

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 409/TT/2014

Coram:

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

Date of Hearing : 06.04.2016

Date of Order : 28.04.2016

In the matter of:

Determination of transmission tariff of **Asset-I:** 400 kV 125 MVAR (3 Ph) Bus Reactor-2 with associated bays at Jabalpur 765/400 kV Pooling Sub-station, **Asset-II:** 765 kV, 240 MVAR bus reactor-1 along with one spare unit of 80 MVAR at 765 kV Jabalpur Pooling Sub-station with associated bays and, **Asset-III:** 765 kV line bay and 3x80 MVAR line reactor at Jabalpur Sub-station (charged as Bus Reactor under interim contingency) for 765 kV D/C Dharamjaygarh-Jabalpur Pooling Station Transmission line ckt-II under "Transmission System for Phase-I Generation Projects in Orissa (Part-B)" for 2014-19 Tariff block period in Western Region for the 2014-19 tariff period 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 A. M. Pavgi, PGCIL
 Shri Mohd. Mohsin, PGCIL
 Shri Piyush Awasthi, PGCIL
 Shri M.M. Mondal, PGCIL
 Shri S.K. Venkatesan, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri S.S. Raju, PGCIL
 Shri Subhash C Taneja, PGCIL
 Shri Pankaj Sharma, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for 400 kV 125 MVAR (3 Ph) Bus



Reactor-2 with associated bays at Jabalpur 765/400 kV Pooling Sub-station (referred as “**Asset-I**”), 765 kV, 240 MVAR bus reactor-1 along with one spare unit of 80 MVAR at 765 kV Jabalpur Pooling Sub-station with associated bays (referred as “**Asset-II**”) and 765 kV line bay and 3x80 MVAR line reactor at Jabalpur Sub-station (charged as Bus Reactor under interim contingency) for 765 kV D/C Dharamjaygarh-Jabalpur Pooling Station Transmission line ckt-II (referred as “**Asset-III**”) under “Transmission System for Phase-I Generation Projects in Orissa (Part-B)” for 2014-19 Tariff block 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 6.4.2016. 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) Investment approval was accorded by Board of Directors of the petitioner, vide the Memorandum No. C/CP/Orissa Ph-I IPPs (Part-B) dtd. 15.12.2010 at an estimated cost of ₹274319 lakh, which included IDC of ₹18092 lakh (based on 3rd quarter 2010 price level). Subsequently, Revised Cost Estimate (RCE) was approved by Board of Directors of the petitioner, vide Memorandum No. C/CP/RCE- Orissa Ph-I IPPs (Part-B) dated 11.3.2016 at an estimated cost of ₹338471 lakh, which included IDC of ₹32182 lakh (based on October 2015 price level).

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

Transmission Lines:

1. Jharsuguda pooling station – Dharamjaygarh (WR) 765 kV D/C line;
2. LILO of Ranchi – Sipat (Bilaspur) pooling station 765 kV S/C line at Dharamjaygarh/ near Korba (WR);
3. Dharamjaygarh – Jabalpur pooling station 765 kV D/C line;
4. Jabalpur pooling station – Jabalpur 400 kV pooling station at jabalpur



Sub-station:

1. Establishment of 765 kV switching station at Dharamjaygarh/ near Korba;
 2. Establishment of 2x1500 MVA, 765/400 kV pooling station at Jabalpur
- (c) The transmission asset was scheduled to be commissioned within 36 months from the date of investment approval i.e. 15.12.2010. Therefore, the scheduled date of commissioning (SCOD) of the transmission system works out to 15.12.2013 against which the Assets-I, II, and III have been commissioned on 31.12.2014, 6.5.2015 and 1.12.2014, respectively. Hence, there is time over-run of 12 months and 16 days in case of Asset-I, 16 months and 21 days in case of Asset-II and 11 months and 5 days in case of Asset-III.
- (d) The petitioner vide its affidavit dated 5.4.2016 has submitted the approved Revised Cost Estimate (RCE) for the project.
- (e) The petitioner in original petition had submitted the tariff forms for the Asset-I, II and III on the basis of unaudited figures. Accordingly, the petitioner was directed to submit Auditor's Certificate and revised tariff forms for the Asset-I, II and III. Further, the petitioner was directed to submit the RLDC certificates in support of trial operation or commercial operation date for the assets. In response, the petitioner, has submitted the revised tariff forms along with Auditor's Certificates for Asset-I, II and



III. The petitioner has also submitted the RLDC certificates for all the assets.

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

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

(₹ in lakh)

Asset-I					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	10.14	42.91	45.81	46.47	46.47
Interest on Loan	11.58	46.92	46.71	43.62	39.58
Return on equity	11.29	47.80	51.02	51.76	51.76
Interest on Working Capital	1.60	6.61	6.86	6.94	6.97
O & M Expenses	15.24	62.30	64.37	66.51	68.71
Total	49.85	206.54	214.77	215.30	213.49

(₹ in lakh)

Asset-II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Depreciation	115.94	151.03	155.74	155.74
Interest on Loan	128.60	156.65	148.60	134.97
Return on equity	129.18	168.28	173.53	173.53
Interest on Working Capital	12.95	15.93	16.14	16.00
O & M Expenses	78.78	90.12	93.11	96.20
Total	465.45	582.01	587.12	576.44

(₹ in lakh)

Asset-III					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	33.51	115.44	134.33	138.80	138.80
Interest on Loan	36.88	121.44	132.91	126.97	115.47
Return on equity	37.34	128.63	149.68	154.65	154.65
Interest on Working Capital	4.03	13.23	14.58	14.82	14.73
O & M Expenses	28.14	87.22	90.12	93.11	96.20
Total	139.90	465.96	521.62	528.35	519.85



