
As claimed by the petitioner	115.28	121.88	128.84	136.22	144.01
Allowed After True up	115.28	121.88	128.84	136.22	144.01

(₹ in lakh)

Particulars	Asset-III				
	2009-10	2010-11	2011-12	2012-13	2013-14



Approved vide order dated 13.10.2015 in petition no. 7/TT/2011	76.85	50.78	0	0	0
As claimed by the petitioner	76.85	50.78	0	0	0
Allowed After True up	76.85	50.78	0	0	0

(₹ in lakh)

Particulars	Combined Asset III and Asset-IV				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.10.2015 in petition no. 7/TT/2011	0	60.94	0	0	0
As claimed by the petitioner	0	60.94	0	0	0
Allowed After True up	0	60.94	0	0	0

(₹ in lakh)

Particulars	Combined Asset III , IV and Asset-V				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 13.10.2015 in petition no. 7/TT/2011	0	121.88	386.52	408.66	432.03
As claimed by the petitioner	0	121.88	386.52	408.66	432.03
Allowed After True up	0	121.88	386.52	408.66	432.03

(₹ in lakh)

Particulars	Asset-VI				
	2009-10	2010-11	2011-12	2012-13	2013-14
Approved vide order dated 22.04.2013 in petition no. 7/TT/2011	0	52.22	82.82	87.54	92.55
As claimed by the petitioner	0	52.22	82.82	87.54	92.55
Allowed After True up	0	52.22	82.82	87.54	92.55

Interest on working capital (IWC)

33. 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 and M expenses**

O&M Expenses have been considered for one month of the allowed O&M Expenses as per order dated 25.5.2015, 8.6.2015 and 13.10.2015 in Petition No. 197/TT/2012, 117/2010 and 7/TT/2011 respectively.

(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**

Rate of interest in working capital is considered on normative basis in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations.

34. The IWC trued up is as under:-

Asset-I

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	11.89	12.57	13.29	14.05	14.85
O and M expenses	6.60	6.98	7.38	7.80	8.25
Receivables	88.45	89.30	89.05	90.47	91.88
Total	106.94	108.85	109.72	112.32	114.98
Rate of Interest (%)	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	13.10	13.33	13.44	13.76	14.08

Asset-II

(₹ in lakh)



	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	17.29	18.28	19.33	20.43	21.60
O and M expenses	9.61	10.16	10.74	11.35	12.00
Receivables	68.42	71.65	73.51	78.31	82.84
Total	95.32	100.08	103.57	110.09	116.44
Rate of Interest (%)	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	11.68	12.26	12.69	13.49	14.26

Asset-III

(₹ in lakh)

	2009-10	2010-11
Maintenance Spares	17.29	18.28
O and M expenses	9.61	10.16
Receivables	70.32	74.96
Total	97.22	103.40
Rate of Interest (%)	12.25%	12.25%
Interest	7.94	12.67

Combined Asset-III and IV

(₹ in lakh)

	2010-11
Maintenance Spares	28.25
O and M expenses	15.70
Receivables	125.50
Total	169.45
Rate of Interest (%)	11.00%
Interest	4.66

Combined Asset-III, IV and V

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	54.85	57.98	61.30	64.80
O and M expenses	30.47	32.21	34.06	36.00
Receivables	206.40	219.12	224.66	229.43
Total	291.72	309.31	320.02	330.24
Rate of Interest (%)	11.00%	11.00%	11.00%	11.00%
Interest	10.70	34.02	35.20	36.33

Asset-VI

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	11.68	12.35	13.06	13.80
O and M expenses	6.49	6.86	7.25	7.67
Receivables	49.89	52.88	58.24	60.72
Total	68.06	72.09	78.55	82.19
Rate of Interest (%)	11.00%	11.00%	11.00%	11.00%
Interest	4.99	7.93	8.64	9.04



ANNUAL TRANSMISSION CHARGES FOR 2009-14 TARIFF PERIOD

35. The annual transmission charges allowed for the instant assets for the tariff period 2009-14, are as follows:-

Asset-I

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	135.48	137.69	139.22	143.89	148.09
Interest on Loan	170.10	160.41	149.97	142.85	134.57
Return on Equity	132.74	140.57	143.05	148.69	155.52
Interest on Working Capital	13.10	13.33	13.44	13.76	14.08
O and M Expenses	79.25	83.78	88.59	93.65	99.00
Total	530.67	535.78	534.28	542.84	551.27

