

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 277/TT/2015**

**Coram:**

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

**Date of Hearing : 29.04.2016  
Date of Order : 30.05.2016**

**In the matter of:**

Determination of transmission tariff for 2014-19 for Asset-I: Extension of both ckt. Of 400 kV D/C (Quad) Biharsharif-Sasaram line to Varanasi bypassing Sasaram & associated bays including 50 MVAR line Reactor in each circuit at Varanasi GIS Sub-station Asset-II: One ckt of 400 kV D/C Sasaram-Allahabad line to be shifted from NR to ER bus at Sasaram Sub-station Asset-III: LILO (Loop in portion) of 765 kV S/C Gaya-Fathepur line & associated bays at Varanasi GIS Sub-station including 240 MVAR non-switchable L/R in Gaya bay under "Northern Region System Strengthening Scheme- XXVIII" under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and 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. Himachal Pradesh State Electricity Board  
Vidyut Bhawan, Kumar House Complex Building II  
Shimla-171 004
2. Punjab State Power Corporation Limited  
Thermal SHED TIA  
Near 22 Phatak, Patiala-147001
3. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6, Panchkula (Haryana) 134 109



4. Power Development Deptt.  
Government of Jammu & Kashmir  
Mini Secretariat, Jammu
  5. Uttar Pradesh Power Corporation Ltd.  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg, Lucknow - 226 001
  6. Delhi Transco Ltd  
Shakti Sadan, Kotla Road,  
New Delhi-110 002
  7. Chandigarh Administration  
Sector -9, Chandigarh.
  8. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road, Dehradun.
  9. Rajasthan Rajya Vidyut Prasaran Nigam Limited  
Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005
  10. Ajmer Vidyut Vitran Nigam Ltd  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
  11. Jaipur Vidyut Vitran Nigam Ltd  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
  12. Jodhpur Vidyut Vitran Nigam Ltd  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
  13. North Central Railway  
Allahabad.
  14. BSES Yamuna Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi.
  15. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place, New Delhi
  16. North Delhi Power Ltd,  
Power Trading & Load Dispatch Group
- 



CENNET Building, Adjacent To 66/11 kV Pitampura-3  
GRID Building, Near PP Jewellers  
Pitampura, New Delhi – 110034

17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg, New Delhi-110002

.....Respondents

The following were present:-

For Petitioner: Shri S. S. Raju, PGCIL  
Shri M. M. Mondal, PGCIL  
Shri Rakesh Prasad, PGCIL  
Shri Pankaj Sharma, PGCIL

For Respondent: None

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for Asset-I: Extension of both ckt. Of 400 kV D/C (Quad) Biharsharif-Sasaram line to Varanasi bypassing Sasaram & associated bays including 50 MVAR line Reactor in each circuit at Varanasi GIS Sub-station Asset-II: One ckt of 400 kV D/C Sasaram-Allahabad line to be shifted from NR to ER bus at Sasaram Sub-station Asset-III: LILO (Loop in portion) of 765 kV S/C Gaya-Fathepur line & associated bays at Varanasi GIS Sub-station including 240 MVAR non-switchable L/R in Gaya bay under "Northern Region System Strengthening Scheme- XXVIII" under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from date of commercial operation to 31.3.2019.



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

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

(a) The administrative approval and expenditure sanction to the transmission project was accorded by the Board of Directors of the petitioner company vide C/CP/NRSS-XXVIII dated 27.9.2012 at an estimated cost of ₹524403 lakh including an IDC of ₹3320 lakh based on August, 2012 price level.

(b) The scope of work covered under System Strengthening in Northern Region for "NRSS-XXVIII " was as follows:-

**Transmission line**

- (i) Extension of one 400 kV DIC (Quard) Biharsharif- Sasaram line to varanasi, bypassing Sasaram.
- (ii) LILO of Gaya-Fatehpur 765 kV S/C line at Varanasi.
- (iii) Sasaram- Allahabad 400 kV line (existing) to be shifted from NR bus to ER bus\*.
- (iv) Sasaram-Sarnath 400 kV circuit (existing) through HVDC back to back\*\*,

**Substations:**

- (i) Extension of Varanasi 765/400 kV GIS (POWERGRID).  
\*Out of two bays being vacated at Sasaram (ER) bus, after diversion of Biharsharif- Sasaram 400 kV D/C (Quard) line to Varanasi, one bay shall be utilized for shifting Sasaram (NR) bus- Allahabad 400 kV line to Sasaram (ER) bus.  
\*\*This arrangement is already in place.