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

(₹ in lakh)

Asset-I					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
O & M Expenses	5.03	5.19	5.36	5.54	5.73
Receivables	32.88	34.42	35.80	35.88	35.58
Total	46.96	48.96	50.82	51.40	51.62
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest	6.34	6.61	6.86	6.94	6.97
Pro-rata Interest	1.60	6.61	6.86	6.94	6.97

(₹ in lakh)

Asset-II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	13.08	13.52	13.97	14.43
O & M Expenses	7.27	7.51	7.76	8.02
Receivables	85.89	97.00	97.85	96.07
Total	106.24	118.03	119.58	118.52
Rate of Interest	13.50	13.50	13.50	13.50
Interest	14.34	15.93	16.14	16.00
Pro-rata Interest	12.95	15.93	16.14	16.00

(₹ in lakh)

Asset-III					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	12.66	13.08	13.52	13.97	14.43
O & M Expenses	7.04	7.27	7.51	7.76	8.02
Receivables	69.95	77.66	86.94	88.06	86.64
Total	89.65	98.01	107.97	109.78	109.09
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest	12.10	13.23	14.58	14.82	14.73
Pro-rata Interest	4.03	13.23	14.58	14.82	14.73



Date of Commercial Operation (“COD”)

8. The petitioner has claimed the date of the commercial operation of the Asset-I, II and III as 31.12.2014, 6.5.2015 and 1.12.2014, respectively.

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.”

9. The petitioner has submitted RLDC certificate issued by WRLDC, POSOCO for Asset-I, II and III 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.



10. Accordingly, the commercial operation date of the transmission asset has been considered as 31.12.2014, 6.5.2015 and 1.12.2014 for Assets-I, II and III, respectively and the tariff is worked out from COD to 31.3.2019.

Capital Cost

11. 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:-

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	
Asset-I	761.91	1241.13	749.59	20.94	84.48	25.18	880.19
Asset-II	4521.94	3040.68	2090.78	0.00	680.35	178.42	2949.57
Asset-III	4593.08	3140.82	1894.78	18.44	546.39	169.19	2628.80

12. 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.”

13. 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 of ₹755.64 lakh, ₹2129.30 lakh and ₹1905.55 lakh of Asset-I, Asset-II and Asset-III, respectively, as on COD is considered as discussed in the subsequent paragraphs.



Cost Over-run

14. The petitioner vide its affidavit dated 5.4.2016 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-I	31.12.2014	761.91	1241.13	880.19
Asset-II	6.5.2015	4521.94	3040.68	2949.57
Asset-III	1.12.2014	4593.08	3140.82	2628.80
Total		9876.93	7422.63	6458.56

15. The completion cost of the instant assets is within the apportioned costs as per revised RCE and hence there is no cost over-run.

Time Over-run

16. As per the investment approval dated 15.12.2010, 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 1.1.2014. Asset-I, II and III were put under commercial operation with effect as below:-

Assets name	SCOD as per IA dtd 15.12.2010	Actual date of commercial operation	Delay in months
Asset-I	15.12.2013	31.12.2014	12 months and 16 days
Asset-II		6.5.2015	16 months and 21 days
Asset-III		1.12.2014	11 months and 15 days

17. As regards the time over-run during the period 15.12.2010 to 31.12.2011 in case of Asset-I and II, the petitioner has submitted that it has filed the application for land acquisition on 17.8.2010. Thereafter, the General Administration Department,



Madhya Pradesh issued gazette notification vide section 4(2) and 17(1) of order dated 28.1.2011 and section 6 of order dated 28.1.2011 with regard to 15.21 ha of land in Shahpura, Jabalpur District. Accordingly, the land was handed over to the petitioner on 7.12.2011. Further, the LOA was kept on hold due to non-availability of land, due to which the LOA was placed on 26.7.2011. In this regard, the petitioner has submitted that the planned timeline for land acquisition was 6 months, against which the land was acquired in 13 months. Thus, there the petitioner has claimed the delay of 7 months on account of land acquisition. We are of the view that the time over-run of 7 months on account of land acquisition was beyond the control of the petitioner. Hence, the time over-run of only 7 months in case of Assets-I and II on account of land acquisition is condoned.

18. As regards the time over-run beyond 31.12.2011 in case of Assets-I and II, the petitioner has submitted that Jabalpur Pooling Sub-station is located in the vicinity of Narmada River. During the execution of works, in some of the area of the sub-station land, there was damage of tower foundation in monsoon season in 2013 and 2014 due to erosion of slopy land and settlement of ground towards river and gorge. In this regard, the petitioner has submitted the Report of Geotechnical experts of IIT, Mumbai as a supporting document. This resulted in delay in erection and commissioning of reactors of Asset-I and Asset-II. We are of the view that the time over-run of 2 months in case of Assets I and II on account of monsoon during the years 2013 and 2014 was beyond the control of the petitioner. Hence, the time over-run of only 2 months on account of heavy monsoons in years 2013 and 2014 is condoned for Assets-I & II.



