

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 260/TT/2015

Coram:

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

Date of Hearing : 29.04.2016

Date of Order : 31.05.2016

In the matter of:

Determination of transmission tariff of Champa PS- Dharamjaygarh (Korba) 765 kV S/C line along with bays, Raigarh PS (near Kotra)- Champa PS 765 kV S/C line along with bays and establishment of 765/400 kV 6x1500 MVA Champa pooling station under "Establishment of pooling stations at Champa and Raigarh (near Tamnar) for IPP Generation Projects in Chattisgarh" for 2014-19 tariff period in Western Region under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 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. Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur, Jabalpur-482008
2. Maharashtra State Electricity Distribution Co. Ltd.
Prakashgad, 4th Floor, Bandra (East), Mumbai-400052
3. Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhawan,
Race Course Road
Vadodara- 390007



4. Electricity Department
Govt. of Goa,
Vidyut Bhawan, Panaji- 403001
 5. Electricity Department
Administration of Daman & Diu,
Daman- 396210
 6. Electricity Department
Administration of Dadra Nagar Haveli,
U.T., Silvassa- 396230
 7. Chhattisgarh State Electricity Board
P.O Sunder Nagar, Dangania, Raipur
Chhattisgarh-492013
 8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road
Indore-452008
-**Respondents**

The following were present:

For Petitioner: Shri M.M. Mondal, PGCIL
 Shri Avinash M.Pavgi, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri S.S. Raju, PGCIL
 Shri Mohd Mohsin, PGCIL
 Shri Pankaj Sharma, PGCIL

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. (“the petitioner”) for determination of tariff for Champa PS- Dharamjaygarh (Korba) 765 kV S/C line along with bays, Raigarh PS (near Kotra)- Champa PS 765 kV S/C line along with bays and establishment of 765/400 kV 6x1500 MVA Champa pooling station under “Establishment of pooling stations at Champa and Raigarh (near Tamnar) for IPP Generation Projects in Chattisgarh” for 2014-19



tariff period in Western Region (hereinafter referred as “transmission asset”) under Central Electricity Regulatory Commission (Terms and Conditions of Tariff Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from COD of respective assets to 31.3.2019.

2. The respondents are distribution licensees, electricity departments and centralised companies who are procuring transmission service from the petitioner, mainly beneficiaries of the 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. None of the respondents have filed any reply to the petition. The hearing in this matter was held on 29.4.2016. 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 of the project was accorded by Board of Directors of the petitioner vide Memorandum No. C/CP/Chattisgarh-IPP dated 31.5.2011 at an estimated cost of ₹196187 lakh including IDC of ₹12572 lakh (Based on 4th quarter, 2010 price level). Subsequently, Revised Cost Estimate (RCE) was approved by Board of Directors of the petitioner, vide Memorandum No. C/CP/RCE/Tamnar dated 11.3.2016 at



an estimated cost of ₹231058 lakh, which included IDC of ₹16500 lakh (based on December 2015 price level).

(b) The scope of work covered under the project is as follows:-

1. Transmission Lines:

- (i) Champa Pooling Station- Raipur Pooling Station 765kV D/C line
- (ii) Raigarh Pooling Station (near Kotra)- Raigarh Pooling Station (near Tamnar) 765 kV S/C line
- (iii) Champa Pooling Station- Dharamjaygarh near Korba Switching Station 765 kV S/C line
- (iv) Raigarh Pooling Station (near Kotra)- Champa Pooling Station 765kV S/C line

2. Sub-stations:

- (i) Establishment of 765/400 kV, 6X1500 MVA Champa Pooling Station
- (ii) Establishment of 765/400 kV, 3X1500 MVA Raigarh Pooling Station (near Tamnar)
- (iii) Bay extensions at 765/400 kV Raigarh Pooling Station (near Kotra), 765 kV Raipur Pooling Station and Dharamjaygarh Pooling Station

5. The transmission asset was scheduled to be commissioned within 36 months for the assets from the date of investment approval i.e. 31.5.2011. Therefore, the scheduled date of commissioning (SCOD) of the transmission system works out to 31.5.2014 against which the assets were put under commercial operation with effect as below:-

Assets name	SCOD as per IA dtd 31.5.2011	Actual date of commercial operation	Delay in months
Asset-1	31.5.2014	24.5.2014 (actual)	No delay
Asset-2		31.5.2015 (actual)	12 months
Asset-3		13.6.2015 (actual)	12 months and 13 days
Asset-4A		26.3.2016 (actual)	21 months and 26 days
Asset-4B		26.3.2016 (actual)	21 months and 26 days
Asset-5		27.3.2016 (actual)	21 months and 27 days
Asset-6A		15.6.2016 (anticipated)	24 months and 15 days



Assets name	SCOD as per IA dtd 31.5.2011	Actual date of commercial operation	Delay in months
Asset-6B		15.6.2016 (anticipated)	24 months and 15 days

(c) The petitioner vide its affidavit dated 28.4.2016 has submitted the approved Revised Cost Estimate (RCE) for the project.

(d) The petitioner in its original petition had submitted the tariff forms for Assets-4, 5 and 6 for the assets on the basis of unaudited figures. Accordingly, the petitioner was directed to submit Auditor's Certificate and revised tariff forms for the Assets-4, 5 and 6. Further, the petitioner was directed to submit the RLDC certificates in support of trial operation or commercial operation date for assets-1 to 5. In response, the petitioner has submitted the revised tariff forms along with Auditor's Certificates for the Assets-4, 5 and 6. The petitioner has also submitted the RLDC certificates for all the Assets-1 to 5. However, the petitioner has revised the arrangement of assets for Assets- 4, 5 and 6 as given below:

Assets	Name as per original petition	Name as per revised tariff forms
Asset-1	Champa PS- Dharamjaygarh (Korba) 765 kV S/C transmission line along with bays at Dharamjaygarh Sub-station	No change in name and original tariff forms are considered
Asset-2	Raigarh PS (near Kotra)- Champa PS 765 kV S/C transmission line along with associated bays and one no. of bay at Champa PS for one circuit of Champa PS- Raipur PS 765 kV D/C transmission line	No change in name and original tariff forms are considered
Asset-3	765/400 kV 1500 MVA ICT-1 at 765/400 kV Champa PS	No change in name and original tariff forms are considered
Asset-4A	400 kV, 80 MVAR & 765 kV, 240 MVAR Bus Reactors at 765/400 kV Champa PS	765/400 kV 1500 MVA auto transformer-2 along with associated bays at Champa PS
Asset-4B		765 kV, 3x80 MVAR Bus Reactor



Assets	Name as per original petition	Name as per revised tariff forms
		along with associated bays at Champa PS
Asset-5	765/400 kV 1500 MVA ICT-2 & 765/400 kV 1500 MVA ICT-3 along with associated bays at 765/400 kV Champa PS	400 kV, 80 MVAr Bus Reactor along with associated bays at Champa PS
Asset-6A	765/400 kV 1500 MVA ICT-4, 765/400 kV 1500 MVA ICT-5 & 765/400 kV 1500 MVA ICT-6 along with associated bays and one no. 765 kV bay at Champa for one circuit of Champa PS- Raipur PS 765 kV D/C transmission line and 765 kV Dharamjaygarh line bay at Champa PS for 765 kV S/C Champa PS- Dharamjaygarh Sub-station transmission line	765/400 kV 1500 MVA ICT-3 along with associated bays at Champa PS
Asset-6B		765/400 kV 1500 MVA ICT-4, 765/400 kV 1500 MVA ICT-5 & 765/400 kV 1500 MVA ICT-6 along with associated bays & one no. 765 kV bay at Champa for one ckt. of Champa PS - Raipur PS 765 kV D/C T/L and 765 kV Dharamjaygarh line bay at Champa PS for 765 kV S/C Champa PS - Dharamjaygarh S/S T/L

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

7. The petitioner has claimed the transmission charges as under:-

(₹ in lakh)

Asset-1					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	556.23	694.80	728.71	739.78	739.78
Interest on Loan	536.32	629.56	607.77	560.39	497.74
Return on equity	640.95	801.10	840.10	852.94	852.94
Interest on Working Capital	45.55	55.74	57.15	56.84	55.64
O & M Expenses	102.12	123.48	127.54	131.80	136.16
Total	1881.17	2304.68	2361.27	2341.75	2282.26

(₹ in lakh)

Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	881.99	1241.82	1296.39	1296.39
Interest on Loan	683.09	942.81	940.59	874.76
Return on equity	1165.15	1691.70	1792.14	1792.14
Interest on Working Capital	77.72	107.60	111.73	110.84



Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
O & M Expenses	269.20	332.63	343.71	355.10
Total	3077.15	4316.56	4484.56	4429.23

(₹ in lakh)

Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	161.46	271.68	291.32	291.32
Interest on Loan	196.56	314.86	314.21	289.21
Return on equity	185.90	314.07	337.13	337.13
Interest on Working Capital	19.13	29.26	30.52	30.23
O & M Expenses	119.62	154.49	159.62	164.91
Total	682.67	1084.36	1132.80	1112.80

(₹ in lakh)

Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	4.88	379.83	460.56	464.27
Interest on Loan	5.14	385.27	437.80	403.65
Return on equity	5.75	447.12	541.32	545.47
Interest on Working Capital	0.57	41.41	47.10	46.96
O & M Expenses	3.82	244.61	252.73	261.11
Total	20.16	1498.24	1739.51	1721.46

(₹ in lakh)

Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	0.96	77.41	85.50	87.89
Interest on Loan	1.24	96.27	99.91	95.54
Return on equity	1.15	92.72	102.97	106.20
Interest on Working Capital	0.12	9.69	10.31	10.46
O & M Expenses	0.84	64.37	66.51	68.71
Total	4.31	340.46	365.20	368.80

(₹ in lakh)

Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Depreciation	1234.84	1766.06	1787.22



Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Interest on Loan	1330.51	1785.21	1663.39
Return on equity	1435.62	2049.92	2074.20
Interest on Working Capital	135.04	184.77	184.87
O & M Expenses	777.31	1010.92	1044.44
Total	3678.48	6796.88	6754.12

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

(₹ in lakh)

Asset-1					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	17.92	18.52	19.13	19.77	20.42
O & M Expenses	9.96	10.29	10.63	10.98	11.35
Receivables	366.77	384.11	393.55	390.29	380.38
Total	394.65	412.92	423.31	421.04	412.15
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest	53.28	55.74	57.15	56.84	55.64
Pro-rata Interest	45.55	55.74	57.15	56.84	55.64

(₹ in lakh)

Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	48.30	49.89	51.56	53.27
O & M Expenses	26.83	27.72	28.64	29.59
Receivables	613.45	719.43	747.43	738.21
Total	688.59	797.04	827.63	821.06
Rate of Interest	13.50	13.50	13.50	13.50
Interest	92.96	107.60	111.73	110.84
Pro-rata Interest	77.72	107.60	111.73	110.84

(₹ in lakh)

Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	22.43	23.17	23.94	24.74
O & M Expenses	12.46	12.87	13.30	13.74
Receivables	142.22	180.73	188.80	185.47
Total	177.11	216.77	226.04	223.94



Rate of Interest	13.50	13.50	13.50	13.50
Interest	23.91	29.26	30.52	30.23
Pro-rata Interest	19.13	29.26	30.52	30.23

(₹ in lakh)

Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	35.54	36.69	37.91	39.17
O & M Expenses	19.74	20.38	21.06	21.76
Receivables	208.42	249.71	289.92	286.91
Total	263.70	306.78	348.89	347.84
Rate of Interest	13.50	13.50	13.50	13.50
Interest	35.60	41.41	47.10	46.96
Pro-rata Interest	0.57	41.41	47.10	46.96

(₹ in lakh)

Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	9.37	9.66	9.98	10.31
O & M Expenses	5.21	5.36	5.54	5.73
Receivables	53.48	56.74	60.87	61.47
Total	68.06	71.76	76.39	77.51
Rate of Interest	13.50	13.50	13.50	13.50
Interest	9.19	9.69	10.31	10.46
Pro-rata Interest	0.12	9.69	10.31	10.46

(₹ in lakh)

Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Maintenance Spares	146.77	151.64	156.67
O & M Expenses	81.54	84.24	87.04
Receivables	1030.77	1132.81	1125.69
Total	1259.08	1368.69	1369.39
Rate of Interest	13.50	13.50	13.50
Interest	169.98	184.77	184.87
Pro-rata Interest	135.04	184.77	184.87

Date of Commercial Operation (“COD”)

9. The petitioner has claimed the date of the commercial operation of the as follows:-



Assets	COD
Asset-1	24.5.2014 (actual)
Asset-2	31.5.2015 (actual)
Asset-3	13.6.2015 (actual)
Asset-4A	26.3.2016 (actual)
Asset-4B	26.3.2016 (actual)
Asset-5	27.3.2016 (actual)
Asset-6A	15.6.2016 (anticipated)
Asset-6B	15.6.2016 (anticipated)

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

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

xxx]

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

(i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations :

(ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.”



11. The petitioner has submitted RLDC certificate issued by WRLDC, POSOCO for Asset-1, 2, 3, 4A, 4B and 5 in support of the claim of commercial operation in accordance with Regulation 5(2) of the 2014 Tariff Regulations, indicating completion of successful trial operation.

12. Accordingly, the commercial operation date of the Assets-1 to 5 has been considered as given in the table above and the tariff is worked out from COD to 31.3.2019. Further, for Assets-6A and 6B, the COD is considered provisionally as 15.6.2016 (anticipated) as the petitioner has submitted the Auditor's Certificate for the same. However, for Asset-6B, the petitioner is directed to submit the Auditor's Certificate for each sub-component of Asset-6B.

Capital Cost

13. The details of apportioned approved cost, capital cost as on date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the instant assets as submitted by the petitioner are as under:-

(₹ in lakh)

Asset	Approved apportioned cost as per FR	Revised Apportioned Cost as per RCE	Capital cost as on COD	Additional capitalization				Total estimated completion cost
				2014-15	2015-16	2016-17	2017-18	
Asset-1	11986.97	14489.67	11932.25	828.28	861.65	422.89	0.00	14045.07
Asset-2	30659.10	31478.63	20331.63	0.00	6716.89	3414.56	0.00	30463.08
Asset-3	5860.30	7349.64	2953.05	0.00	1993.61	783.97	0.00	5730.63
Asset-4A	4626.20	10083.47	6034.30	0.00	6.04	3046.45	140.58	9227.37
Asset-4B								
Asset-5	14774.16	1977.08	1446.31	0.00	3.43	237.56	109.26	1796.56
Asset-6A	21452.98	32186.02	26871.78	0.00	0.00	7394.24	821.58	35087.60
Asset-6B								



14. Regulations 9 and 10 of the 2014 Tariff Regulations specify as follows:-

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

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

- a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
- c) Increase in cost in contract packages as approved by the Commission;
- d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.

...

(6) The following shall be excluded or removed from the capital cost of the existing and new project:

- a) The assets forming part of the project, but not in use;
- b) Decapitalisation of Asset;
- c) In case of hydro generating station any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State government by following a two stage transparent process of bidding; and
- d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:

Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;

10. Prudence Check of Capital Expenditure: The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time:



Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff.”

15. The petitioner has submitted Auditor’s Certificates for all the assets in support of capital cost incurred up to COD. As per the Auditor’s Certificates, the capital cost as on COD of the assets is as given below:-

(₹ in lakh)

Asset	Revised Apportioned Cost as per RCE	Capital cost as on COD	Additional capitalization				Total estimated completion cost
			2014-15	2015-16	2016-17	2017-18	
Asset-1	14489.67	11932.25	828.28	861.65	422.89	0.00	14045.07
Asset-2	31478.63	20331.63	0.00	6716.89	3414.56	0.00	30463.08
Asset-3	7349.64	2953.05	0.00	1993.61	783.97	0.00	5730.63
Asset-4A	4958.15	2587.47	0.00	2.93	1917.91	0.00	4508.31
Asset-4B	5125.32	3594.17	0.00	3.11	981.20	140.58	4719.06
Asset-5	1977.08	1485.00	0.00	3.43	198.87	109.26	1796.56
Asset-6A	5104.43	4864.97	0.00	0.00	1584.83	176.09	6625.89
Asset-6B	27081.59	22006.81	0.00	0.00	5809.41	645.49	28461.71

Cost Over-run

16. The petitioner vide its affidavit dated 28.4.2016 has submitted the RCE for the project. The details are as given below:-

(₹ in lakh)

Asset	COD	Apportioned cost as per FR as submitted in original petition	Revised apportioned cost as per RCE	Estimated completion cost an on 31.3.2019
Asset-1	24.5.2014 (actual)	11986.97	14489.67	14045.07
Asset-2	31.5.2015 (actual)	30659.10	31478.63	30463.08
Asset-3	13.6.2015 (actual)	5860.30	7349.64	5730.63
Asset-4	26.3.2016 (actual)	4626.20	10083.47	9227.37
Asset-5	27.3.2016 (actual)	14774.16	1977.08	1796.56
Asset-6	15.6.2016	21452.98	32186.02	35087.60



	(anticipated)			
Total		89359.71	97564.51	96350.31

The completion cost of the instant assets except Asset-6 is within the apportioned costs as per revised RCE and hence there is no cost over-run with respect to revised apportioned approved cost. However, in case of Asset-6, the completion cost exceeds the revised apportioned approved cost.

17. The petitioner submitted that cost over-run is mainly due to higher award cost received in competitive bidding compared to initial estimates.

Time Over-run

18. As per the investment approval dated 31.5.2011, the project was scheduled to be commissioned within 36 months from the date of investment approval. Hence, the assets were to be commissioned progressively upto 31.5.2014. Assets were put under commercial operation with effect as below:-

Assets name	SCOD as per IA dtd 31.5.2011	Actual date of commercial operation	Delay in months
Asset-1	31.5.2014	24.5.2014 (actual)	No delay
Asset-2		31.5.2015 (actual)	12 months
Asset-3		13.6.2015 (actual)	12 months and 13 days
Asset-4A		26.3.2016 (actual)	21 months and 26 days
Asset-4B		26.3.2016 (actual)	21 months and 26 days
Asset-5		27.3.2016 (actual)	21 months and 27 days
Asset-6A		15.6.2016 (anticipated)	24 months and 15 days
Asset-6B		15.6.2016 (anticipated)	24 months and 15 days

19. The petitioner has submitted that the delay in execution is mainly due to various factors as given below:-



a. Right of Way Issues

With regard to the delay of 765 kV S/C Raigarh Champa Line, the petitioner has submitted that the construction of Rajarh PS (near Kotra) - Champa PS 765 kV S/C transmission line was delayed mainly because of severe ROW issue. Work at various locations was forcibly stopped by the villagers for compensation, which delayed the work from 10.5.2012 to 26.2.2015. This resulted in a delay of around 2 years. In this regard, the petitioner has submitted various letters submitted by the petitioner to the tehsildars and police stations stations of Champa requesting for assistance regarding the same.

b. Court case against 765 kV S/C Raigarh (Kotra) - Champa power station transmission line

Champa power station transmission line: A case was filed for insufficient compensation for 765 kV S/C Raigarh (Kotra) - Champa power station transmission line against POWERGRID in the Hon'ble High Court of Chhattisgarh. This hampered construction activities at Location AP 38/9 from January, 2013 to August, 2014, i.e. for about one year and six months. In this regard, the petitioner has submitted the copy of such court orders. After vacation of stay order on August 4, 2014, work could resume at that location. Thus, there was a delay of around one year and six months on account of such court cases. In this regard, the petitioner has submitted the copy of relevant court orders.