### Reactive Compensation

S. No.	Component	Line Reactor (MVAR) from bus	Line Reactor (MVAR) to bus
1.	Biharsharif- Sasaram 400 kV D/C (Quard) - already under implementation as part of DVC scheme.  <b>After extension to Varanasi</b>  Biharsharif-Sasaram 400 kV D/C (Quard)	50 MVAR (Existing)  50 MVAR (Existing Retained)	50 MVAR (Existing to be shifted)  50 MVAR (new)
2.	Gaya-Fatehpur 765 kV S/C via Sasaram.  After LILO of Gaya-Fatehpur 765 kV S/C at Varanasi  Gaya-Varanasi 765 kV S/C Varanasi-Fatehpur 765 kV S/C	240 MVAR (Existing switchable)  NIL	240 MVAR (new) (Fixed)  330 MVAR (Existing)
3.	Sasaram-Sarnath 400 kV S/C through HVDC back to back- (to be LILOed at Varanasi later)	63 MVAR (Existing retained)	--
4.	Sasaram (ER bus)- Allahabad 400kV S/C	50 MVAR	--

4. Initially, the petitioner had claimed the transmission charges for the following assets based on anticipated COD of the assets as depicted below:-

Assets	SCOD	COD
Asset-I	26.05.2015	31.12.2015 (Anticipated)
Asset-II	26.05.2015	31.12.2015 (Anticipated)
Asset-III	26.05.2015	31.12.2015 (Anticipated)



5. The annual fixed charges for the instant asset were allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 17.12.2015 based on anticipated COD.

6. Subsequently, the petitioner, vide affidavit dated 26.4.2016 and 20.5.2016, has submitted the following details with respect to the COD of the assets covered in the instant petition:-

<b>Assets</b>	<b>SCOD</b>	<b>COD</b>
Asset-I	26.5.2015	1.4.2016 (Actual)
Asset-II	26.5.2015	31.5.2015 (Anticipated)
Asset-III(A)	26.5.2015	1.4.2016 (Actual)
Asset-III(B)	26.5.2015	31.5.2015 (Anticipated)

The petitioner has split the Asset III in two parts i.e. Asset-III(A) and Asset-III(B). Further, COD of the Asset-III(A) coincides with the Asset-I. The petitioner has combined the capital cost of both the assets and submitted the revised tariff forms and Auditor's certificate for the purpose of tariff combining Asset-I and III (A). Similarly, the petitioner has combined Asset-II and III(B) as the anticipated COD of both the assets coincides.

7. In view of the revised circumstances based on actual COD of the assets, we have considered the tariff of combined Asset 1 and III (A) from actual COD to 31.3.2019 and combined Asset-II and III(B) from anticipated COD to 31.3.2019 for the purpose of tariff. However, the tariff allowed for the combined Asset-II and III(B) in this will be treated as withdrawn, if these assets are not commissioned



on or before 16.6.2016 as provided in proviso (ii) to Regulation 7(7) of the 2014 Tariff Regulations as 180 days from the date of grant of AFC allowed under Regulation 7(7) would expire on 16.6.2016.

8. The transmission charges claimed by the petitioner are as under:-

**Combined Asset-I & III (A):**

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
Depreciation	1965.69	2103.27	2143.51
Interest on Loan	2255.37	2235.74	2094.24
Return on Equity	2198.70	2352.10	2397.15
Interest on Working Capital	166.79	173.67	173.03
O&M Expenses	344.33	355.80	367.63
<b>Total</b>	<b>6930.88</b>	<b>7220.58</b>	<b>7175.56</b>

**Combined Asset-II & III (B):**

(₹ in lakh)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	115.30	154.33	154.33
Interest on Loan	127.29	159.42	145.94
Return on Equity	128.27	171.80	171.80
Interest on Working Capital	12.80	16.45	16.31
O&M Expenses	77.20	95.40	98.57
<b>Total</b>	<b>460.86</b>	<b>597.40</b>	<b>586.95</b>

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

**Combined Asset-I & III (A):**

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
O & M Expenses	28.69	29.65	30.64
Maintenance Spares	51.65	53.37	55.14
Receivables	1155.15	1203.43	1195.93
Total	1235.49	1286.45	1281.71
Rate of Interest (%)	13.50	13.50	13.50
<b>Interest</b>	<b>166.79</b>	<b>173.67</b>	<b>173.03</b>



**Combined Asset-II & III (B):**

(₹ in lakh)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
O & M Expenses	7.70	7.95	8.21
Maintenance Spares	13.85	14.31	14.79
Receivables	91.88	99.57	97.83
Total	113.43	121.83	120.83
Rate of Interest (%)	13.50	13.50	13.50
<b>Interest</b>	<b>12.80</b>	<b>16.45</b>	<b>16.31</b>

9. The capital cost claimed by the petitioner, as certified vide Auditor's Certificates dated 19.5.2016 for combined Asset-I and III(A) and combined Asset-II and III(B), along with the estimated additional capital expenditure during 2014-19 tariff period, is as below :

(₹ in lakh)

Asset	FR Appor- tioned approved cost	Capital Cost up to COD	Estimated Additional Capital Expenditure				Total estimated completi- on cost as on 31.3.2019
			2016-17	2017-18	2018-19	Total	
Asset I & III(A)- Actual	48508.85	35360.87	3665.61	1524.17	0.00	5189.78	40550.65
Asset II & III(B)- Anticipated	3932.02	2284.62	621.51	0.00	0.00	621.51	2906.13

10. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 29.4.2016. The Commission directed the petitioner vide the Record of Proceedings in hearing dated





29.4.2016, to submit additional information related to commissioning of assets. The petitioner has filed the reply vide affidavit dated 20.5.2016.