19. As regards Asset-I, there was delay in receipt of 400 kV neutral bushing from BHEL. Failure rate of bushings supplied by BHEL since 2005 was very high (23%). Bushings supplied by BHEL with reactor failed during testing (oil leakage). Accordingly, the petitioner decided to hold the supply of BHEL made bushings. The petitioner has submitted the minutes of meeting dated 11.12.2013 stating that the new bushings were to be supplied from other POWERGRID approved vendors to meet the project requirement. Further, the petitioner has submitted the copy of the letter dated 13.1.2014 vide which the supply of OTP bushings for power transformers and reactors upto 400 kV from BHEL, Bhopal works was kept under hold by the petitioner. Therefore, BHEL was instructed to supply bushings for new/on-going projects from other POWERGRID approved vendors so that commissioning of reactors and ICTs does not get affected. But, there was considerable delay by BHEL in arranging alternate bushing source. Thereafter, BHEL placed order of bushings on M/s Alstom. In this regard, the petitioner recovered the LD of ₹2,27,470.00 from the contractor for delay in supply of bushings. We are of the view that such delay is totally attributable to the petitioner as the petitioner should have taken some steps for considerable delay by BHEL and the petitioner cannot absolve itself of the time over-run due to such delay. Hence, the time over-run due to delay in supply of bushings by BHEL is not condoned and, therefore, the entire cost due to such time over-run has to be borne by the petitioner.



20. Further, in case of Asset-II and III, the petitioner has submitted that as per contract M/s TBEA had to establish reactor manufacturing factory in India and supply reactors from its Indian factory to ensure technology availability in India. M/s TBEA received approval for its 100% subsidiary company from Ministry of Company Affairs in December, 2010. Subsequently, TBEA got land possession at Vododara for establishment of their factory in August, 2012. Reactor manufacturing clearance to the factory was granted in January, 2014 after detailed compliance and POWEGRID MQP. Thereafter, TBEA could manufacture and supply reactors from Vadodara factory. In this regard, the petitioner recovered the LD of USD10207.00 + ₹924789.00 from the contractor for delay in supply of reactors by TBEA. The petitioner has submitted the letter dated 30.1.2014 vide which POWERGRID had considered the establishment of manufacturing facility for 765 kV class transformer and reactor in India by M/s TBEA at Karjan works, Vadodara based on physical assessment dated 10.12.2013 and 29.1.2014. In this regard, it is observed that the time over-run due to delay in supply of reactors by M/s TBEA is totally attributable to the petitioner. We are of the view that the petitioner should have taken steps for supply of reactors promptly and the petitioner cannot absolve itself of the time over-run due to delay in supply of reactors. Hence, the time over-run due to delay in supply of reactors by M/s TBEA is not condoned and, therefore, the entire cost due to such time over run has to be borne by the petitioner.

21. The petitioner has submitted that the commissioning of Asset-III, i.e. 765 kV Dharamjaygarh-Jabalpur line got delayed due to non-approval of forest proposal as



provided in Petition No. 266/TT/2015. Since, transmission line was getting delayed and high voltage problems were observed at Jabalpur Pooling Station, it was decided to charge the line reactors as bus reactor. Hence, the line reactors were commissioned as bus reactors as interim contingency arrangement. We are of the view that above mentioned 765 kV Dharamjaygarh-Jabalpur line is claimed by the petitioner in Petition No. 266/TT/2015, which is under process. Accordingly, final decision on time over-run in case of Asset-III will be taken after the decision of the Commission in Petition No. 266/TT/2015. The petitioner has the liberty to approach for review of time over-run.

22. 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 paras, for Assets-I and II, the time over-run of 7 months on account of land acquisition and 2 months on account of heavy monsoons 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 time over-run in case of the Asset-I and III is condoned and accordingly IDC and IEDC for the delay are allowed to be capitalised.

Assets name	SCOD as per IA dtd 17.3.2011	Actual Date of commercial operation	Delay in months	Delay condoned by the Commission	Delay not condoned by the Commission
Asset-I	1.4.2014	31.12.2014	12 months and 16 days	9 months	3 months and 16 days



Assets name	SCOD as per IA dtd 17.3.2011	Actual Date of commercial operation	Delay in months	Delay condoned by the Commission	Delay not condoned by the Commission
Asset-II		6.5.2015	16 months and 21 days	9 months	7 months and 21 days
Asset-III		1.12.2014	11 months and 15 days	0 months	11 months and 15 days*

* Final decision on time over-run in case of Asset-III will be taken after determination of final tariff for Petition No. 266/TT/2015

IDC and IEDC

23. The petitioner was directed to provide the computation of IDC and IEDC on cash basis (i) from date of infusion of debt fund to scheduled COD and (ii) from scheduled COD to actual COD. In response, the petitioner vide its affidavit dated 25.4.2016 submitted the breakup of IDC and IEDC as follows:

(₹ in lakh)

Statement showing IDC and IEDC	Asset-I		Asset-II		Asset-III	
	IDC	IEDC	IDC	IEDC*	IDC	IEDC
Total IDC/IEDC as per certificate	156.73	21.18	264.99	64.58	365.90	48.51
IDC/IEDC discharged upto SCOD(15.12.2013)	12.43	21.18	141.48	18.69	13.07	48.51
IDC/IEDC discharged from SCOD to actual COD	144.30		123.51	45.89	352.83	

* In case of Asset-II, out ₹64.58 lakh of IEDC, ₹18.69 lakh is discharged upto 31.3.2015 and ₹45.89 lakh is discharged from 1.4.2015 to 6.5.2015 (COD)

24. Further, the petitioner vide its affidavit dated 22.2.2016 submitted the Auditor's Certificate for all the assets. In this regard, the the petitioner has submitted that entire IEDC amount mentioned in the Auditor's Certificate is on cash basis and is paid upto COD for all the assets. The petitioner has also submitted the details of IDC claimed on cash basis is as given below:-