Asset-II

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	85.68	90.26	93.01	100.77	107.95
Interest on Loan	121.78	120.24	116.62	119.14	119.88
Return on Equity	76.08	85.23	89.91	100.22	110.94
Interest on Working Capital	11.68	12.26	12.69	13.49	14.26
O and M Expenses	115.28	121.88	128.84	136.22	144.01
Total	410.50	429.87	441.07	469.84	497.04

Asset-III

(₹ in lakh)

	2009-10	2010-11
Depreciation	56.38	91.53
Interest on Loan	74.93	114.34
Return on Equity	65.19	109.35
Interest on Working Capital	7.94	12.67
O and M Expenses	76.85	121.88
Total	281.29	449.77

Combined Asset-III and IV

(₹ in lakh)

	2010-11
Depreciation	37.86
Interest on Loan	50.49
Return on Equity	48.16
Interest on Working Capital	4.66
O and M Expenses	47.09
Total	188.25

Combined Asset-III, IV and V

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
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Depreciation	77.15	252.25	262.24	269.49
Interest on Loan	103.21	319.16	308.10	292.85
Return on Equity	99.87	322.79	333.79	345.88
Interest on Working Capital	10.70	34.02	35.20	36.33
O and M Expenses	121.88	386.52	408.66	432.03
Total	412.80	1314.74	1347.99	1376.58

Asset-VI

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
Depreciation	41.17	67.08	77.05	81.69
Interest on Loan	51.77	79.43	85.24	83.82
Return on Equity	49.69	80.47	91.45	97.72
Interest on Working Capital	4.99	7.93	8.64	9.04
O and M Expenses	51.93	82.35	87.05	92.03
Total	199.55	317.27	349.43	364.30

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

36. The petitioner has claimed the transmission charges for Combined Asset for the 2014-19 tariff period asunder:-

(₹ in lakh)

Combined Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	610.21	615.00	616.68	616.68	616.68
Interest on Loan	573.05	528.27	474.24	424.29	374.34
Return on equity	758.52	766.72	768.59	774.54	780.49
Interest on Working Capital	83.75	84.31	84.49	84.86	85.28
O and M Expenses	706.94	730.39	754.62	779.63	805.64
Total	2732.47	2724.69	2698.62	2680.00	2662.43

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	106.04	109.56	113.19	116.94	120.85
O and M expenses	58.91	60.87	62.89	64.97	67.14
Receivables	455.42	454.13	449.78	446.68	443.75
Total	620.37	624.56	625.86	628.59	631.74
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	83.75	84.32	84.49	84.86	85.28



Effective Date of Commercial Operation (E-COD)

38. The petitioner has stated that E-COD of the combined assets works out to be 1.2.2010. However, based on the trued up capital cost and actual COD of the 3 individual assets (asset I, II and VI) and one combined asset for (asset III, IV and V), the E-COD has been worked out as 27.2.2010 and is shown below:-

(₹ in Lakh)

	Actual COD	Trued up capital cost as on 31.3.2014 (in the instant petition)	Weight of the cost	No. of days from assets COD to project COD	Weighted days	Effective COD of Project (Project COD - Weighted days)
Asset-I	1.3.2009	2872.74	22.62%	640	144.75	27.2.2010
Asset-II	1.3.2009	2288.05	18.01%	640	115.29	
Combined Asset-III, IV and V	1.12.2010	5879.37	46.29%	0	0.00	
Asset-VI	1.8.2010	1661.01	13.08%	122	15.95	
TOTAL	1.12.2010	12701.17	100.00%		276.00	

39. The E-COD has been used to determine the lapsed life (i.e. the number of completed years) of all the 6 assets as on 27.2.2010.

Weighted Average Life (WAL)

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

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



42. The Weighted Average Life (WAL) has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as stipulated in 2014-19 Tariff Regulations. The element wise life as it was defined in Tariff Regulations prevailed at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, the Weighted Average Life (WAL) of all the assets commissioned during 2009-14 tariff period has been worked out as 26 years as shown below:-

(₹ in lakh)

Particulars	ASSET-I	ASSET-II	COMBINED ASSET-III, IV and V	ASSET-VI	Combined Cost (a)	Life (b)	Weight (a) x (b)
Freehold Land	26.90	53.80	247.33	48.38	376.41	0	0.00
Leasehold Land	36.40	91.40	0.00	0.00	127.80	25	3195.00
Building and Other Civil Works	184.80	424.98	1437.26	242.72	2289.76	25	57243.92
Transmission Line	1556.13	0.00	0.00	222.32	1778.44	35	62245.50
Sub-Station Equipment	866.79	1717.87	4194.78	1028.55	7808.00	25	195199.88
PLCC	201.72	0.00	0.00	119.04	320.76	25	8019.08
Total	2872.74	2288.05	5879.37	1661.01	12701.17	26	325903.38
Weighted Average Life						26 Years	

43. It is assumed that, the Weighted Average Life as on 1.4.2014 as determined above is applicable prospectively (i.e. for 2014-19 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. Accordingly, the WAL has been used to determine the remaining useful life as on 31.3.2014 to be 26 years.