11. Having heard the representatives of the petitioner and respondents, and perused the material on record, we proceed to determine the tariff in accordance with the Tariff Regulations, 2014.

#### **Date of Commercial Operation (COD)**

12. 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:

xxx

xxx”

13. The petitioner vide affidavit dated 26.4.2016 and 20.5.2016 has submitted the following details with respect to the COD of the assets covered in the instant petition:

<b>Assets</b>	<b>SCOD</b>	<b>COD</b>
Asset-I	26.05.2015	1.4.2016 (Actual)
Asset-II	26.05.2015	31.5.2016 (Anticipated)
Asset-III(A)	26.05.2015	1.4.2016 (Actual)
Asset-III(B)	26.05.2015	31.5.2016 (Anticipated)



14. The petitioner has split the Asset III in Asset-III(A) and Asset-III(B) and has submitted the revised tariff forms and auditor`s certificate combining Asset 1 and III (A) and Asset-II and III(B). However, the petitioner has neither submitted any documents depicting the reasons for splitting of Asset-III, nor any discussions held with RPC/RLDC regarding the same. The petitioner is directed to submit the reasons for splitting Asset-III and whether the petitioner has taken the beneficiaries into confidence in this regard, at the time of truing up.

15. The petitioner, vide affidavit dated 26.4.2016 and 12.5.2016 and 20.5.2016, has submitted that the Asset-I and Asset-III (A) were put under commercial operation on 1.4.2016 and Asset II and Asset-III (B) are expected to be put under commercial operation from 31.5.2016. The petitioner has submitted the RLDC trial run certificate in support of claim of commercial operation in respect of Asset-I and Asset-III (A). Accordingly, the commercial operation date considered for the Asset-I and Asset- III (A) is 1.4.2016 and anticipated commercial operation date considered for Asset II and Asset-III(B) is 31.5.2016. The tariff is worked out for the instant assets and the petitioner is directed to submit the RLDC certificates and actual COD for Asset-II and Asset-III (B) as and when they are commissioned.

### **Capital Cost**

16. The petitioner has combined Asset-I and III(A) and Asset-II and III(B) for the purpose of tariff calculation and submitted the combined Auditor`s certificates dated 19.5.2016 for the same respectively and has claimed the capital cost as



mentioned in Para 5 for all the assets. The total capital cost up to 31.3.2019 includes the IDC, IEDC, capitalized spares and estimated additional capital expenditure from COD to 31.3.2019. The capital cost along with estimated additional capital expenditure during the 2014-19 tariff period is reproduced below:

(₹ in lakh)

Asset	FR Apportio ned approved cost	Capital Cost up to COD	Estimated Additional Capital Expenditure				Total estimated completion cost as on 31.3.2019
			2016-17	2017-18	2018-19	Total	
Asset I & III(A)-Actual	48508.85	35360.87	3665.61	1524.17	0.00	5189.78	40550.65
Asset II & III(B)- Anticipated	3932.02	2284.62	621.51	0.00	0.00	621.51	2906.13

17. Regulation 9 (1) and (2) and 10 (1) 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.”



**“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.”

18. The admissible capital cost of the transmission asset as on COD is worked out in the subsequent paragraphs taking into consideration the initial spares and IEDC and IDC amount.

#### **Time over-run**

19. As per the investment approval, the commissioning schedule of the project is 32 months from the date of investment approval. The investment approval was accorded on 26.9.2012 and accordingly, the schedule date of commercial operation works out to 26.5.2015 i.e. 32 months from the investment approval. The actual COD for Combined Asset-I & III(A) is 1.4.2016 and the Combined Asset-II & III(B) is expected to be commissioned by 31.5.2016. Hence, there is time over-run of 311 days in Combined Asset-I & III(A) and estimated time overrun of 371 days in Combined Asset II & III(B) based on anticipated COD.



SI No.	Assets	Scheduled DOCO as per IA	COD	Delay
A	Asset-1: Extension of both ckt. of 400 KV D/C (Quad) Biharsharif-Sasaram line to Varanasi bypassing Sasaram & associated bays including 50 MVAR line Reactor in each circuit at Varanasi GIS S/S	26.05.2015	1.4.2016 (actual)	311 days
B	Asset-II: One ckt of 400 KV D/C Sasaram-Allahabad line to be shifted from NR to ER bus at Sasaram S/S	26.05.2015	31.5.2016 (anticipated)	371 days
C	Asset-III (A): LILO (Loop in portion) of 765 KV S/C Gaya-Fathepur line & Gaya-1 bay at Varanasi GIS S/S Including 240 MVAR non-switchable L/R in Gaya bay	26.05.2015	1.4.2016 (actual)	311 days
D	Asset-III (B): 765 KV Fathepur bay of LILO of 765kV S/c line at Varanasi GIS S/S	26.05.2015	31.5.2016 (anticipated)	371 days