Particulars	Asset-I	Asset-II	Asset-III
IDC as per Certificate	156.73	264.99	365.90
IDC discharged upto COD	150.67	226.49	355.13
IDC discharged in 2014-15	2.53	0.00	3.46
IDC to be discharged in 2015-16	3.52	38.50	7.31



25. As discussed above, we have disallowed the delay of 3 months and 16 days in case of Asset-I and 7 months and 21 days in case of Asset-II. Further, in case of Asset-III, final decision on time over-run in case of Asset-III will be taken at the time of truing-up due to pending determination of final tariff for Petition No. 266/TT/2015. Accordingly, we have worked out the IDC/IEDC as follows:-

(₹ in lakh)

Asset-I			
Particulars	IDC	IEDC	Total
Delay in days (from SCOD to COD)	381	381	
Total IDC/IEDC from date of infusion of debt fund to SCOD	12.43	21.18	
Total IDC/IEDC from SCOD to COD (in Rs lakh)	144.30		
Total delay in days disallowed by the Commission	107	107	
IDC and IEDC disallowed (Rs lakh)	40.53	1.53	42.06
IDC and IEDC allowed by the Commission (Rs lakh)	116.20	19.65	135.85
As worked out (after adjustment of above IDC/IEDC disallowed by the commission due to time-overrun):			
Total IDC/IEDC upto COD	116.20	19.65	135.85
Accrued IDC and IEDC discharged in 2014-15	0.00	0.00	0.00
Accrued IDC and IEDC discharged in 2015-16	0.00	0.00	0.00

(₹ in lakh)

Asset-II			
Particulars	IDC	IEDC	Total
Delay in days (from SCOD to COD)	507	507	
Total IDC/IEDC from date of infusion of debt fund to SCOD	141.48	18.69 (upto 31.3.2015)	
Total IDC/IEDC from SCOD to COD (in Rs lakh)	123.51	45.89 (from 1.4.2015 to 6.5.2015)	
Total delay in days disallowed by the Commission	233	233	
IDC and IEDC disallowed	56.76	53.71	110.47
IDC and IEDC allowed by the Commission	208.23	10.87	219.10
As worked out (after adjustment of above IDC/IEDC disallowed by the commission due to time-overrun):			
Total IDC/IEDC upto COD	208.23	10.87	219.10
Accrued IDC and IEDC discharged in 2014-15	0.00	0.00	0.00
Accrued IDC and IEDC discharged in 2015-16	0.00	0.00	0.00



(₹ in lakh)

Asset-III			
Particulars	IDC	IEDC	Total
Delay in days (from SCOD to COD)	351	351	
Total IDC/IEDC from date of infusion of debt fund to SCOD	13.07	48.51	
Total IDC/IEDC from SCOD to COD (in Rs lakh)	352.83		
Total delay in days disallowed by the Commission	351	351	
IDC and IEDC disallowed	352.83	11.77	352.83
IDC and IEDC allowed by the Commission	13.07	36.74	61.58
As worked out (after adjustment of above IDC/IEDC disallowed by the commission due to time-overrun):			
Total IDC/IEDC upto COD	13.07	36.74	13.07
Accrued IDC and IEDC discharged in 2014-15	0.00	0.00	0.00
Accrued IDC and IEDC discharged in 2015-16	0.00	0.00	0.00

Initial Spares

26. 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%”

27. The petitioner has claimed initial spares of ₹28.00 lakh, ₹104.00 lakh and ₹88.00 lakh for Asset-I, II and III, respectively, pertaining to sub-station. The initial spares of for sub-station (green-field) claimed by the petitioner are within the specified ceiling limits 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)
Sub-station (Greenfield)						
Asset-I	31.3.2017	702.28	28.00	4.00%	28.10	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)
Asset-II	31.3.2018	2620.00	104.00	4.00%	104.83	0.00
Asset-III	31.3.2017	2214.39	88.00	4.00%	88.60	0.00

25. The capital cost for Asset-I, II and III has been worked out by adjusting IDC/IEDC and excess initial spares as given below:-

(₹ in lakh)			
Particulars	Asset-I	Asset-II	Asset-III
Capital Cost as on COD as per Auditor's Certificate	755.64	2129.30	1905.55
Total IDC/IEDC disallowed by the Commission	42.06	110.47	364.60
Accrued IDC and IEDC discharged in 2014-15	0.00	0.00	0.00
Accrued IDC and IEDC discharged in 2015-16	0.00	0.00	0.00
Capital Cost as on COD (after deducting disallowed IDC/IEDC and accrued IDC discharged in 2014-16)	713.59	2018.83	1540.95
Excess Initial Spares (for sub-station)	0.00	0.00	0.00
Capital Cost as on COD (after deducting accrued IDC/IEDC and excess initial spares)	713.59	2018.83	1540.95

28. The capital cost as on COD of ₹713.59 lakh, ₹2018.83 lakh and ₹1540.95 lakh, as worked out above is within the approved apportioned cost of ₹1241.13 lakh, ₹3040.68 lakh and ₹3140.82 lakh for Asset-I, Asset-II and Asset-III, respectively. 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 Asset-I to V, during 2014-19 tariff period, 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 and 2016-17 is within the approved apportioned cost for both Asset-I, II and III.