Capital Cost

44. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations specify as



follows:-

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

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

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

45. The petitioner has claimed capital cost of ₹2920.88 lakh, ₹2317.04 lakh, ₹2179.22 lakh, ₹1758.28 lakh, ₹2133.09 lakh, ₹1666.20 lakh as on 31.3.2014 and additional capitalization of ₹0.00 lakh, ₹0.00 lakh, ₹331.41.00 lakh, ₹90.77 lakh, ₹90.77lakh and ₹0.00 lakh for Assets-I, II, III, IV, V and VI respectively for the 2014-19 tariff period.

46. However, the trued up capital cost of ₹2872.74 lakh, ₹2288.05 lakh, ₹5879.37 lakh, ₹1661.01 lakh for Assets-I, II, (Combined III, IV and V) and VI respectively, as on 31.3.2014 is considered to work out tariff for 2014-19 tariff period.

Additional Capital Expenditure

47. The petitioner has proposed additional capitalization of ₹331.41 lakh, ₹90.77 lakh, ₹90.77 lakh for Assets-III, IV and V respectively, towards balance and retention payments under Clause 1 of Regulation 14 of the 2014 Tariff Regulations.

48. 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;

49. The petitioner vide affidavit dated 23.3.2018 has submitted the details of additional capital expenditure of ₹247.16 lakh, ₹63.54 lakh and ₹202.25 lakh, projected in 2014-15 , 2015-16 and 2017-18 onwards respectively.

50. The petitioner has submitted that the total capital cost of the transmission asset including additional capitalization incurred during the 2014-19 tariff period works out to ₹13487.66 lakh for combined asset, which is within the RCE approved apportioned cost of the asset. It is observed that in case of Asset-IV and V, the additional capitalization proposed is mainly towards balance and retention payments due to undischarged liabilities for works executed within cut- off date. However, in case of Asset- III, the additional capitalization proposed is mainly towards payment for enhanced land cost as per court case order for Sitarganj land, the details of which have been submitted by the petitioner vide affidavit dated 13.6.2018. The additional capitalization for tariff period 2014-19 shall be finally approved after the detailed scrutiny of additional capitalization while carrying out the true up for 2014-19 period in accordance with 2014 Tariff Regulations.

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

(₹ in lakh)

Name of Asset	Approved cost as per RCE*	Cost as on 31.03.2014	Add Cap 2014-15	Add cap 2015-16	Add cap 2017-18	Total
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Asset-I	3027.40	2872.74	0.00	0.00	0.00	2872.75
Asset-II	2400.74	2288.05	0.00	0.00	0.00	2288.04
Combined Asset-III, IV and V	6928.11	5879.37	247.16	63.54	202.25	6392.32
Asset-VI	1901.74	1661.01	0.00	0.00	0.00	1661.01
Total	14257.99	12701.17	247.16	63.54	202.25	13214.12

Debt: Equity Ratio

52. 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.”

53. The debt:equity ratio 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)					
	Capital Cost	Debt	Equity	Debt %	Equity %
Asset-I	2,872.74	2,079.66	793.09	72.39%	27.61%
Asset-II	2,288.05	1,722.34	565.71	75.28%	24.72%
Combined Asset-III, IV and V	5,879.37	4,115.56	1,763.81	70.00%	30.00%
Asset-VI	1,661.01	1,162.71	498.29	70.00%	30.00%
Total	12,701.17	9,080.27	3,620.90	71.49%	28.51%

54. 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	9438.08	71.42%
Equity	3776.03	28.58%



Total	13214.12	100.00%
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Interest on Loan (“IOL”)

55. Clause (5) and (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.”

56. 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)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	9080.27	9253.28	9297.76	9297.76	9439.34
Cumulative Repayment up to previous year	2473.14	3083.47	3698.59	4315.39	4932.19
Net Loan-Opening	6607.13	6169.81	5599.17	4982.37	4507.14
Additions during the year	173.01	44.48	0.00	141.58	0.00
Repayment during the year	610.33	615.12	616.80	616.80	616.80
Net Loan-Closing	6169.81	5599.17	4982.37	4507.14	3890.34
Average Loan	6388.47	5884.49	5290.77	4744.75	4198.74
Rate of Interest (%)	9.12%	9.13%	9.13%	9.13%	9.13%
Interest	582.33	537.12	483.08	433.12	383.15



Return on Equity (“ROE”)

57. 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:

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

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

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

(b) 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.