20. The petitioner has submitted following chronological of the events and action taken by the petitioner for forest clearance (UP portion), forest clearance (Bihar Portion), ROW (Bihar) and ROW (Uttar Pradesh), Railway clearance of Mughal Sarai Division (ECR), Varanasi division (NER), Allahabad Division (NCR), PTCC clearance of Uttar Pradesh portion and Bihar portion, defence aviation clearance, Civil aviation clearance, NHAI clearance in NH-2 (Between Tower loc.no. AP12-AP13)in Varanasi-Kolkata section, NH-2 (Between Tower loc.no. AP92-AP13) in Allahabad-Varanasi section, Power Line Clearance of UPPTCL 400/220/132KV lines, BSPTCL 220/132 KV lines, delay in land acquisition of Varanasi sub-station at Chandauli, Roopchandrapur and Thathra village. The above submission of the petitioner has been placed on record by the



petitioner. The petitioner has attached the relevant documents as mentioned above along with the petition.

21. The petitioner vide affidavit dated 25.5.2016 has further submitted that here were ROW issues in Bihar which further delayed the commissioning of Asset-I & III and has submitted the chronology as below:-

<b>ROW in Bihar</b>	
<b>Description</b>	<b>Date</b>
Letter written to SHO Chand Dist.-Kaimur regarding ROW for Stringing work in Gehuan village	14.2.2016
Letter written to SHO Chainpur, Dist. Kaimur regarding ROW for Stringing work in Baheriya village at loc no. 29/0	9.3.2016
Letter writted to DM, Kaimur regarding ROW for Stringing work in Baheriya village Karji & Baheriya	10.3.2016
Order issued by SDM, Bhabhua Dist Kaimur to C.O. Chainpur for resolving ROW issues along with police force and conduct Stringing work smoothly in village Karji, Anchal-Chanpur, Dist-Kaimur	10.3.2016
Letter written to Farmer Sh. Sachidanand Singh, Vill Darauli, Sh. Damodar Singh, Vill- Darauli and Sh. Rajendra Bind, Vill-Karmichark, both sub-division- Bhabhua, Dist. _Kaimur regarding cutting of critical trees falling in line corridor.	20.3.2016
Letter written to SDM, Bhabhua regarding helo in cutting/lopping of critical trees falling in line corridor of Sh. Sachidanand Singh, Vill Darauli & Sh. Rajendra Bind, Vill-Karmichark, sub-division-Bhabhua, Dist. _Kaimur	21.3.2016

22. As regards Asset-II, the petitioner has submitted that the anticipated time over-run of 371 days in commissioning of Asset II is mainly due to delay in commissioning of Asset-I.



23. Further, in regards of delay of Asset III (B), the petitioner has submitted that in addition to reasons of Asset-III(A), tower failure was encountered in March`16 in existing 765kVS/C Gaya-Fatehpur line which delayed charging of Fatehpur bay, when Biharsharif line was shifted from Sasaram to Varanasi, the bays vacated by it were to be utilized for connecting on ckt. of Allahabad-Sasaram line (from NR bus to ER bus). PLCC equipment has been installed at Sasaram. The petitioner has attached the report of CEA regarding tower failure.

24. We have considered the submissions of the petitioner for time-over-run in instant assets. The transmission charges for Combined Asset-I & III(A) has been claimed based on actual COD of 1.4.2016. The petitioner has attributed delay to the Forest Clearance in UP and Bihar portions, ROW issues in Bihar and Uttar Pradesh, Court Cases, Railway Clearances in ECR, NER and NCR regions, PTCC Clearances in Bihar and Uttar Pradesh portions, Defence Aviation clearance, Civil Aviation Clearance, NHAI clearances and Power Line clearances. Further, delay in land acquisition of Varanasi substation at Thathra, Chandaulu and Roopchandrapur villages. The petitioner has submitted the chronological schedule of events and all the respective correspondences to support its claim. We have gone through the correspondences and are of the view that the correspondence for forest clearance of UP portion started from 8.7.2013 and final clearance was given on 17.9.2015, the correspondence for forest clearance of Bihar portion started from 12.7.2013 and final clearance was given on 11.3.2014 and the petitioner has not submitted the letter dated 8.1.2015 depicting final stage-II clearance. The ROW issues in Bihar persisted from