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 for Asset-I, II and III works out to be 31.3.2017, 31.3.2018 and 31.3.2017 respectively. The additional capitalization claimed by the petitioner is within the cut-off date. The additional capitalization for 2014-15, 2015-16 and 2016-17 is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations for both Asset-I and Asset-II. The details of additional capitalization allowed is as follows:-



(₹ in lakh)

Name of the element	Particulars	Approved Apportioned Cost	Expenditure upto COD*	Additional Capital Expenditure#				Total estimated completion cost
				2014-15	2015-16	2016-17	Total	
Asset-I	Petitioner's Claim	1241.13	749.59 (=755.64-2.53-3.52)	20.94 (=18.41+2.53)	84.48 (=80.96+3.52)	25.18	130.60	880.19
	Approved in this order	1241.13	713.59	18.41	80.96	25.18	124.55	838.14
Asset-II	Petitioner's Claim	3040.68	2090.78 (=2129.30-38.50)	0.00	680.35 (=641.85+38.50)	178.42	858.77	2949.57
	Approved in this order	3040.68	2018.83	0.00	641.85	178.42	820.27	2839.10
Asset-III	Petitioner's Claim	3140.82	1894.78 (=1905.55-3.46-7.31)	18.44 (14.98+3.46)	546.39 (=539.08+7.31)	169.19	734.02	2628.80
	Approved in this order	3140.82	1540.95	14.98	539.08	169.19	723.25	2264.20

* Capital Cost after deducting accrued IDC discharged

Additional capital expenditure after addition of IDC discharged in respective years

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 70.01:29.99 in case of Asset-I and 70:30 in case of Assets-II and III for capital cost as on COD. 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-I				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	499.58	70.01	586.77	70.01
Equity	214.01	29.99	251.37	29.99
Total	713.59	100.00	838.14	100.00

(₹ in lakh)

Asset-II				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	1413.18	70.00	1987.37	70.00
Equity	605.65	30.00	851.73	30.00
Total	2018.83	100.00	2839.10	100.00

(₹ in lakh)

Asset-III				
Particulars	Capital cost as on COD		Estimated completion cost including additional capitalization	
	Amount	(%)	Amount	(%)
Debt	1078.67	70.00	1584.94	70.00
Equity	462.29	30.00	679.26	30.00
Total	1540.95	100.00	2264.20	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-I					
Details of Loan	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	499.58	512.47	569.14	586.77	586.77
Cumulative Repayment upto DOCO/previous year	0.00	9.51	50.30	93.89	138.14
Net Loan-Opening	499.58	502.96	518.84	492.88	448.63
Additions during the year	12.89	56.67	17.63	0.00	0.00
Repayment during the year	9.51	40.79	43.59	44.25	44.25
Net Loan-Closing	502.96	518.84	492.88	448.63	404.37
Average Loan	501.27	510.90	505.86	470.75	426.50
Rate of Interest (%)	8.6959	8.7322	8.7898	8.8283	8.8428
Interest	10.87	44.61	44.46	41.56	37.71



(₹ in lakh)

Asset-II				
Details of Loan	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	1413.18	1862.48	1987.37	1987.37
Cumulative Repayment upto DOCO/previous year	0.00	111.73	256.92	406.82
Net Loan-Opening	1413.18	1750.75	1730.45	1580.55
Additions during the year	449.30	124.89	0.00	0.00
Repayment during the year	111.73	145.19	149.90	149.90
Net Loan-Closing	1750.75	1730.45	1580.55	1430.64
Average Loan	1581.97	1740.60	1655.50	1505.59
Rate of Interest (%)	8.6614	8.6506	8.6401	8.6289
Interest	123.92	150.57	143.04	129.92

(₹ in lakh)

Asset-III					
Details of Loan	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	1078.67	1089.15	1466.51	1584.94	1584.94
Cumulative Repayment upto DOCO/previous year	0.00	27.10	123.49	238.57	358.12
Net Loan-Opening	1078.67	1062.05	1343.02	1346.37	1226.82
Additions during the year	10.49	377.36	118.43	0.00	0.00
Repayment during the year	27.10	96.38	115.08	119.55	119.55
Net Loan-Closing	1062.05	1343.02	1346.37	1226.82	1107.27
Average Loan	1070.36	1202.54	1344.70	1286.60	1167.05
Rate of Interest (%)	8.4068	8.4374	8.4932	8.5358	8.5618
Interest	29.83	101.46	114.21	109.82	99.92

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.”

40. The petitioner has computed ROE at the rate of 19.610% 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.



41. 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.

42. We have computed ROE at the rate of 19.610% 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-I					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	214.01	219.53	243.82	251.37	251.37
Addition due to Additional Capitalisation	5.52	24.29	7.55	0.00	0.00
Closing Equity	219.53	243.82	251.37	251.37	251.37
Average Equity	216.77	231.67	247.59	251.37	251.37
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre	19.610	19.610	19.610	19.610	19.610



Asset-I					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Tax)(%)					
Return on Equity (Pre Tax)	10.60	45.43	48.55	49.29	49.29

(₹ in lakh)

Asset-II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Equity	605.65	798.20	851.73	851.73
Addition due to Additional Capitalisation	192.56	53.53	0.00	0.00
Closing Equity	798.20	851.73	851.73	851.73
Average Equity	701.93	824.97	851.73	851.73
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)	124.48	161.78	167.02	167.02

(₹ in lakh)

Asset-III					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	462.29	466.78	628.50	679.26	679.26
Addition due to Additional Capitalisation	4.49	161.72	50.76	0.00	0.00
Closing Equity	466.78	628.50	679.26	679.26	679.26
Average Equity	464.53	547.64	653.88	679.26	679.26
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax)(%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	30.20	107.39	128.23	133.20	133.20

Depreciation

43. 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”

44. 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.”

45. The petitioner in its petition has computed depreciation considering capital cost as on COD of ₹749.59 lakh, ₹2090.78 lakh and ₹1894.78 lakh for Asset-I, Asset-II and Asset-III, respectively.

46. 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 25 years for Asset-I, II & III.