c. Delay in land acquisition for Champa power station

The petitioner acquired 261.78 acre of land for establishing sub-station at Champa. Out of this, 158 acre was government land for which compensation amount was solely decided by Govt. For the balance part of land, it took approximately 3 years to take possession of land after agreement with the villagers and district authorities as shown below:-

- **Allotment of Govt. Land of 158 Acre:** There was allotment of Bhainso Government land at Pamgarh Tehsil from 4.9.2009 to 16.11.2010. However, this allotment of Bainso land was cancelled on 29.12.2010 by Ministry. Thereafter new land of Taga village was searched and intimated to district administration on 15.2.2011. Application for land allotment of Taga village was submitted to District Collector, Janjgir, Champa on 9.3.2011. Most part of Taga govt. land was in the name of CSPGCL Madwa Power Plant for plantation of trees. After NOC obtained from CSPGCL and forest department, land was finally allotted to the petitioner on 30.9.2011.
- **Allotment of private land of Taga Village:** Application for land allotment of private lands of villages Taga and Chorbhatthi was submitted to District Collector, Janjgir, Champa from 13.6.2011 to 13.1.2012. However, there was strong objection from local public of the village landowners for compensation amount. After third and final meeting held on 15.4.2013 between local govt. administrations, land owners and POWERGRID, some land owners agreed for giving



possession of their land. After the finalization of compensation amount, 50% of private land was awarded to the petitioner from 31.11.2012 to 15.4.2013. Similarly, after finalization of compensation amount, balance part of private land was awarded to the petitioner from 13.6.2011 to 13.1.2015.

In this regard, the petitioner has submitted the following documents:

- Copy of letter dated 4.9.2009, vide which the petitioner submitted application to district collector, Janjgir, Champa for govt. land at village Bhainso
- Copy of letter dated 16.11.2010, vide which the petitioner was awarded the govt. land at village Bhainso
- Copy of letters dated 15.2.2011 and 10.10.2011, vide which the petitioner intimated district administration of Janjgir, Champa for cancellation of Govt. land at village Bhainso and suggested for new land of village Taga.
- Copy of letter dated 30.11.2011, vide which Ministry of Chhattisgarh awarded the govt. land of village Taga to the petitioner
- Copy of letters dated 13.6.2011, vide which the petitioner submitted application to district collector, Janjgir, Champa for pvt. land at village Taga and village Chorbhatthi.
- Copy of minutes of 3rd and final meeting held on 15.4.2013 between local govt. administrations, land owners and POWERGRID



- Copy of letter dated 19.2.2015, 6.12.2014 vide which the petitioner got the possession of pvt. land of village Taga.
- Various other relevant documents for finalization of compensation amount for landowners of private land of the villages Taga and Chorhatthi.

20. As regards the time over-run during the period from 10.5.2012 to 26.2.2015 for around 2 years, the petitioner has submitted that the delay was on account of serious RoW (Right of Way) issues. Further, during the period from 4.9.2009 to 13.1.2015, for around 3 years, the petitioner has submitted that the delay was on account of land acquisition process for Champa power station. Also, the construction activities were hampered from January, 2013 to August, 2014 on account of court cases against POWERGRID in the Hon'ble High Court of Chhattisgarh for 765 kV S/C Raigarh (Kotra) - Champa power station transmission line. We are of the view that the total time over-run of 3 years (i.e. 36 months) was on account of delay in land acquisition, serious ROW issues and court cases against POWERGRID and this was beyond the control of the petitioner. Hence, the entire time over-run in case of all the assets on account of delay in land acquisition, serious ROW issues and court cases against POWERGRID is condoned.

21. The Hon'ble Appellate Tribunal for Electricity in its Judgment dated 27.4.2011 in Appeal No.72/2010 has held that the additional cost due to time over-run due to the factors beyond the control of project developer shall be



capitalized. As discussed in above, the time over-run of 36 months on account of delay in land acquisition, serious ROW issues and court cases against POWERGRID is beyond the control of the petitioner and it cannot be attributed to the petitioner. As per the judgement of Hon'ble Tribunal, the additional cost due to time over-run not attributable to the petitioner shall be capitalized. Accordingly, the entire time over-run in all the assets is condoned and accordingly IDC and IEDC for the delay are allowed to be capitalised.

Assets name	SCOD as per IA dtd 31.5.2011	Actual Date of commercial operation	Delay in months	Delay condoned by the Commission	Delay not condoned by the Commission
Asset-1	31.5.2014	24.5.2014 (actual)	No delay	No delay	0 months
Asset-2		31.5.2015 (actual)	12 months	12 months	0 months
Asset-3		13.6.2015 (actual)	12 months and 13 days	12 months and 13 days	0 months
Asset-4A		26.3.2016 (actual)	21 months and 26 days	21 months and 26 days	0 months
Asset-4B		26.3.2016 (actual)	21 months and 26 days	21 months and 26 days	0 months
Asset-5		27.3.2016 (actual)	21 months and 27 days	21 months and 27 days	0 months
Asset-6A		15.6.2016 (anticipated)	24 months and 15 days	24 months and 15 days	0 months
Asset-6B		15.6.2016 (anticipated)	24 months and 15 days	24 months and 15 days	0 months

IDC and IEDC

22. The petitioner in its auditor's certificates for the assets has submitted the breakup of IDC and IEDC as follows:-

Statement showing IDC and IEDC	(₹ in lakh)	
	Asset-1	
	IDC	IEDC
Total IDC/IEDC as per certificate	848.72	139.79



Statement showing IDC and IEDC	Asset-1	
	IDC	IEDC
Total IDC/IEDC from date of infusion of debt fund to 31.3.2013	456.36	72.59
Total IDC/IEDC from 1.4.2013 to 31.3.2014	255.75	20.03
Total IDC/IEDC from 1.4.2014 to COD	136.61	47.17

(₹ in lakh)

Statement showing IDC and IEDC	Asset-2		Asset-3	
	IDC	IEDC	IDC	IEDC
Total IDC/IEDC as per certificate	1174.89	272.22	275.06	99.12
Total IDC/IEDC from date of infusion of debt fund to 31.3.2014	798.54	103.86	98.90	12.86
Total IDC/IEDC from 1.4.2014 to 31.3.2015	322.59	144.31	146.80	71.88
Total IDC/IEDC from 1.4.2015 to COD	53.76	24.05	29.36	14.38

(₹ in lakh)

Statement showing IDC and IEDC	Asset-4A		Asset-4B		Asset-5	
	IDC	IEDC	IDC	IEDC	IDC	IEDC
Total IDC/IEDC as per certificate	194.61	86.01	487.69	230.39	124.42	46.76
IDC/IEDC discharged upto COD	194.61	86.01	487.69	230.39	124.42	46.76

(₹ in lakh)

Statement showing IDC and IEDC	Asset-6A		Asset-6B	
	IDC	IEDC	IDC	IEDC
Total IDC/IEDC as per certificate	490.73	172.42	2086.93	733.24
Total IDC/IEDC from date of infusion of debt fund to 31.3.2014	145.29	51.05	978.68	343.86
Total IDC/IEDC from 1.4.2014 to 31.3.2015	214.24	75.27	682.46	239.78
Total IDC/IEDC from 1.4.2015 to COD	131.20	46.10	425.79	149.60

23. Further, the petitioner has also submitted the details of IDC claimed on cash basis is as given below:-

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-4A
IDC as per Certificate	848.72	1174.89	275.06	194.61
IDC discharged upto COD	557.26	986.36	169.52	168.75
IDC discharged in 2014-15	291.46	0.00	0.00	0.00
IDC discharged in 2015-16	0.00	188.53	105.54	0.00
IDC to be discharged in 2016-17	0.00	0.00	0.00	25.86

(₹ in lakh)



Particulars	Asset-4B	Asset-5	Asset-6A	Asset-6B
IDC as per Certificate	487.69	124.42	490.73	2086.93
IDC discharged upto COD	366.21	85.73	490.73	2086.93
IDC discharged in 2014-15	0.00	0.00	0.00	0.00
IDC discharged in 2015-16	0.00	0.00	0.00	0.00
IDC to be discharged in 2016-17	121.48	38.69	0.00	0.00

24. Further, the petitioner has submitted that entire IEDC is on cash basis and is discharged upto COD. As discussed above, we have condoned the entire time over-run in case of all the assets.

Initial Spares

25. Regulation 13(d) of the 2014 Tariff Regulations provides that initial spares shall be capitalised as a percentage of plant and machinery cost upto cut-off date, subject to following ceiling norms:-

“(d) Transmission System	
Transmission line:	1.00%
Transmission sub-station (Green Field):	4.00%
Transmission sub-station (Brown Field):	6.00%”

26. The petitioner has claimed initial spares for the assets as given in table below. The initial spares for transmission line and sub-station (green-field) claimed by the petitioner are within the specified ceiling limits except in case of Assets-1 and 5 as given below:-

(₹ in lakh)						
Description Sub-station (including PLCC)	Cut-off date	Plant & Machinery Cost as on cut-off date	Initial spares claimed	Ceiling limits as per Regulation 8 of the 2009 Tariff Regulation	Initial spares worked out as per Regulations	Excess initial spares claimed
		(a)	(b)	(c)	(d)= ((a-b)*c)/(100-c)%	(e)=(d)-(b)
Transmission Line						
Asset-1	31.3.2017	11323.56	94.73	1.00%	113.42	0.00
Asset-2	31.3.2018	14330.10	139.17	1.00%	143.34	0.00