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	3620.90	3695.05	3714.11	3714.11	3774.78
Additional Capitalization	74.15	19.06	0.00	60.68	0.00
Closing Equity	3695.05	3714.11	3714.11	3774.78	3774.78
Average Equity	3657.97	3704.58	3714.11	3744.45	3774.78
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the year (%)	20.96%	20.96%	20.96%	20.96%	20.96%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	717.33	726.47	728.34	734.29	740.23



Depreciation

58. 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."

59. The petitioner has computed depreciation considering capital expenditure of ₹12974.71 lakh as on 31.3.2014 with additional capitalization of ₹247.16lakh, ₹63.54 lakh and ₹202.25 lakh for 2014-15, 2015-16 and 2017-18 onwards, respectively, during the 2014-19 tariff period. The effective date of commercial operation (December, 2012) and weighted average useful life of 28 years has been considered in accordance to Regulation 26 of the 2014 Tariff Regulations considering actual COD and capital cost of all the elements of the transmission system for working out the depreciation for Combined Asset.

60. We have considered the submissions of the petitioner. The depreciation is allowed considering capital expenditure of ₹12785.60 lakh as on 31.3.2014 under



Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	12701.17	12948.33	13011.87	13011.87	13214.12
Additional Capitalization	247.16	63.54	0.00	202.25	0.00
Closing Gross block	12948.33	13011.87	13011.87	13214.12	13214.12
Average gross block	12824.75	12980.10	13011.87	13112.99	13214.12
Rate of Depreciation (%)	4.76%	4.74%	4.74%	4.70%	4.67%
Depreciable Value	11145.38	22319.36	22347.95	23141.73	22347.95
Remaining Depreciable Value	8686.06	19249.71	18663.18	18840.16	17429.58
Depreciation	610.33	615.12	616.80	616.80	616.80

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

61. The O and M Expenses for combined 6 assets claimed by the petitioner for 2014-19 are as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Claimed	706.94	730.39	754.62	779.63	805.64

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
220 kV D/C single conductor transmission line (21.906 km)	6.64	6.86	7.10	7.32	7.58
220 kV D/C triple conductor transmission line (1.166 km)	0.82	0.85	0.88	0.91	0.94
8 Nos. 220 kV bays	337.68	348.88	360.48	372.40	384.80
12 Nos. 132 kV bays	361.80	373.80	386.16	399.00	412.32
TOTAL	706.94	730.39	754.62	779.63	805.64

63. 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.

64. We have considered the submissions made by the petitioner. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, 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.

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Allowed	706.94	730.39	754.62	779.63	805.64

Interest on Working Capital (“IWC”)

66. 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;”



67. 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%.

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

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	106.04	109.56	113.19	116.94	120.85
O and M Expenses	58.91	60.87	62.89	64.97	67.14
Receivables	450.21	449.00	444.65	441.54	438.61
Total	615.16	619.42	620.73	623.46	626.60
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	83.05	83.62	83.80	84.17	84.59

Annual Transmission Charges

69. 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	610.33	615.12	616.80	616.80	616.80
Interest on Loan	583.59	538.38	484.34	434.38	384.42
Return on Equity	717.33	726.47	728.34	734.29	740.23
Interest on Working Capital	83.05	83.62	83.80	84.17	84.59
O and M Expenses	706.94	730.39	754.62	779.63	805.64
Total	2701.23	2693.99	2667.90	2649.26	2631.68

Filing Fee and Publication Expenses

70. The petitioner has sought reimbursement of fee paid by it for filing the petition



and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner is entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

License Fee and RLDC Fees and Charges

71. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of license 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

72. 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

73. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. The petitioner has submitted that the Commission should allow to recover GST from the beneficiaries, if imposed on transmission charges under the proposed GST when implemented by Government of India. We are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

74. 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.