47. 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-I					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	732.00	812.96	838.14	838.14	838.14
Additional Capitalization	722.80	772.48	825.55	838.14	838.14
Closing Gross block	5.280	5.280	5.280	5.280	5.280
Average Gross block	650.52	695.23	743.00	754.33	754.33
Rate of Depreciation (%)	0	1	2	3	4
Depreciable Value	25	24	23	22	21
Elapsed Life of the asset at beginning of the year	650.52	685.72	692.69	660.44	616.18
Weighted Balance Useful life of the asset	9.51	40.79	43.59	44.25	44.25
Remaining Depreciable Value	9.51	50.30	93.89	138.14	182.40
Depreciation	732.00	812.96	838.14	838.14	838.14

(₹ in lakh)

Asset-II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	2018.83	2660.68	2839.10	2839.10
Additional Capitalization	641.85	178.42	0.00	0.00
Closing Gross block	2660.68	2839.10	2839.10	2839.10
Average Gross block	2339.76	2749.89	2839.10	2839.10
Rate of Depreciation (%)	5.280	5.280	5.280	5.280
Depreciable Value	2105.78	2474.90	2555.19	2555.19
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	2105.78	2363.18	2298.27	2148.37
Depreciation	111.73	145.19	149.90	149.90

(₹ in lakh)

Asset-III



Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1540.95	1555.93	2095.01	2264.20	2264.20
Additional Capitalization	14.98	539.08	169.19	0.00	0.00
Closing Gross block	1555.93	2095.01	2264.20	2264.20	2264.20
Average Gross block	1548.44	1825.47	2179.61	2264.20	2264.20
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1393.60	1642.93	1961.65	2037.78	2037.78
Elapsed Life of the asset at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the asset	25	24	23	22	21
Remaining Depreciable Value	1393.60	1615.82	1838.16	1799.21	1679.66
Depreciation	27.10	96.38	115.08	119.55	119.55

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

48. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations.

49. We have considered the petitioner’s submission. The petitioner’s entitlement of O&M Expenses has been worked out as given hereunder:-

(₹ in lakh)

Asset-I						
Particulars		2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Actual (No. of bays)	400 kV bay	1	1	1	1	1
Norms as per Regulation	400 kV bay (₹lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total		15.03	62.30	64.37	66.51	68.71

(₹ in lakh)

Asset-II					
Particulars		2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Actual (No. of bays)	765 kV bay	1	1	1	1



Asset-II					
Particulars		2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Norms as per Regulation	765 kV bay ((₹lakh/bay))	87.22	90.12	93.11	96.20
Total		78.88	90.12	93.11	96.20

(₹ in lakh)

Asset-III						
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	765 kV bay ((₹lakh/bay))	84.42	87.22	90.12	93.11	96.20
Total		27.99	87.22	90.12	93.11	96.20

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	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Asset-I	15.03	62.30	64.37	66.51	68.71
Asset-II	0.00	78.88 (Pro-rata)	90.12	93.11	96.20
Asset-III	27.99	87.22	90.12	93.11	96.20

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).

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

(₹ in lakh)					
Asset-II					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.26	9.35	9.66	9.98	10.31
O & M expenses	1.25	5.19	5.36	5.54	5.73
Receivables	7.93	33.26	34.61	34.73	34.46
Total	11.43	47.80	49.63	50.25	50.50
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



Asset-II					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Interest	1.54	6.45	6.70	6.78	6.82

(₹ in lakh)

Asset-II				
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	11.83	13.52	13.97	14.43
O & M expenses	6.57	7.51	7.76	8.02
Receivables	75.28	93.86	94.80	93.11
Total	93.68	114.89	116.53	115.55
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	12.65	15.51	15.73	15.60

(₹ in lakh)

Asset-III					
Particulars	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	4.20	13.08	13.52	13.97	14.43
O & M expenses	2.33	7.27	7.51	7.76	8.02
Receivables	19.78	67.38	76.81	78.20	77.05
Total	26.31	87.74	97.84	99.92	99.50
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	3.55	11.84	13.21	13.49	13.43

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)

Particulars	Asset-I				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	713.59	732.00	812.96	838.14	838.14
Additional Capitalisation	18.41	80.96	25.18	0.00	0.00
Closing Gross Block	732.00	812.96	838.14	838.14	838.14
Average Gross Block	722.80	772.48	825.55	838.14	838.14



Particulars	Asset-I				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Rate of Depreciation	5.280	5.280	5.280	5.280	5.280
Depreciable Value	650.52	695.23	743.00	754.33	754.33
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	650.52	685.72	692.69	660.44	616.18
Depreciation	9.51	40.79	43.59	44.25	44.25
Interest on Loan					
Gross Normative Loan	499.58	512.47	569.14	586.77	586.77
Cumulative Repayment upto Previous Year	0.00	9.51	50.30	93.89	138.14
Net Loan-Opening	499.58	502.96	518.84	492.88	448.63
Additions	12.89	56.67	17.63	0.00	0.00
Repayment during the year	9.51	40.79	43.59	44.25	44.25
Net Loan-Closing	502.96	518.84	492.88	448.63	404.37
Average Loan	501.27	510.90	505.86	470.75	426.50
Weighted Average Rate of Interest on Loan (%)	8.6959	8.7322	8.7898	8.8283	8.8428
Interest	10.87	44.61	44.46	41.56	37.71
Return on Equity					
Opening Equity	214.01	219.53	243.82	251.37	251.37
Additions	5.52	24.29	7.55	0.00	0.00
Closing Equity	219.53	243.82	251.37	251.37	251.37
Average Equity	216.77	231.67	247.59	251.37	251.37
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	10.60	45.43	48.55	49.29	49.29
Interest on Working Capital					
Maintenance Spares	2.26	9.35	9.66	9.98	10.31
O & M expenses	1.25	5.19	5.36	5.54	5.73
Receivables	7.93	33.26	34.61	34.73	34.46
Total	11.43	47.80	49.63	50.25	50.50
Interest	1.54	6.45	6.70	6.78	6.82
Annual Transmission Charges					
Depreciation	9.51	40.79	43.59	44.25	44.25
Interest on Loan	10.87	44.61	44.46	41.56	37.71
Return on Equity	10.60	45.43	48.55	49.29	49.29
Interest on Working Capital	1.54	6.45	6.70	6.78	6.82
O & M Expenses	15.03	62.30	64.37	66.51	68.71