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18.11.2013 till 20.10.2015 and ROW in UP persisted from 5.3.2014 till 16.3.2015. The Court Cases were heard and judgement given on 18.7.2013, 19.2.2015 respectively and third case is still pending, the petitioner is directed to submit the outcome of Court Case at LoC No. 35/1 in Village - Naudihan, in District Court Chandauli. The Railway clearances on the whole were provided on 8.7.2014, 1.8.2014 and 31.7.2014 respectively for ECR, NER and NCR regions. All the other clearance i.e. PTCC clearances, Defence Aviation clearance, Civil aviation clearance, NHAI clearances along with Land Acquisition Delays in Varanasi sub- (which were finally cleared in 12.12.2014 and land compensation disbursed till 8.6.2015) are subsumed within ROW issues and Forest Clearances. Additionally, the petitioner has submitted that the ROW issues in Bihar persisted till 21.3.2016 for which he has submitted the necessary correspondences with SHO and SDM of the district. Hence, keeping in view that the ROW issues and forest clearance were beyond the control of the petitioner and the petitioner took necessary steps and correspondences to cater to the issues, and the time taken for getting all other clearance are subsumed by the time taken to resolve the ROW issues and forest clearance, the period from 8.7.2013 to 21.3.2016 is condoned. Hence, the complete delay of 311 days in commissioning of Asset I and Asset-III(A) is condoned.

25. As regards combined Asset II & III(B), we have considered the submissions of the petitioner for time over-run. The transmission charges for combined Asset II & III (B) have been claimed based on the anticipated COD of 31.5.2016. We are not going into the details of time overrun in case of combined

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Asset II & III(B), as the asset has not yet been commissioned. The merits of reasons for time over-run in combined Asset II & III(B) shall be considered when the actual COD of the asset is achieved. Thus, the time over-run of 371 days is being disallowed and corresponding IDC and IEDC is being adjusted in the capital cost in respect of Asset combined Asset II & III(B).

### **Cost over-run**

26. The petitioner has submitted reasons for cost variation in few elements with respect to the original FR cost. The cost variation is mainly attributed to, open competitive bidding route followed by the petitioner and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services are obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market condition on which petitioner has no control whatsoever. The reasons submitted by the petitioner for cost variation in some of the elements with respect to the FR cost are in order and the commission is convinced of them.

27. There is no cost over-run in case of the instant assets as the projected completion cost is within the apportioned approved cost.

### **Initial Spares**

28. The petitioner has claimed initial spares vide Auditor's certificates dated 19.5.2016 for Combined Asset I & III(A) and Combined Asset II & III(B)



respectively in respect of transmission line and substation based on the estimated cost up to cut-off date of 31.3.2019 excluding IDC, IEDC and civil works.

29. Regulation 13 of the 2014 Tariff Regulations provide for ceiling norms for capitalization of initial spares. In case of GIS Sub-station it is 5.00%, and in transmission line it is 1.00% of the capital cost. Accordingly, the initial spares are allowed as specified in the 2014 Tariff Regulations and it is as under:-

(₹ in lakh)

Particulars	P &M cost up to 31.3.2019 (exc. IDC, IEDC, civil works)	Initial spares claimed	Ceiling limit as per 2014 Regulation	Initial spares worked out	Excess initial spares
<b>Combined Asset I &amp; III(A)</b>					
Transmission Line	28286.19	658.07	1.00%	279.07	379.00
Substation(GIS)	3753.40	102.07	5.00%	192.18	0.00
<b>Combined Asset I &amp; III(A)</b>					
Transmission Line	1011.82	101.27	1.00%	9.20	92.07
Substation	895.26	74.98	6.00%	52.36	22.61

30. The initial spares claimed by the petitioner for instant assets are in excess with respect to the limits prescribed under Regulation 13 of the Tariff Regulation, 2014 and the same have been reduced from the capital cost as on COD.

31. Thus, the capital cost on COD considered for tariff determination for Combined Asset 1 & III(A) and Combined Asset II & III(B) are as below:-



(₹ in lakh)

Particulars	Combined Asset I & III(A): COD 1.4.2016	Combined Asset II & III(B): Ant. COD 31.5.2016
Capital Cost claimed as per Auditor's certificate	35360.87	2284.62
Less: IDC & IEDC disallowed and adjusted on cash basis	0.00	96.73
Less: excess initial Spares	379.00	114.68
<b>Total Capital Cost as on COD</b>	<b>34981.87</b>	<b>2073.19</b>

### **Additional Capital Expenditure**

32. The petitioner has proposed additional capitalization of ₹3665.61 lakh and ₹1524.17 lakh for Combined Asset I & III(A) during 2016-17 and 2017-18 respectively and ₹621.51 lakh for Combined Asset II & III(B) during 2016-17 towards balance and retention payment under Regulation 14(1) of 2014 Tariff Regulations.

33. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines "cut-off" date as under:-

"cut-off date" means 31<sup>st</sup> 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 the year, the cut-off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation".