Description Sub-station (including PLCC)	Cut-off date	Plant & Machinery Cost as on cut-off date	Initial spares claimed	Ceiling limits as per Regulation 8 of the 2009 Tariff Regulation	Initial spares worked out as per Regulations	Excess initial spares claimed
		(a)	(b)	(c)	(d)= ((a-b)*c)/(100-c)%	(e)=(d)-(b)
Sub-station (Greenfield)						
Asset-1	31.3.2017	1596.82	299.03	4.00%	54.07	244.96
Asset-2	31.3.2018	5102.69	177.12	4.00%	205.23	0.00
Asset-3	31.3.2018	4808.90	160.73	4.00%	193.67	0.00
Asset-4A	31.3.2018	3790.97	0.00	4.00%	157.96	0.00
Asset-4B	31.3.2018	3577.19	87.60	4.00%	145.40	0.00
Asset-5	31.3.2018	1304.67	109.33	4.00%	49.81	59.52
Asset-6A	31.3.2019	5286.42	167.17	4.00%	213.30	0.00
Asset-6B	31.3.2019	22761.86	502.64	4.00%	927.47	0.00

27. The capital cost for the assets has been worked out by adjusting IDC/IEDC and excess initial spares as given below:-

(₹ in lakh)								
Particulars	Asset-1	Asset-2	Asset-3	Asset-4	Asset-4	Asset-5	Asset-6	Asset-6
Capital Cost as on COD as per Auditor's Certificate	11932.25	20331.63	2953.05	2587.47	3594.17	1485.00	4864.97	22006.81
Accrued IDC and IEDC discharged in 2014-15	291.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accrued IDC and IEDC discharged in 2015-16	0.00	188.53	105.54	0.00	0.00	0.00	0.00	0.00
Accrued IDC and IEDC to be discharged in 2016-17	0.00	0.00	0.00	25.86	121.48	38.69	0.00	0.00
Capital Cost as on COD (after deducting IDC to be discharged in 2014-17)	11640.79	20143.10	2847.51	2561.61	3472.69	1446.31	4864.97	22006.81
Excess Initial Spares (for transmission line)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excess Initial Spares (for sub-station)	244.96	0.00	0.00	0.00	0.00	59.52	0.00	0.00
Capital Cost as on COD (after deducting accrual IDC/IEDC and excess initial spares)	11395.83	20143.10	2847.51	2561.61	3472.69	1386.79	4864.97	22006.81



28. The capital cost as on COD for the assets, as worked out above is within the approved apportioned cost. Accordingly, capital cost as worked out as on COD is allowed and considered for the purpose of tariff computation for 2014-19 tariff period on provisional basis, which shall be trued up at the time of truing up of tariff for 2014-19 period.

Additional Capital Expenditure

29. The petitioner has claimed additional capital expenditure for the assets during tariff period 2014-19, towards balance and retention payments under Clause 1 of Regulation 14 of the 2014 Tariff Regulations.

30. 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;

31. It is observed that total estimated completion cost including additional capitalization for 2014-15, 2015-16, 2016-17 and 2017-18 is within the approved apportioned cost for all the assets except Asset-6A and Asset-6B as stated in para 16 above. Therefore, we have restricted the completion cost to approved apportioned cost in case of Asset-6A and Asset-6B.



32. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” as follows:-

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

33. The cut-off date works out to be 31.3.2017 in case of Asset-1, 31.3.2018 in case of Assets-2, 3, 4A, 4B and 5 and 31.3.2019 in case of Asset-6A and 6B. The additional capitalization claimed by the petitioner is within the cut-off date. The additional capitalization for 2014-15, 2015-16, 2016-17 and 2017-18 is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations for all the assets subject to ceiling of approved apportioned cost. The details of additional capitalization allowed is as follows:-

Name of the element	Particulars	Approved Apportioned Cost	Expenditure upto COD	Additional Capital Expenditure					Total estimated completion cost
				2014-15	2015-16	2016-17	2017-18	Total	
Asset-1	Petitioner's Claim	14489.67	11932.25	828.28	861.65	422.89	0.00	2112.82	14045.07
	Approved in this order	14489.67	11395.83	1119.74	861.65	422.89	0.00	2404.28	13800.11
Asset-2	Petitioner's Claim	31478.63	20331.63	0.00	6716.89	3414.56	0.00	10131.45	30463.08
	Approved in this order	31478.63	20143.10	0.00	6905.42	3414.56	0.00	10319.98	30463.08
Asset-3	Petitioner's Claim	7349.64	2953.05	0.00	1993.61	783.97	0.00	2777.58	5730.63
	Approved in this order	7349.64	2847.51	0.00	2099.15	783.97	0.00	2883.12	5730.63
Asset-4	Petitioner's Claim	10083.47	6034.30	0.00	6.04	3046.45	140.58	3193.07	9227.37
	Asset-4A Approved in this	4958.15	2561.61	0.00	2.93	1943.77	0.00	1946.70	4508.31



Name of the element	Particulars	Approved Apportioned Cost	Expenditure upto COD	Additional Capital Expenditure					Total estimated completion cost
				2014-15	2015-16	2016-17	2017-18	Total	
	order								
	Asset-4B Approved in this order	5125.32	3472.69	0.00	3.11	1102.68	140.58	1246.37	4719.06
	Asset-4 Approved in this order	10083.47	6034.30	0.00	6.04	3046.45	140.58	3193.07	9227.37
Asset-5	Petitioner's Claim	1977.08	1446.31	0.00	3.43	237.56	109.26		1796.56
	Approved in this order	1977.08	1386.79	0.00	3.43	237.56	109.26	350.25	1737.04
Asset-6	Petitioner's Claim	32186.02	26871.78	0.00	0.00	7394.24	821.58	8215.82	35087.60
	Asset-6A Approved in this order	5104.43	4864.97	0.00	0.00	239.46	0.00	239.46	5104.43
	Asset-6B Approved in this order	27081.59	22006.81	0.00	0.00	5074.78	0.00	5074.78	27081.59
	Asset-6 Approved in this order	32186.02	26871.78	0.00	0.00	5314.24	0.00	5314.24	32186.02

Debt: Equity Ratio

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

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

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:



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

35. The petitioner has considered debt:equity ratio as 70:30 as on COD for all the assets. Further, the petitioner has considered debt:equity ratio as 70:30 for all the assets for additional capitalization during the tariff period 2014-19. We have considered the petitioner’s submission. The details of the debt:equity as on COD and for the additional capital expenditure considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset-1				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	7977.09	70.00	9660.09	70.00
Equity	3418.75	30.00	4140.02	30.00
Total	11395.83	100.00	13800.11	100.00

(₹ in lakh)

Asset-2				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	14100.17	70.00	21324.16	70.00
Equity	6042.93	30.00	9138.92	30.00
Total	20143.10	100.00	30463.08	100.00

(₹ in lakh)

Asset-3				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	1993.26	70.00	4011.44	70.00
Equity	854.25	30.00	1719.19	30.00
Total	2847.51	100.00	5730.63	100.00

(₹ in lakh)

Asset-4				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)



Debt	4224.01	70.00	6459.16	70.00
Equity	1810.29	30.00	2768.21	30.00
Total	6034.30	100.00	9227.37	100.00

(₹ in lakh)

Asset-5				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	970.75	70.00	1215.93	70.00
Equity	416.04	30.00	521.11	30.00
Total	1386.79	100.00	1737.04	100.00

(₹ in lakh)

Asset-6				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	18810.25	70.00	22530.21	70.00
Equity	8061.53	30.00	9655.81	30.00
Total	26871.78	100.00	32186.02	100.00

Interest on Loan (“IOL”)

36. 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.”

37. The weighted average rate of IOL has been considered on the basis of rate prevailing as on COD. The petitioner has prayed that the change in interest



rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted at the time of true up.

38. We have considered the petitioner's submissions. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. Further, with regard to floating rate of interest, variation in interest rate if any shall be considered at the time of true up. 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-1					
Details of Loan	2015-16 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	7977.09	8760.91	9364.07	9660.09	9660.09
Cumulative Repayment upto DOCO/previous year	0.00	538.58	1220.45	1936.22	2663.07
Net Loan-Opening	7977.09	8222.33	8143.62	7723.87	6997.02
Additions during the year	783.82	603.16	296.02	0.00	0.00
Repayment during the year	538.58	681.87	715.77	726.85	726.85
Net Loan-Closing	8222.33	8143.62	7723.87	6997.02	6270.17
Average Loan	8099.71	8182.97	7933.74	7360.44	6633.59
Rate of Interest (%)	7.5007	7.5573	7.5328	7.4898	7.3824
Interest	519.32	618.42	597.63	551.28	489.72

(₹ in lakh)

Asset-2				
Details of Loan	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	14100.17	18933.96	21324.16	21324.16
Cumulative Repayment upto DOCO/previous year	0.00	878.46	2120.28	3416.67
Net Loan-Opening	14100.17	18055.50	19203.88	17907.48
Additions during the year	4833.79	2390.19	0.00	0.00
Repayment during the year	878.46	1241.82	1296.39	1296.39
Net Loan-Closing	18055.50	19203.88	17907.48	16611.09



Asset-2				
Details of Loan	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Average Loan	16077.84	18629.69	18555.68	17259.28
Rate of Interest (%)	5.0618	5.0618	5.0700	5.0694
Interest	680.41	942.99	940.77	874.94

(₹ in lakh)

Asset-3				
Details of Loan	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	1993.26	3462.66	4011.44	4011.44
Cumulative Repayment upto DOCO/previous year	0.00	159.40	431.08	722.39
Net Loan-Opening	1993.26	3303.26	3580.36	3289.05
Additions during the year	1469.41	548.78	0.00	0.00
Repayment during the year	159.40	271.68	291.32	291.32
Net Loan-Closing	3303.26	3580.36	3289.05	2997.73
Average Loan	2648.26	3441.81	3434.71	3143.39
Rate of Interest (%)	9.1536	9.1536	9.1536	9.2068
Interest	194.06	315.05	314.40	289.40

₹ in lakh)