Particulars	Asset-I				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Total	47.56	199.58	207.68	208.40	206.79

(₹ in lakh)

Particulars	Asset-II			
	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Gross Block				
Opening Gross Block	2018.83	2660.68	2839.10	2839.10
Additional Capitalisation	641.85	178.42	0.00	0.00
Closing Gross Block	2660.68	2839.10	2839.10	2839.10
Average Gross Block	2339.76	2749.89	2839.10	2839.10
Rate of Depreciation	5.280	5.280	5.280	5.280
Depreciable Value	2105.78	2474.90	2555.19	2555.19
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	2105.78	2363.18	2298.27	2148.37
Depreciation	111.73	145.19	149.90	149.90
Interest on Loan				
Gross Normative Loan	1413.18	1862.48	1987.37	1987.37
Cumulative Repayment upto Previous Year	0.00	111.73	256.92	406.82
Net Loan-Opening	1413.18	1750.75	1730.45	1580.55
Additions	449.30	124.89	0.00	0.00
Repayment during the year	111.73	145.19	149.90	149.90
Net Loan-Closing	1750.75	1730.45	1580.55	1430.64
Average Loan	1581.97	1740.60	1655.50	1505.59
Weighted Average Rate of Interest on Loan (%)	8.6614	8.6506	8.6401	8.6289
Interest	123.92	150.57	143.04	129.92
Return on Equity				
Opening Equity	605.65	798.20	851.73	851.73
Additions	192.56	53.53	0.00	0.00
Closing Equity	798.20	851.73	851.73	851.73
Average Equity	701.93	824.97	851.73	851.73
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)	124.48	161.78	167.02	167.02
Interest on Working Capital				
Maintenance Spares	11.83	13.52	13.97	14.43



Particulars	Asset-II			
	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
O & M expenses	6.57	7.51	7.76	8.02
Receivables	75.28	93.86	94.80	93.11
Total	93.68	114.89	116.53	115.55
Interest	12.65	15.51	15.73	15.60
Annual Transmission Charges				
Depreciation	111.73	145.19	149.90	149.90
Interest on Loan	123.92	150.57	143.04	129.92
Return on Equity	124.48	161.78	167.02	167.02
Interest on Working Capital	12.65	15.51	15.73	15.60
O & M Expenses	78.88	90.12	93.11	96.20
Total	451.65	563.17	568.81	558.65

(₹ in lakh)

Particulars	Asset-III				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	1540.95	1555.93	2095.01	2264.20	2264.20
Additional Capitalisation	14.98	539.08	169.19	0.00	0.00
Closing Gross Block	1555.93	2095.01	2264.20	2264.20	2264.20
Average Gross Block	1548.44	1825.47	2179.61	2264.20	2264.20
Rate of Depreciation	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1393.60	1642.93	1961.65	2037.78	2037.78
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	1393.60	1615.82	1838.16	1799.21	1679.66
Depreciation	27.10	96.38	115.08	119.55	119.55
Interest on Loan					
Gross Normative Loan	1078.67	1089.15	1466.51	1584.94	1584.94
Cumulative Repayment upto Previous Year	0.00	27.10	123.49	238.57	358.12
Net Loan-Opening	1078.67	1062.05	1343.02	1346.37	1226.82
Additions	10.49	377.36	118.43	0.00	0.00
Repayment during the year	27.10	96.38	115.08	119.55	119.55
Net Loan-Closing	1062.05	1343.02	1346.37	1226.82	1107.27
Average Loan	1070.36	1202.54	1344.70	1286.60	1167.05
Weighted Average Rate of Interest on Loan (%)	8.4068	8.4374	8.4932	8.5358	8.5618
Interest	29.83	101.46	114.21	109.82	99.92
Return on Equity					



Particulars	Asset-III				
	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	462.29	466.78	628.50	679.26	679.26
Additions	4.49	161.72	50.76	0.00	0.00
Closing Equity	466.78	628.50	679.26	679.26	679.26
Average Equity	464.53	547.64	653.88	679.26	679.26
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	30.20	107.39	128.23	133.20	133.20
Interest on Working Capital					
Maintenance Spares	4.20	13.08	13.52	13.97	14.43
O & M expenses	2.33	7.27	7.51	7.76	8.02
Receivables	19.78	67.38	76.81	78.20	77.05
Total	26.31	87.74	97.84	99.92	99.50
Interest	3.55	11.84	13.21	13.49	13.43
Annual Transmission Charges					
Depreciation	27.10	96.38	115.08	119.55	119.55
Interest on Loan	29.83	101.46	114.21	109.82	99.92
Return on Equity	30.20	107.39	128.23	133.20	133.20
Interest on Working Capital	3.55	11.84	13.21	13.49	13.43
O & M Expenses	27.99	87.22	90.12	93.11	96.20
Total	118.67	404.30	460.85	469.17	462.31

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.