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer;"

34. The cut-off date of the transmission assets is 31.3.2019. The additional capital expenditure claimed by the petitioner is certified vide Auditor's certificates dated 19.5.2016 for all the assets. Further, the total estimated completion cost is



within the apportioned approved cost as per FR. Thus, the additional capital expenditure is allowed under Regulation 14(1) of 2014 Tariff Regulations, subject to true up on actual basis. The additional capital expenditure approved during 2014-19 is as below:

(₹ in lakh)

Asset	FR Apportioned approved cost	Capital Cost up to COD	Estimated Additional Capital Expenditure				Total estimated completion cost as on 31.3.2019
			2016-17	2017-18	2018-19	Total	
Asset I & III(A)- Actual	48508.85	34981.87	3665.61	1524.17	0.00	5189.78	40171.65
Asset II & III(B)- Anticipated	3932.02	2074.19	621.51	0.00	0.00	621.51	2694.70

### **Debt: Equity Ratio**

35. Regulation 19 (1) 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.”

36. The petitioner has considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2014-19 tariff period. Accordingly, we have considered the same for the purpose of tariff computation for the 2014-19 tariff period is as follows:-



(₹ in lakh)

Funding	As on COD	(%)	Additional capital expenditure during 2014-19	(%)	As on 31.3.2019	(%)
<b>Combined Asset-I &amp; III(A)</b>						
Debt	24487.31	70.00	3632.85	70.00	28120.16	70.00
Equity	10494.56	30.00	1556.93	30.00	12051.50	30.00
<b>Total</b>	<b>34981.87</b>	<b>100.00</b>	<b>5189.78</b>	<b>100.00</b>	<b>40171.65</b>	<b>100.00</b>
<b>Combined Asset-II &amp; III(B)</b>						
Debt	1451.24	70.00	435.06	70.00	1886.29	70.00
Equity	621.96	30.00	186.45	30.00	808.41	30.00
<b>Total</b>	<b>2073.19</b>	<b>100.00</b>	<b>621.51</b>	<b>100.00</b>	<b>2694.70</b>	<b>100.00</b>

### **Interest on Loan ("IOL")**

37. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides 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.”

38. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. Further, the petitioner has prayed to allow it to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period, if any from the respondents. The IOL has been worked out in accordance with Regulation 26 of



the 2014 Tariff Regulations. The petitioner's prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out as follows:-

**Combined Asset I & III (A):**

(₹ in lakh)			
Particulars	2016-17	2017-18	2018-19
Gross loan opening	24487.31	27053.24	28120.16
Cumulative Repayment upto previous year	0.00	1945.68	4028.94
Net Loan-Opening	24487.31	25107.56	24091.22
Additions during the year	2565.93	1066.92	0.00
Repayment during the year	1945.68	2083.26	2123.50
Net Loan-Closing	25107.56	24091.22	21967.72
Average Loan	24797.44	24599.39	23029.47
Rate of Interest (%)	9.0025%	9.0025%	9.0095%
<b>Interest on Loan</b>	<b>2,232.38</b>	<b>2,214.56</b>	<b>2,074.85</b>

**Combined Asset II & III(B):**

(₹ in lakh)			
Particulars	2016-17 (pro-rata)	2017-18	2018-19
Gross loan opening	1451.24	1886.29	1886.29
Cumulative Repayment upto previous year	0.00	105.89	249.02
Net Loan-Opening	1451.24	1780.40	1637.27
Additions during the year	435.06	0.00	0.00
Repayment during the year	105.89	143.13	143.13
Net Loan-Closing	1780.40	1637.27	1494.15
Average Loan	1615.82	1708.84	1565.71
Rate of Interest (%)	8.6554%	8.6554%	8.6484%
<b>Interest on Loan</b>	<b>116.87</b>	<b>147.91</b>	<b>135.41</b>



## **Return on Equity (“ROE”)**

39. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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 and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

xxx

xxx”

**“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 claimed ROE at the rate of 19.705% after grossing up the ROE of 15.5% with MAT rate as per the above said 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 considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate of 21.342% is applicable to the petitioner's company during 2015-16. Accordingly, the MAT rate applicable during 2015-16 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. The ROE allowed for the instant transmission asset is given below:-

**Combined Asset I & III(A):**

(₹ in lakh)

<b>Return on Equity</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	10494.56	11594.24	12051.50
Additions	1,099.68	457.25	0.00
Closing Equity	11594.24	12051.50	12051.50





<b>Return on Equity</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Average Equity	11044.40	11822.87	12051.50
Return on Equity (Base Rate) (%)	15.500%	15.500%	15.500%
MAT Rate for respective year (%)	21.342%	21.342%	21.342%
Rate of Return on Equity (%)	19.705%	19.705%	19.705%
Return on Equity	2,176.35	2,329.75	2,374.80

**Combined Asset II & III(B):**

(₹ in lakh)

<b>Return on Equity</b>	<b>2016-17 (pro-rata)</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	621.96	808.41	808.41
Additions	186.45	0.00	0.00
Closing Equity	808.41	808.41	808.41
Average Equity	715.18	808.41	808.41
Return on Equity (Base Rate) (%)	15.500%	15.500%	15.500%
MAT Rate for respective year (%)	21.342%	21.342%	21.342%
Rate of Return on Equity (%)	19.705%	19.705%	19.705%
Return on Equity	117.76	159.30	159.30

**Depreciation**

43. 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.”

44. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful life as follows:-

“(67) ‘Useful life’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

- (a) Coal/Lignite based thermal generating station 25 years
- (b) Gas/Liquid fuel based thermal generating station 25 years
- (c) AC and DC sub-station 25 years
- (d) Gas Insulated Substation (GIS) 25 years
- (d) Hydro generating station including pumped Storage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years”

45. The weighted average useful life of the asset has been considered as 29 years for Asset I and in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

**Combined Asset I & III(A):**

(₹ in lakh)			
Particulars	2016-17	2017-18	2018-19
Opening Gross block	34981.87	38647.48	40171.65
Additional Capitalization	3,665.61	1524.17	0.00
Closing Gross block	38647.48	40171.65	40171.65
Average Gross block	36814.68	39409.57	40171.65
Rate of Depreciation (%)	5.29%	5.29%	5.29%
Depreciable Value	33133.21	35468.61	36154.49
Elapsed Life of the assets at beginning of the year	34	33	32
Weighted Balance Useful life of the assets	-	1	2
Remaining Depreciable Value	33133.21	33522.93	32125.55
Depreciation during the year			



Particulars	2016-17	2017-18	2018-19
	1,945.68	2,083.26	2,123.50
Depreciation upto previous year	0.00	1945.68	4028.94
Cumulative depreciation	1945.68	4028.94	6152.44

**Combined Asset II & III(B):**

(₹ in lakh)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross block	2073.19	2694.70	2694.70
Additional Capitalization	621.51	0.00	0.00
Closing Gross block	2694.70	2694.70	2694.70
Average Gross block	2383.95	2694.70	2694.70
Rate of Depreciation (%)	5.32%	5.31%	5.31%
Depreciable Value	2145.55	2425.23	2425.23
Elapsed Life of the assets at beginning of the year	30	29	28
Weighted Balance Useful life of the assets	-	1	2
Remaining Depreciable Value	279.68	453.47	310.34
Depreciation during the year	105.89	143.13	143.13
Depreciation upto previous year	0.00	105.89	249.02
Cumulative depreciation	105.89	249.02	392.15

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

46. The petitioner has submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also submitted that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.



47. We have considered the submissions of the petitioner. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.

48. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets are as follows:-

**Combined Asset I & III(A):**

Particulars	2016-17	2017-18	2018-19
<b>400 kV GIS bay</b>			
No.	2	2	2
Norms (₹ lakh/bay)	55.02	56.84	58.73
Total O&M Expenses (₹ lakh)	110.04	113.68	117.46
<b>765 kV bay</b>			
No.	1	1	1
Norms (₹ lakh/bay)	90.12	93.11	96.20
Total O&M Expenses (₹ lakh)	90.12	93.11	96.20
<b>D/C bundled (4 or more sub-con.)</b>			
KMs	125.30	125.30	125.30
Norms (₹ lakh/KM)	1.133	1.171	1.210
Total O&M Expenses (₹ lakh)	141.96	146.73	151.61
<b>S/C (Bundle Conductor- 4 sub-c)</b>			
KMs	3.417	3.417	3.417
Norms (₹ lakh/KM)	0.647	0.669	0.691
Total O&M Expenses (₹ lakh)	2.21	2.29	2.36
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>344.34</b>	<b>355.80</b>	<b>367.63</b>



### **Combined Asset II & III(B):**

<b>Particulars</b>	<b>2016-17 (pro-rata)</b>	<b>2017-18</b>	<b>2018-19</b>
<b>765 kV bay</b>			
No.	1	1	1
Norms (₹ lakh/bay)	90.12	93.11	96.20
Total O&M Expenses (₹ lakh)	90.12	93.11	96.20
<b>D/C Twin/Triple Conductor</b>			
KMs	2.94	2.94	2.94
Norms (₹ lakh/KM)	0.755	0.780	0.806
Total O&M Expenses (₹ lakh)	2.22	2.29	2.37
<b>Total O&amp;M Expenses (₹ lakh)</b>	<b>77.16</b>	<b>95.40</b>	<b>98.57</b>

### **Interest on Working Capital (“IWC”)**

49. 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).

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



**Combined Asset I & III(A):**

(₹ in lakh)

<b>Interest on Working Capital</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	28.68	29.64	30.62
Maintenance Spares	51.65	53.37	55.15
Receivables	1144.00	1192.60	1185.40
Total	1224.34	1275.61	1271.17
Rate of Interest (%)	13.50%	13.50%	13.50%
Interest on Working Capital	165.29	172.21	171.61

**Combined Asset II & III(B):**

(₹ in lakh)

<b>Interest on Working Capital</b>	<b>2016-17 (pro-rata)</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	6.43	7.95	8.21
Maintenance Spares	13.85	14.31	14.79
Receivables	85.69	93.56	91.99
Total	105.97	115.82	114.98
Rate of Interest (%)	13.50%	13.50%	13.50%
Interest on Working Capital	11.95	15.64	15.52

**Annual Transmission Charges**

51. 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:-

**Combined Asset I & III(A):**

(₹ in lakh)