Asset-4				
Details of Loan	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	4224.01	4228.24	6360.76	6459.16
Cumulative Repayment upto DOCO/previous year	0.00	4.96	384.80	845.36
Net Loan-Opening	4224.01	4223.28	5975.96	5613.80
Additions during the year	4.23	2132.52	98.41	0.00
Repayment during the year	4.96	379.84	460.56	464.27
Net Loan-Closing	4223.28	5975.96	5613.80	5149.53
Average Loan	4223.64	5099.62	5794.88	5381.66
Rate of Interest (%)	7.5538	7.5548	7.5548	7.5004
Interest	5.23	385.26	437.79	403.65



(₹ in lakh)

Asset-5				
Details of Loan	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	970.75	973.15	1139.44	1215.93
Cumulative Repayment upto DOCO/previous year	0.00	0.94	75.20	157.56
Net Loan-Opening	970.75	972.22	1064.24	1058.37
Additions during the year	2.40	166.29	76.48	0.00
Repayment during the year	0.94	74.27	82.36	84.74
Net Loan-Closing	972.22	1064.24	1058.37	973.62
Average Loan	971.48	1018.23	1061.30	1015.99
Rate of Interest (%)	9.0964	9.0970	9.0970	9.1011
Interest	1.21	92.63	96.55	92.47

(₹ in lakh)

Asset-6			
Details of Loan	2016-17 (Pro-rata)	2017-18	2018-19
Gross loan opening	18810.25	22530.21	22530.21
Cumulative Repayment upto DOCO/previous year	0.00	1192.56	2830.71
Net Loan-Opening	18810.25	21337.65	19699.50
Additions during the year	3719.97	0.00	0.00
Repayment during the year	1192.56	1638.15	1638.15
Net Loan-Closing	21337.65	19699.50	18061.36
Average Loan	20073.95	20518.58	18880.43
Rate of Interest (%)	8.0592	8.0575	8.0486
Interest	1285.37	1653.28	1519.61

Return on Equity("ROE")

39. 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...

Provided that:



i. in case of projects commissioned on or after 1st April, 2014, an additional return of **0.50 %** shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**:

ii. the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii. additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid.”

“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.”

Additional Return on Equity

40. The petitioner has claimed the additional ROE of 0.50% for Asset-1 in accordance with Regulation 24(2)(i) of the 2014 Tariff Regulations. Appendix-I of the 2014 Tariff Regulations stipulates that in case a scheme having combination of various type of projects, the qualifying time schedule of the activity having maximum time period shall be considered for the scheme as a whole. Accordingly, the petitioner has claimed that the timeline for Asset-1 is same as that for 765 kV S/C line, i.e. 36 months for plain area from the date of Investment Approval. As Asset-1 has been commissioned on 24.5.2014, which is within the above timeline, the petitioner has claimed the additional ROE of 0.5% for Asset-



1. Further, in accordance with the Regulation 24(2)(iii) of the 2014 Tariff Regulations, the petitioner is also required to submit the certificate issued by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid, which is not provided by the petitioner. The petitioner has also submitted the such certificate by WRPC clearly stating that commissioning of this particular element has benefitted the system operation in the regional/national grid vide letter dated 9.10.2015. Accordingly, we have allowed the additional ROE of 0.50% for Asset-1.

41. The petitioner has computed ROE at the rate of 20.243% in case of Asset-1, 19.610% in case of Assets- 2 and 3 and 19.705% in case of Assets-4, 5 and 6 for tariff period 2014-19 after grossing up the ROE 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.

42. 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.

43. We have computed ROE at the rate of 20.243% in case of Asset-1 and 19.610% in case of Assets- 2 to 6 for tariff period 2014-19 after grossing up the ROE with MAT rate as per the above Regulation. 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-1					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	3418.75	3754.67	4013.16	4140.02	4140.02
Addition due to Additional Capitalisation	335.92	258.49	126.87	0.00	0.00
Closing Equity	3754.67	4013.16	4140.02	4140.02	4140.02
Average Equity	3586.71	3883.91	4076.59	4140.02	4140.02
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
MAT rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	20.243	20.243	20.243	20.243	20.243
Return on Equity (Pre Tax)	620.63	786.22	825.22	838.07	838.07



(₹ in lakh)

Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Equity	6042.93	8114.56	9138.92	9138.92
Addition due to Additional Capitalisation	2071.63	1024.37	0.00	0.00
Closing Equity	8114.56	9138.92	9138.92	9138.92
Average Equity	7078.74	8626.74	9138.92	9138.92
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1160.58	1691.70	1792.14	1792.14

(₹ in lakh)

Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Equity	854.25	1484.00	1719.19	1719.19
Addition due to Additional Capitalisation	629.75	235.19	0.00	0.00
Closing Equity	1484.00	1719.19	1719.19	1719.19
Average Equity	1169.13	1601.59	1719.19	1719.19
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	183.54	314.07	337.13	337.13

(₹ in lakh)

Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Equity	1810.29	1812.10	2726.03	2768.21
Addition due to Additional Capitalisation	1.81	913.93	42.17	0.00
Closing Equity	1812.10	2726.03	2768.21	2768.21
Average Equity	1811.20	2269.07	2747.12	2768.21
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	5.82	444.96	538.71	542.85

(₹ in lakh)

Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19



Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Equity	416.04	417.06	488.33	521.11
Addition due to Additional Capitalisation	1.03	71.27	32.78	0.00
Closing Equity	417.06	488.33	521.11	521.11
Average Equity	416.55	452.70	504.72	521.11
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1.12	88.77	98.98	102.19

(₹ in lakh)

Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Opening Equity	8061.53	9655.81	9655.81
Addition due to Additional Capitalisation	1594.27	0.00	0.00
Closing Equity	9655.81	9655.81	9655.81
Average Equity	8858.67	9655.81	9655.81
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610
Return on Equity (Pre Tax)	1380.23	1893.50	1893.50

Depreciation

44. Clause (67) of Regulation 3 of the 2014 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) Gas Insulated Sub-station: 25 years
- (e) Transmission line (including HVAC & HVDC): 35 years”

45. 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.”

46. The petitioner in its petition has computed depreciation considering capital cost as on COD of ₹11932.25 lakh, ₹20331.63 lakh, ₹2953.05 lakh, ₹6034.30 lakh, ₹1446.31 lakh and ₹26871.78 lakh for Assets- 1, 2, 3, 4, 5 and 6, respectively. Further, the petitioner has considered additional capital expenditure as mentioned in para 13 above.

47. As per Clause 67 of Regulation 3 of the 2014 Tariff Regulations, weighted average value of asset as on COD has been considered to work out the weighted average life of the transmission system as 34 years for Asset-1, 32 years for Asset-2 and 25 years for Assets-3, 4, 5 and 6.

48. We have computed depreciation considering approved capital cost as on COD and allowed additional capitalisation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-



(₹ in lakh)

Asset-1					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	11395.83	12515.57	13377.22	13800.11	13800.11
Additional Capitalization	1119.74	861.65	422.89	0.00	0.00
Closing Gross block	12515.57	13377.22	13800.11	13800.11	13800.11
Average Gross block	11955.70	12946.40	13588.67	13800.11	13800.11
Rate of Depreciation (%)	5.270	5.267	5.267	5.267	5.267
Depreciable Value	10760.13	11651.76	12229.80	12420.10	12420.10
Elapsed Life of the asset at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the asset	34	33	32	31	30
Remaining Depreciable Value	10760.13	11113.18	11009.35	10483.88	9757.03
Depreciation	538.58	681.87	715.77	726.85	726.85

(₹ in lakh)

Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	20143.10	27048.52	30463.08	30463.08
Additional Capitalization	6905.42	3414.56	0.00	0.00
Closing Gross block	27048.52	30463.08	30463.08	30463.08
Average Gross block	23595.81	28755.80	30463.08	30463.08
Rate of Depreciation (%)	4.453	4.318	4.256	4.256
Depreciable Value	18821.84	22818.42	24014.77	24014.77
Elapsed Life of the asset at beginning of the year	0	1	2	3
Weighted Balance Useful life of the asset	32	31	30	29
Remaining Depreciable Value	18821.84	21939.96	21894.49	20598.10
Depreciation	878.46	1241.82	1296.39	1296.39

(₹ in lakh)

Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	2847.51	4946.66	5730.63	5730.63
Additional Capitalization	2099.15	783.97	0.00	0.00
Closing Gross block	4946.66	5730.63	5730.63	5730.63



Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Average Gross block	3897.09	5338.65	5730.63	5730.63
Rate of Depreciation (%)	5.109	5.089	5.083	5.083
Depreciable Value	3507.38	4804.78	5157.57	5157.57
Elapsed Life of the asset at beginning of the year	0	1	2	3
Weighted Balance Useful life of the asset	25	24	23	22
Remaining Depreciable Value	3507.38	4645.38	4726.49	4435.17
Depreciation	159.40	271.68	291.32	291.32

(₹ in lakh)

Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	6034.30	6040.34	9086.79	9227.37
Additional Capitalization	6.04	3046.45	140.58	0.00
Closing Gross block	6040.34	9086.79	9227.37	9227.37
Average Gross block	6037.32	7563.57	9157.08	9227.37
Rate of Depreciation (%)	5.014	5.022	5.030	5.031
Depreciable Value	5433.59	6807.21	8241.37	8304.63
Elapsed Life of the asset at beginning of the year	0	1	2	3
Weighted Balance Useful life of the asset	25	24	23	22
Remaining Depreciable Value	5433.59	6802.25	7856.57	7459.27
Depreciation	4.96	379.84	460.56	464.27

(₹ in lakh)

Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	1386.79	1390.22	1627.78	1737.04
Additional Capitalization	3.43	237.56	109.26	0.00
Closing Gross block	1390.22	1627.78	1737.04	1737.04
Average Gross block	1388.50	1509.00	1682.41	1737.04
Rate of Depreciation (%)	4.933	4.922	4.895	4.879
Depreciable Value	1249.65	1358.10	1514.17	1563.33



Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Elapsed Life of the asset at beginning of the year	0	1	2	3
Weighted Balance Useful life of the asset	25	24	23	22
Remaining Depreciable Value	1249.65	1357.16	1438.96	1405.77
Depreciation	0.94	74.27	82.36	84.74

(₹ in lakh)

Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Opening Gross Block	26871.78	32186.02	32186.02
Additional Capitalization	5314.24	0.00	0.00
Closing Gross block	32186.02	32186.02	32186.02
Average Gross block	29528.90	32186.02	32186.02
Rate of Depreciation (%)	5.083%	5.090%	5.090%
Depreciable Value	26576.01	28967.42	28967.42
Elapsed Life of the asset at beginning of the year	0	1	2
Weighted Balance Useful life of the asset	25	24	23
Remaining Depreciable Value	26576.01	27774.86	26136.71
Depreciation	1192.56	1638.15	1638.15

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

49. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. We have considered the petitioner’s submission. The O&M Expenses has been worked out as given hereunder:-

(₹ in lakh)

Asset-1						
Particulars		2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Actual line length (km)	Single Circuit (Bundled Conductor with four sub-conductors)	57.83	57.83	57.83	57.83	57.83



Asset-1						
Particulars		2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Actual (No. of bays)	765 kV bay	1	1	1	1	1
Norms as per Regulation	Single Circuit (Bundled Conductor with four sub- conductors) (₹lakh/km)	0.606	0.627	0.647	0.669	0.691
	765 kV bay (₹lakh/bay)	84.42	87.22	90.12	93.11	96.20
Total		102.12	123.48	127.54	131.80	136.16

(₹ in lakh)

Asset-2					
Particulars		2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Actual line length (km)	Single Circuit (Bundled Conductor with four sub- conductors)	96.24	96.24	96.24	96.24
Actual (No. of bays)	765 kV bay	3	3	3	3
Norms as per Regulation	Single Circuit (Bundled Conductor with four sub- conductors) (₹lakh/km)	0.627	0.647	0.669	0.691
	400 kV bay(₹lakh/bay)	87.22	90.12	93.11	96.20
Total		269.22	332.63	343.71	355.10

(₹ in lakh)

Asset-3					
Particulars		2015-16	2016-17	2017-18	2018-19
Actual (No. of bays)	765 kV bay	1	1	1	1
	400 kV bay	1	1	1	1
Norms as per Regulation	765 kV bay(₹lakh/bay)	87.22	90.12	93.11	96.20
	400 kV bay(₹lakh/bay)	62.30	64.37	66.51	68.71
Total		119.70	154.49	159.62	164.91

(₹ in lakh)

Asset-4					
Particulars		2015-16	2016-17	2017-18	2018-19
Actual (No. of bays)	765 kV bay	2	2	2	2



Asset-4					
Particulars		2015-16	2016-17	2017-18	2018-19
	400 kV bay	1	1	1	1
Norms as per Regulation	765 kV bay(₹lakh/bay)	87.22	90.12	93.11	96.20
	400 kV bay(₹lakh/bay)	62.30	64.37	66.51	68.71
Total		3.88	244.61	252.73	261.11

(₹ in lakh)

Asset-5					
Particulars		2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Actual (No. of bays)	400 kV bay	1	1	1	1
Norms as per Regulation	400 kV bay (₹lakh/bay)	62.30	64.37	66.51	68.71
Total		0.85	64.37	66.51	68.71

(₹ in lakh)

Asset-6					
Particulars		2016-17	2017-18	2018-19	
Actual (No. of bays)	765 kV bay	8	8	8	
	400 kV bay	4	4	4	
Norms as per Regulation	765 kV bay(₹lakh/bay)	90.12	93.11	96.20	
	400 kV bay(₹lakh/bay)	64.37	66.51	68.71	
Total		777.39	1010.92	1044.44	

50. 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.

51. 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.

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

(₹ in lakh)					
Particulars	2015-16 (Pro-rata)	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Asset-1	102.12	123.48*	127.54	131.80	136.16
Asset-2	0.00	269.22	332.63	343.71	355.10
Asset-3	0.00	119.70	154.49	159.62	164.91
Asset-4	0.00	3.88	244.61	252.73	261.11
Asset-5	0.00	0.85	64.37	66.51	68.71
Asset-6	0.00	0.00	777.39	1010.92	1044.44

*For Asset-1, the COD is in 2014-15, therefore, O&M expenses is not in pro-rata basis in 2015-16

Interest on Working Capital (“IWC”)

53. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

(i) Receivables

As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being



allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

(iv) Rate of interest on working capital

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points) for Assets- 1 to 5 and 12.80% (SBI Base Rate of 9.30% plus 350 basis points) for Asset-6.

54. The interest on working capital allowed is shown in the table below:-

(₹ in lakh)

Asset-1					
Particulars	2015-16 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	15.32	18.52	19.13	19.77	20.42
O & M expenses	8.51	10.29	10.63	10.98	11.35
Receivables	304.15	377.47	387.07	384.00	374.27
Total	327.98	406.28	416.83	414.75	406.04
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	44.28	54.85	56.27	55.99	54.82

(₹ in lakh)

Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	40.38	49.89	51.56	53.27
O & M expenses	22.43	27.72	28.64	29.59
Receivables	511.02	719.46	747.46	738.24
Total	573.84	797.07	827.66	821.10
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	77.47	107.60	111.73	110.85

(₹ in lakh)

Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	17.95	23.17	23.94	24.74
O & M expenses	9.97	12.87	13.30	13.74
Receivables	112.61	180.76	188.83	185.50
Total	140.54	216.81	226.08	223.98
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	18.97	29.27	30.52	30.24



(₹ in lakh)

Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	0.58	36.69	37.91	39.17
O & M expenses	0.32	20.38	21.06	21.76
Receivables	3.41	249.34	289.47	286.46
Total	4.32	306.42	348.44	347.39
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	0.58	41.37	47.04	46.90

(₹ in lakh)

Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	0.13	9.66	9.98	10.31
O & M expenses	0.07	5.36	5.54	5.73
Receivables	0.71	54.91	59.08	59.72
Total	0.90	69.93	74.60	75.75
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	0.12	9.44	10.07	10.23

(₹ in lakh)

Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Maintenance Spares	116.61	151.64	156.67
O & M expenses	64.78	84.24	87.04
Receivables	793.39	1060.29	1043.41
Total	974.78	1296.17	1287.11
Rate of Interest (%)	12.80	12.80	12.80
Interest	124.77	165.91	164.75

Annual Transmission Charges

55. 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-1					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	11395.83	12515.57	13377.22	13800.11	13800.11
Additional Capitalisation	1119.74	861.65	422.89	0.00	0.00
Closing Gross Block	12515.57	13377.22	13800.11	13800.11	13800.11
Average Gross Block	11955.70	12946.40	13588.67	13800.11	13800.11
Rate of Depreciation	5.270	5.267	5.267	5.267	5.267
Depreciable Value	10760.13	11651.76	12229.80	12420.10	12420.10
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	34	33	32	31	30
Remaining Depreciable Value	10760.13	11113.18	11009.35	10483.88	9757.03
Depreciation	538.58	681.87	715.77	726.85	726.85
Interest on Loan					
Gross Normative Loan	7977.09	8760.91	9364.07	9660.09	9660.09
Cumulative Repayment upto Previous Year	0.00	538.58	1220.45	1936.22	2663.07
Net Loan-Opening	7977.09	8222.33	8143.62	7723.87	6997.02
Additions	783.82	603.16	296.02	0.00	0.00
Repayment during the year	538.58	681.87	715.77	726.85	726.85
Net Loan-Closing	8222.33	8143.62	7723.87	6997.02	6270.17
Average Loan	8099.71	8182.97	7933.74	7360.44	6633.59
Weighted Average Rate of Interest on Loan (%)	7.5007	7.5573	7.5328	7.4898	7.3824
Interest	519.32	618.42	597.63	551.28	489.72
Return on Equity					
Opening Equity	3418.75	3754.67	4013.16	4140.02	4140.02
Additions	335.92	258.49	126.87	0.00	0.00
Closing Equity	3754.67	4013.16	4140.02	4140.02	4140.02
Average Equity	3586.71	3883.91	4076.59	4140.02	4140.02
Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	20.243	20.243	20.243	20.243	20.243



Asset-1					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Return on Equity (Pre Tax)	620.63	786.22	825.22	838.07	838.07
Interest on Working Capital					
Maintenance Spares	15.32	18.52	19.13	19.77	20.42
O & M expenses	8.51	10.29	10.63	10.98	11.35
Receivables	304.15	377.47	387.07	384.00	374.27
Total	327.98	406.28	416.83	414.75	406.04
Interest	44.28	54.85	56.27	55.99	54.82
Annual Transmission Charges					
Depreciation	538.58	681.87	715.77	726.85	726.85
Interest on Loan	519.32	618.42	597.63	551.28	489.72
Return on Equity	620.63	786.22	825.22	838.07	838.07
Interest on Working Capital	44.28	54.85	56.27	55.99	54.82
O & M Expenses	102.12	123.48	127.54	131.80	136.16
Total	1824.93	2264.83	2322.44	2303.98	2245.61

(₹ in lakh)

Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Block				
Opening Gross Block	20143.10	27048.52	30463.08	30463.08
Additional Capitalisation	6905.42	3414.56	0.00	0.00
Closing Gross Block	27048.52	30463.08	30463.08	30463.08
Average Gross Block	23595.81	28755.80	30463.08	30463.08
Rate of Depreciation	4.453	4.318	4.256	4.256
Depreciable Value	18821.84	22818.42	24014.77	24014.77
Elapsed Life of the assets at beginning of the year	0	1	2	3
Weighted Balance Useful life of the assets	32	31	30	29
Remaining Depreciable Value	18821.84	21939.96	21894.49	20598.10
Depreciation	878.46	1241.82	1296.39	1296.39
Interest on Loan				
Gross Normative Loan	14100.17	18933.96	21324.16	21324.16
Cumulative Repayment upto Previous Year	0.00	878.46	2120.28	3416.67
Net Loan-Opening	14100.17	18055.50	19203.88	17907.4