Licence Fee and RLDC Fees and Charges

57. 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

58. 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

59. 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.

60. This order disposes of Petition No. 409/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	ASSET-I			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIV-Doco	8.84	380.00	0.00	380.00
BOND XXXVII-Doco	9.25	15.00	0.00	15.00
BOND XXXVIII-Doco	9.25	10.00	0.00	10.00
BOND XXXIX- Doco	9.40	10.00	0.00	10.00
SBI (21.3.2012)-doco	10.25	5.00	0.00	5.00
BOND-XL-loan 4	9.30	3.21	0.00	3.21
IFC (IFC - A loan) (31419-00)-doco- 63.93	3.23	6.39	0.00	6.39
IFC (IFC - B loan) (31419-01)-doco- 63.93	2.38	9.59	0.00	9.59
IFC (ICFF loan) (31419-02)-doco- 63.93	3.23	6.39	0.00	6.39
FC - BOND (17.1.2013)- loan 9-61.26	4.10	12.79	0.00	12.79
SBI (2014-15)- addcap for 2014-15 addcap	10.25	0.00	1.77	1.77
SBI (2014-15) -doco	10.25	66.35	0.00	66.35
Bond XLVI- addcap for 2014-15 - addcap	9.30	0.00	12.89	12.89
Total		524.72	14.66	539.38

(₹ in lakh)

Particulars	ASSET-II			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIV-Doco	8.84	515.00	0.00	515.00
BOND XXXVII-Doco	9.25	20.00	0.00	20.00
BOND XXXVIII-Doco	9.25	30.00	0.00	30.00
BOND XXXIX- Doco	9.40	30.00	0.00	30.00
BOND-XL-doco	9.30	100.00	0.00	100.00
BOND-XLIII-doco	7.93	20.00	0.00	20.00
BOND-XLIV-doco	8.70	20.00	0.00	20.00
BOND-XLVI-doco	9.30	13.77	0.00	13.77
Proposed loan 2015-16 (8.40%) - addcap for 2015-16 addcap	8.40	0.00	26.95	26.95
Proposed loan 2015-16 (8.40%) - doco	8.40	714.78	0.00	714.78
Total		1463.55	26.95	1490.50



(₹ in lakh)

Particulars	ASSET-III			
	2014-19			
	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIV-Doco	8.84	915.00	0.00	915.00
BOND XXXVII-Doco	9.25	10.00	0.00	10.00
BOND XXXVIII-Doco	9.25	10.00	0.00	10.00
BOND XXXIX- Doco	9.40	10.00	0.00	10.00
SBI (21.3.2012)-doco	10.25	10.00	0.00	10.00
IFC (IFC - A loan) (31419-00)-doco- 62.72	3.23	62.72	0.00	62.72
IFC (IFC - B loan) (31419-01)-doco- 62.72	2.38	31.36	0.00	31.36
IFC (ICFF loan) (31419-02)-doco- 62.72	3.23	31.36	0.00	31.36
FC - BOND (17.1.2013)- loan 9 - 62.72	4.10	31.36	0.00	31.36
SBI (2014-15)- addcap for 2014-15 addcap	10.25	0.00	2.42	2.42
SBI (2014-15) -doco	10.25	214.55	0.00	214.55
Bond XLVI- addcap for 2014-15 - addcap	9.30	0.00	10.49	10.49
Total		1326.35	12.91	1339.26



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

(₹ in lakh)

Particulars	ASSET-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	524.72	539.38	539.38	539.38	539.38
Cumulative Repayments of Loans upto Previous Year	31.67	31.67	69.38	107.81	142.73
Net Loans Opening	493.05	507.71	470.00	431.57	396.65
Add: Drawl(s) during the year	14.66	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	37.71	38.43	34.92	34.92
Net Closing Loan	507.71	470.00	431.57	396.65	361.73
Average Net Loan	500.38	488.86	450.79	414.11	379.19
Interest on Loan	43.51	42.69	39.62	36.56	33.53
Rate of Interest on Loan (%)	8.6959	8.7322	8.7898	8.8283	8.8428

(₹ in lakh)

Particulars	ASSET-II			
	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1463.55	1490.50	1490.50	1490.50
Cumulative Repayments of Loans upto Previous Year	42.92	87.51	140.43	195.02
Net Loans Opening	1420.63	1402.99	1350.07	1295.48
Add: Drawl(s) during the year	26.95	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	44.59	52.92	54.59	61.26
Net Closing Loan	1402.99	1350.07	1295.48	1234.22
Average Net Loan	1411.81	1376.53	1322.78	1264.85
Interest on Loan	122.28	119.08	114.29	109.14
Rate of Interest on Loan (%)	8.6614	8.6506	8.6401	8.6289

(₹ in lakh)

Particulars	ASSET-III				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1326.35	1339.26	1339.26	1339.26	1339.26
Cumulative Repayments of Loans upto Previous Year	76.25	76.25	169.01	262.68	350.08
Net Loans Opening	1250.10	1263.01	1170.25	1076.58	989.18
Add: Drawl(s) during the year	12.91	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	0.00	92.76	93.67	87.40	87.40



Particulars	ASSET-III				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net Closing Loan	1263.01	1170.25	1076.58	989.18	901.78
Average Net Loan	1256.56	1216.63	1123.42	1032.88	945.48
Interest on Loan	105.64	102.65	95.41	88.16	80.95
Rate of Interest on Loan (%)	8.4068	8.4374	8.4932	8.5358	8.5618