75. This order disposes of Petition No.82/TT/2018.

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

Asset-I

(₹ in lakh)

Total Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Gross loan opening	1858.71	1889.22	1930.16	1945.78	2035.78
Cumulative Repayment upto COD/previous year	0.00	0.00	50.00	166.67	321.56
Net Loan-Opening	1858.71	1889.22	1880.16	1779.11	1714.22
Additions during the year	30.51	40.94	15.62	90.00	0.00
Repayment during the year	0.00	50.00	116.67	154.89	154.89
Net Loan-Closing	1889.22	1880.16	1779.11	1714.22	1559.33
Average Loan	1873.97	1884.69	1829.64	1746.67	1636.77
Rate of Interest	9.3772%	9.3639%	9.3562%	9.3415%	9.3240%
Interest	175.73	176.48	171.18	163.16	152.61

Asset-II

(₹ in lakh)

Total Loan	2009-10	2010-11	2011-12	2012-13	2013-14
Gross loan opening	1256.94	1321.82	1410.36	1432.57	1533.57
Cumulative Repayment upto COD/previous year	0.00	0.00	29.17	100.00	204.75
Net Loan-Opening	1256.94	1321.82	1381.19	1332.57	1328.83
Additions during the year	64.88	88.54	22.21	101.00	0.00
Repayment during the year	0.00	29.17	70.83	104.75	104.75
Net Loan-Closing	1321.82	1381.19	1332.57	1328.83	1224.08
Average Loan	1289.38	1351.51	1356.88	1330.70	1276.45
Rate of Interest	9.3278%	9.2898%	9.2699%	9.2685%	9.2634%
Interest	120.27	125.55	125.78	123.34	118.24

Asset-III

(₹ in lakh)

Total Loan	2009-10	2010-11
Gross loan opening	1181.71	1284.95
Cumulative Repayment upto COD/previous year	0.00	0.00
Net Loan-Opening	1181.71	1284.95
Additions during the year	103.24	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	1284.95	1284.95
Average Loan	1233.33	1284.95
Rate of Interest	9.4121%	9.3994%
Interest	116.08	120.78

Combined Asset-III and IV

(₹ in lakh)

Total Loan	2010-11
Gross loan opening	2209.84



Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	2209.84
Additions during the year	0.00
Repayment during the year	1.08
Net Loan-Closing	2208.76
Average Loan	2209.30
Rate of Interest	9.1735%
Interest	202.67

Combined Asset-III, IV and V

(₹ in lakh)

Total Loan	2010-11	2011-12	2012-13	2013-14
Gross loan opening	3429.80	3756.96	3829.47	3984.43
Cumulative Repayment upto COD/previous year	1.33	11.58	81.50	193.68
Net Loan-Opening	3428.47	3745.38	3747.97	3790.75
Additions during the year	327.16	72.51	154.96	0.00
Repayment during the year	10.25	69.92	112.18	219.91
Net Loan-Closing	3745.38	3747.97	3790.75	3570.84
Average Loan	3586.93	3746.68	3769.36	3680.80
Rate of Interest	9.0166%	9.0028%	9.0082%	9.0092%
Interest	323.42	337.31	339.55	331.61

Asset-VI

(₹ in lakh)

Total Loan	2010-11	2011-12	2012-13	2013-14
Gross loan opening	898.84	899.52	1040.75	1162.22
Cumulative Repayment upto COD/previous year	0.00	1.83	3.67	5.50
Net Loan-Opening	898.84	897.69	1037.08	1156.72
Additions during the year	0.68	141.23	121.47	0.00
Repayment during the year	1.83	1.83	1.83	66.08
Net Loan-Closing	897.69	1037.08	1156.72	1090.64
Average Loan	898.26	967.39	1096.90	1123.68
Rate of Interest	8.8456%	8.8814%	8.9313%	8.9499%
Interest	79.46	85.92	97.97	100.57



Annexure-II**Calculation of Weighted Average Rate of Interest on Loan for Tariff Period 2014-19****Combined Assets-I to VI**

(₹ in lakh)

Total Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	8716.00	8898.52	8943.00	8943.00	8943.00
Cumulative Repayment upto COD/previous year	1279.08	1945.50	2625.17	3339.65	4054.13
Net Loan-Opening	7436.92	6953.02	6317.83	5603.35	4888.87
Additions during the year	182.52	44.48	0.00	0.00	0.00
Repayment during the year	666.42	679.67	714.48	714.48	714.48
Net Loan-Closing	6953.02	6317.83	5603.35	4888.87	4174.39
Average Loan	7194.97	6635.43	5960.59	5246.11	4531.63
Rate of Interest	9.1153%	9.1278%	9.1306%	9.1284%	9.1255%
Interest	655.85	605.67	544.24	478.89	413.53