Asset-2				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
				8
Additions	4833.79	2390.19	0.00	0.00
Repayment during the year	878.46	1241.82	1296.39	1296.39
Net Loan-Closing	18055.50	19203.88	17907.48	16611.09
Average Loan	16077.84	18629.69	18555.68	17259.28
Weighted Average Rate of Interest on Loan (%)	5.0618	5.0618	5.0700	5.0694
Interest	680.41	942.99	940.77	874.94
Return on Equity				
Opening Equity	6042.93	8114.56	9138.92	9138.92
Additions	2071.63	1024.37	0.00	0.00
Closing Equity	8114.56	9138.92	9138.92	9138.92
Average Equity	7078.74	8626.74	9138.92	9138.92
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1160.58	1691.70	1792.14	1792.14
Interest on Working Capital				
Maintenance Spares	40.38	49.89	51.56	53.27
O & M expenses	22.43	27.72	28.64	29.59
Receivables	511.02	719.46	747.46	738.24
Total	573.84	797.07	827.66	821.10
Interest	77.47	107.60	111.73	110.85
Annual Transmission Charges				
Depreciation	878.46	1241.82	1296.39	1296.39
Interest on Loan	680.41	942.99	940.77	874.94
Return on Equity	1160.58	1691.70	1792.14	1792.14
Interest on Working Capital	77.47	107.60	111.73	110.85
O & M Expenses	269.22	332.63	343.71	355.10
Total	3066.13	4316.75	4484.76	4429.43

(₹ in lakh)

Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Block				
Opening Gross Block	2847.51	4946.66	5730.63	5730.63



Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Additional Capitalisation	2099.15	783.97	0.00	0.00
Closing Gross Block	4946.66	5730.63	5730.63	5730.63
Average Gross Block	3897.09	5338.65	5730.63	5730.63
Rate of Depreciation	5.109	5.089	5.083	5.083
Depreciable Value	3507.38	4804.78	5157.57	5157.57
Elapsed Life of the assets at beginning of the year	0	1	2	3
Weighted Balance Useful life of the assets	25	24	23	22
Remaining Depreciable Value	3507.38	4645.38	4726.49	4435.17
Depreciation	159.40	271.68	291.32	291.32
Interest on Loan				
Gross Normative Loan	1993.26	3462.66	4011.44	4011.44
Cumulative Repayment upto Previous Year	0.00	159.40	431.08	722.39
Net Loan-Opening	1993.26	3303.26	3580.36	3289.05
Additions	1469.41	548.78	0.00	0.00
Repayment during the year	159.40	271.68	291.32	291.32
Net Loan-Closing	3303.26	3580.36	3289.05	2997.73
Average Loan	2648.26	3441.81	3434.71	3143.39
Weighted Average Rate of Interest on Loan (%)	9.1536	9.1536	9.1536	9.2068
Interest	194.06	315.05	314.40	289.40
Return on Equity				
Opening Equity	854.25	1484.00	1719.19	1719.19
Additions	629.75	235.19	0.00	0.00
Closing Equity	1484.00	1719.19	1719.19	1719.19
Average Equity	1169.13	1601.59	1719.19	1719.19
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	183.54	314.07	337.13	337.13
Interest on Working Capital				
Maintenance Spares	17.95	23.17	23.94	24.74
O & M expenses	9.97	12.87	13.30	13.74
Receivables	112.61	180.76	188.83	185.50
Total	140.54	216.81	226.08	223.98
Interest	18.97	29.27	30.52	30.24
Annual Transmission Charges				



Asset-3				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	159.40	271.68	291.32	291.32
Interest on Loan	194.06	315.05	314.40	289.40
Return on Equity	183.54	314.07	337.13	337.13
Interest on Working Capital	18.97	29.27	30.52	30.24
O & M Expenses	119.70	154.49	159.62	164.91
Total	675.67	1084.56	1132.99	1113.00

(₹ in lakh)

Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Block				
Opening Gross Block	6034.30	6040.34	9086.79	9227.37
Additional Capitalisation	6.04	3046.45	140.58	0.00
Closing Gross Block	6040.34	9086.79	9227.37	9227.37
Average Gross Block	6037.32	7563.57	9157.08	9227.37
Rate of Depreciation	-	-	-	-
Depreciable Value	5433.59	6807.21	8241.37	8304.63
Elapsed Life of the assets at beginning of the year	0	1	2	3
Weighted Balance Useful life of the assets	25	24	23	22
Remaining Depreciable Value	5433.59	6802.25	7856.57	7459.27
Depreciation	4.96	379.84	460.56	464.27
Interest on Loan				
Gross Normative Loan	4224.01	4228.24	6360.76	6459.16
Cumulative Repayment upto Previous Year	0.00	4.96	384.80	845.36
Net Loan-Opening	4224.01	4223.28	5975.96	5613.80
Additions	4.23	2132.52	98.41	0.00
Repayment during the year	4.96	379.84	460.56	464.27
Net Loan-Closing	4223.28	5975.96	5613.80	5149.53
Average Loan	4223.64	5099.62	5794.88	5381.66
Weighted Average Rate of Interest on Loan (%)	7.5538	7.5548	7.5548	7.5004
Interest	5.23	385.26	437.79	403.65
Return on Equity				
Opening Equity	1810.29	1812.10	2726.03	2768.21
Additions	1.81	913.93	42.17	0.00
Closing Equity	1812.10	2726.03	2768.21	2768.21
Average Equity	1811.20	2269.07	2747.12	2768.21
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50



Asset-4				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	5.82	444.96	538.71	542.85
Interest on Working Capital				
Maintenance Spares	0.58	36.69	37.91	39.17
O & M expenses	0.32	20.38	21.06	21.76
Receivables	3.41	249.34	289.47	286.46
Total	4.32	306.42	348.44	347.39
Interest	0.58	41.37	47.04	46.90
Annual Transmission Charges				
Depreciation	4.96	379.84	460.56	464.27
Interest on Loan	5.23	385.26	437.79	403.65
Return on Equity	5.82	444.96	538.71	542.85
Interest on Working Capital	0.58	41.37	47.04	46.90
O & M Expenses	3.88	244.61	252.73	261.11
Total	20.48	1496.04	1736.83	1718.77

(₹ in lakh)

Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Block				
Opening Gross Block	1386.79	1390.22	1627.78	1737.04
Additional Capitalisation	3.43	237.56	109.26	0.00
Closing Gross Block	1390.22	1627.78	1737.04	1737.04
Average Gross Block	1388.50	1509.00	1682.41	1737.04
Rate of Depreciation	4.933	4.922	4.895	4.879
Depreciable Value	1249.65	1358.10	1514.17	1563.33
Elapsed Life of the assets at beginning of the year	0	1	2	3
Weighted Balance Useful life of the assets	25	24	23	22
Remaining Depreciable Value	1249.65	1357.16	1438.96	1405.77
Depreciation	0.94	74.27	82.36	84.74
Interest on Loan				
Gross Normative Loan	970.75	973.15	1139.44	1215.93
Cumulative Repayment upto Previous Year	0.00	0.94	75.20	157.56
Net Loan-Opening	970.75	972.22	1064.24	1058.37
Additions	2.40	166.29	76.48	0.00
Repayment during the year	0.94	74.27	82.36	84.74



Asset-5				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Net Loan-Closing	972.22	1064.24	1058.37	973.62
Average Loan	971.48	1018.23	1061.30	1015.99
Weighted Average Rate of Interest on Loan (%)	9.0964	9.0970	9.0970	9.1011
Interest	1.21	92.63	96.55	92.47
Return on Equity				
Opening Equity	416.04	417.06	488.33	521.11
Additions	1.03	71.27	32.78	0.00
Closing Equity	417.06	488.33	521.11	521.11
Average Equity	416.55	452.70	504.72	521.11
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1.12	88.77	98.98	102.19
Interest on Working Capital				
Maintenance Spares	0.13	9.66	9.98	10.31
O & M expenses	0.07	5.36	5.54	5.73
Receivables	0.71	54.91	59.08	59.72
Total	0.90	69.93	74.60	75.75
Interest	0.12	9.44	10.07	10.23
Annual Transmission Charges				
Depreciation	0.94	74.27	82.36	84.74
Interest on Loan	1.21	92.63	96.55	92.47
Return on Equity	1.12	88.77	98.98	102.19
Interest on Working Capital	0.12	9.44	10.07	10.23
O & M Expenses	0.85	64.37	66.51	68.71
Total	4.23	329.48	354.46	358.34

(₹ in lakh)

Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Gross Block			
Opening Gross Block	26871.78	32186.02	32186.02
Additional Capitalisation	5314.24	0.00	0.00
Closing Gross Block	32186.02	32186.02	32186.02
Average Gross Block	29528.90	32186.02	32186.02
Rate of Depreciation	5.083	5.090	5.090



Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
Depreciable Value	26576.01	28967.42	28967.42
Elapsed Life of the assets at beginning of the year	0.00	1.00	2.00
Weighted Balance Useful life of the assets	25.00	24.00	23.00
Remaining Depreciable Value	26576.01	27774.86	26136.71
Depreciation	1192.56	1638.15	1638.15
Interest on Loan			
Gross Normative Loan	18810.25	22530.21	22530.21
Cumulative Repayment upto Previous Year	0.00	1192.56	2830.71
Net Loan-Opening	18810.25	21337.65	19699.50
Additions	3719.97	0.00	0.00
Repayment during the year	1192.56	1638.15	1638.15
Net Loan-Closing	21337.65	19699.50	18061.36
Average Loan	20073.95	20518.58	18880.43
Weighted Average Rate of Interest on Loan (%)	8.0592	8.0575	8.0486
Interest	1285.37	1653.28	1519.61
Return on Equity			
Opening Equity	8061.53	9655.81	9655.81
Additions	1594.27	0.00	0.00
Closing Equity	9655.81	9655.81	9655.81
Average Equity	8858.67	9655.81	9655.81
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610
Return on Equity (Pre Tax)	1380.23	1893.50	1893.50
Interest on Working Capital			
Maintenance Spares	116.61	151.64	156.67
O & M expenses	64.78	84.24	87.04
Receivables	793.39	1060.29	1043.41
Total	974.78	1296.17	1287.11
Interest	124.77	165.91	164.75
Annual Transmission Charges			
Depreciation	1192.56	1638.15	1638.15
Interest on Loan	1285.37	1653.28	1519.61
Return on Equity	1380.23	1893.50	1893.50
Interest on Working Capital	124.77	165.91	164.75



Asset-6			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
O & M Expenses	777.39	1010.92	1044.44
Total	4760.33	6361.76	6260.45

Filing Fee and the Publication Expenses

56. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Foreign Exchange Rate Variation

57. The petitioner has sought recovery of FERV on foreign loans deployed as provided in Clause 50 of the 2014 Tariff Regulations. The petitioner is entitled to recover the FERV directly from the beneficiaries or the long term transmission customers/DICs as the case may be, in accordance with Regulation 51(1) of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

58. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) respectively of Regulation 52 of the 2014 Tariff Regulations.



Service Tax

59. 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.

Sharing of Transmission Charges

60. 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.

61. This order disposes of Petition No. 260/TT/2015.

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

Sd/-
(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	ASSET-1			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
Bond-XXXV-Loan 1	9.64	20.00	0.00	20.00
BOND XXXVI-Loan 2	9.35	90.00	0.00	90.00
Bond XXXVII- Loan 3	9.25	200.00	0.00	200.00
Bond XXXIX-Loan 4	9.40	240.00	0.00	240.00
SBI (21.3.2012)- Loan 5	10.25	1100.00	0.00	1100.00
Bond XL- Loan 6	9.30	435.00	0.00	435.00
Bond XLI- Loan 7	8.85	250.00	0.00	250.00
IFC (IFC - A loan) (31419-00)- Loan 8-59.01	3.23	300.95	0.00	300.95
FC- Bond (17.1.2013)- Loan 9- 59.01	4.10	2428.26	0.00	2428.26
Bond- XLIII- Loan 10	7.93	500.00	0.00	500.00
Bond-XLIV- Loan 11	8.70	2500.00	0.00	2500.00
Bond-XLV-Loan 12	9.65	224.56	0.00	224.56
SBI (2014-15)- loan 13	10.25	63.80	0.00	63.80
Bond XLVI- Addcap for 2014-15 Addcap for 2014-15	9.30	0.00	579.80	579.80
Total		8352.57	579.80	8932.37

(₹ in lakh)

Particulars	ASSET-2			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IFC (IFC - A LOAN) (31419-00) CHILD 01	3.23	1272.79	0.00	1272.79
BOND - XLIV - CHILD 1	8.70	400.00	0.00	400.00
BOND XLVI	9.30	1000.00	0.00	1000.00
BOND XLVII	9.30	474.34	0.00	474.34
SBI 10000 (01.05.2014)	10.10	500.00	0.00	500.00
Proposed Loan 2015-16 (Bond L)	8.40	580.36	0.00	580.36
FC Bond (17.01.2013)	4.10	10004.65	0.00	10004.65
		14232.14	0.00	14232.14



(₹ in lakh)

Particulars	ASSET-3			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND - XLIV - CHILD 1	8.70	1300.00	0.00	1300.00
BOND XLVI	9.30	170.32	0.00	170.32
SBI 10000 (01.05.2014)	10.10	500.00	0.00	500.00
PROPOSED LOAN 2015-2016 10.10%	10.10	96.81	0.00	96.81
		2067.13	0.00	2067.13

(₹ in lakh)

Particulars	ASSET-4			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
FC - BOND (17.01.2013)-Loan 6-67.28	4.10	1211.04	0.00	1211.04
BOND - XLIV-Loan 1-	8.70	1150.00	0.00	1150.00
SBI (2014-15)-ADDCAP FOR 2015-2016 Add Cap 1-	9.55	0.00	4.23	4.23
SBI (2014-15)-Loan 2-	9.55	850.00	0.00	850.00
BOND XLVI -Loan 3-	9.30	345.00	0.00	345.00
BOND L-Loan 5-	8.40	307.93	0.00	307.93
BOND LI-Loan 4-	8.40	360.04	0.00	360.04
		4224.01	4.23	4228.24

(₹ in lakh)

Particulars	ASSET-5			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND - XLIV-doco-	8.70	61.85	0.00	61.85
SBI (2014-15)-ADDCAP FOR 2015-2016 add cap-	9.55	0.00	2.40	2.40
SBI (2014-15)-doco-	9.55	67.12	0.00	67.12
BOND XLVI -doco-	9.30	676.45	0.00	676.45
BOND LI-doco-	8.40	206.99	0.00	206.99
		1012.41	2.40	1014.81



(₹ in lakh)

Particulars	ASSET-6			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND-XXXV-doco-	9.64	20.64	0.00	20.64
BOND XXXVII-doco-	9.25	4.13	0.00	4.13
BOND XXXIX-doco-	9.40	9.91	0.00	9.91
SBI (21.03.2012)-doco-	9.55	21.47	0.00	21.47
BOND XL-doco-	9.30	232.00	0.00	232.00
BOND - XLI-doco-	8.85	53.38	0.00	53.38
FC - BOND (17.01.2013)-doco-67.06	4.10	2368.56	0.00	2368.56
BOND - XLIV-doco-	8.70	71.47	0.00	71.47
SBI (2014-15)-doco-	9.55	129.74	0.00	129.74
BOND XLVI -doco-	9.30	3066.93	0.00	3066.93
Bond XLVII-doco-	8.93	3398.09	0.00	3398.09
Bond XLVIII-doco-	8.20	2386.98	0.00	2386.98
BOND XLIX-doco-	8.15	2778.57	0.00	2778.57
BOND L-doco-	8.40	1468.86	0.00	1468.86
BOND LI-doco-	8.40	2604.56	0.00	2604.56
PROPOSED LOAN 2016-17 INTT 8.13%-doco	8.13	194.96	0.00	194.96
		18810.25	0.00	18810.25



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

(₹ in lakh)

Particulars	ASSET-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	8352.57	8932.37	8932.37	8932.37	8932.37
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	18.34	199.76	471.57
Net Loans Opening	8352.57	8932.37	8914.03	8732.61	8460.80
Add: Drawl(s) during the year	579.80	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	18.34	181.42	271.81	1105.14
Net Closing Loan	8932.37	8914.03	8732.61	8460.80	7355.66
Average Net Loan	8642.47	8923.20	8823.32	8596.71	7908.23
Interest on Loan	648.25	674.36	664.64	643.87	583.81
Rate of Interest on Loan (%)	7.5007	7.5573	7.5328	7.4898	7.3824

(₹ in lakh)

Particulars	ASSET-2			
	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	14232.14	14232.14	14232.14	14232.14
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	127.28
Net Loans Opening	14232.14	14232.14	14232.14	14104.86
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	127.28	260.61
Net Closing Loan	14232.14	14232.14	14104.86	13844.25
Average Net Loan	14232.14	14232.14	14168.50	13974.56
Interest on Loan	720.40	720.40	718.34	708.43
Rate of Interest on Loan (%)	5.0618	5.0618	5.0700	5.0694

(₹ in lakh)

Particulars	ASSET-3			
	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	2067.13	2067.13	2067.13	2067.13
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00
Net Loans Opening	2067.13	2067.13	2067.13	2067.13
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	0.00	433.33



Particulars	ASSET-3			
	2015-16	2016-17	2017-18	2018-19
Net Closing Loan	2067.13	2067.13	2067.13	1633.80
Average Net Loan	2067.13	2067.13	2067.13	1850.47
Interest on Loan	189.22	189.22	189.22	170.37
Rate of Interest on Loan (%)	9.1536	9.1536	9.1536	9.2068

(₹ in lakh)

Particulars	ASSET-4			
	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	4224.01	4228.24	4228.24	4228.24
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00
Net Loans Opening	4224.01	4228.24	4228.24	4228.24
Add: Drawl(s) during the year	4.23	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	0.00	383.33
Net Closing Loan	4228.24	4228.24	4228.24	3844.91
Average Net Loan	4226.13	4228.24	4228.24	4036.58
Interest on Loan	319.23	319.43	319.43	302.76
Rate of Interest on Loan (%)	7.5538	7.5548	7.5548	7.5004

(₹ in lakh)

Particulars	ASSET-5			
	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1012.41	1014.81	1014.81	1014.81
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00	0.00
Net Loans Opening	1012.41	1014.81	1014.81	1014.81
Add: Drawl(s) during the year	2.40	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	0.00	0.00	20.62
Net Closing Loan	1014.81	1014.81	1014.81	994.19
Average Net Loan	1013.61	1014.81	1014.81	1004.50
Interest on Loan	92.20	92.32	92.32	91.42
Rate of Interest on Loan (%)	9.0964	9.0970	9.0970	9.1011

(₹ in lakh)

Particulars	Asset-6		
	2016-17	2017-18	2018-19
Gross Opening Loan	18810.25	18810.25	18810.25
Cumulative Repayments of Loans upto Previous Year	3.78	29.85	57.64



Particulars	Asset-6		
	2016-17	2017-18	2018-19
Net Loans Opening	18806.47	18780.40	18752.61
Add: Drawl(s) during the year	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	26.07	27.79	334.78
Net Closing Loan	18780.40	18752.61	18417.83
Average Net Loan	18793.44	18766.51	18585.22
Interest on Loan	1514.60	1512.11	1495.85
Rate of Interest on Loan (%)	8.0592	8.0575	8.0486