<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Depreciation</b>			
Opening Gross Block	34981.87	38647.48	40171.65
Additional Capitalisation	3665.61	1524.17	0.00
Closing Gross Block	38647.48	40171.65	40171.65
Average Gross Block	36814.68	39409.57	40171.65
Rate of Depreciation	5.29%	5.29%	5.29%
Depreciable Value	33133.21	35468.61	36154.49
Balance Useful life of the asset	34	33	32



<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Elapsed Life	0	1	2
Remaining Depreciable Value	33133.21	33522.93	32125.55
Depreciation	1945.68	2083.26	2123.50
Cumulative depreciation	1945.68	4028.94	6152.44
<b>Interest on Loan</b>			
Gross Normative Loan	24487.31	27053.24	28120.16
Cumulative Repayment upto Previous Year	0.00	1945.68	4028.94
Net Loan-Opening	24487.31	25107.56	24091.22
Additions	2565.93	1066.92	0.00
Repayment during the year	1945.68	2083.26	2123.50
Net Loan-Closing	25107.56	24091.22	21967.72
Average Loan	24797.44	24599.39	23029.47
Weighted Average Rate of Interest on Loan	9.0025%	9.0025%	9.0095%
Interest	2232.38	2214.56	2074.85
<b>Return on Equity</b>			
Opening Equity	10494.56	11594.24	12051.50
Additions	1099.68	457.25	0.00
Closing Equity	11594.24	12051.50	12051.50
Average Equity	11044.40	11822.87	12051.50
Return on Equity (Base Rate )	15.500%	15.500%	15.500%
MAT rate for the respective year	21.342%	21.342%	21.342%
Rate of Return on Equity	19.705%	19.705%	19.705%
Return on Equity	2176.35	2329.75	2374.80
<b>Interest on Working Capital</b>			
O & M expenses	28.68	29.64	30.62
Maintenance Spares	51.65	53.37	55.15
Receivables	1144.00	1192.60	1185.40
Total	1224.34	1275.61	1271.17
Rate of Interest (%)	13.50%	13.50%	13.50%
Interest on working capital	165.29	172.21	171.61
<b>Annual Transmission Charges</b>			
Depreciation	1945.68	2083.26	2123.50
Interest on Loan	2232.38	2214.56	2074.85
Return on Equity	2176.35	2329.75	2374.80





Particulars	2016-17	2017-18	2018-19
Interest on Working Capital	165.29	172.21	171.61
O & M Expenses	344.34	355.80	367.63
<b>Total</b>	<b>6864.03</b>	<b>7155.59</b>	<b>7112.39</b>

**Combined Asset II & III(B):**

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
<b>Depreciation</b>			
Opening Gross Block	2073.19	2694.70	2694.70
Additional Capitalisation	621.51	0.00	0.00
Closing Gross Block	2694.70	2694.70	2694.70
Average Gross Block	2383.95	2694.70	2694.70
Rate of Depreciation	5.32%	5.31%	5.31%
Depreciable Value	2145.55	2425.23	2425.23
Balance Useful life of the asset	30	29	28
Elapsed Life	0	1	2
Remaining Depreciable Value	279.68	453.47	310.34
Depreciation	105.89	143.13	143.13
Cumulative depreciation	105.89	249.02	392.15
<b>Interest on Loan</b>			
Gross Normative Loan	1451.24	1886.29	1886.29
Cumulative Repayment upto Previous Year	0.00	105.89	249.02
Net Loan-Opening	1451.24	1780.40	1637.27
Additions	435.06	0.00	0.00
Repayment during the year	105.89	143.13	143.13
Net Loan-Closing	1780.40	1637.27	1494.15
Average Loan	1615.82	1708.84	1565.71
Weighted Average Rate of Interest on Loan	8.6554%	8.6554%	8.6484%
Interest	116.87	147.91	135.41
<b>Return on Equity</b>			
Opening Equity	621.96	808.41	808.41
Additions	186.45	0.00	0.00
Closing Equity	808.41	808.41	808.41
Average Equity	715.18	808.41	808.41
Return on Equity (Base Rate )	15.500%	15.500%	15.500%
MAT rate for the respective year	21.342%	21.342%	21.342%



<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Rate of Return on Equity	19.705%	19.705%	19.705%
Return on Equity	140.93	159.30	159.30
<b>Interest on Working Capital</b>			
O & M expenses	6.43	7.95	8.21
Maintenance Spares	13.85	14.31	14.79
Receivables	85.69	93.56	91.99
Total	105.97	115.82	114.98
Rate of Interest (%)	13.50%	13.50%	13.50%
Interest on working capital	14.31	15.64	15.52
<b>Annual Transmission Charges</b>			
Depreciation	105.89	143.13	143.13
Interest on Loan	116.87	147.91	135.41
Return on Equity	117.76	159.30	159.30
Interest on Working Capital	11.95	15.64	15.52
O & M Expenses	77.16	95.40	98.57
<b>Total</b>	<b>429.63</b>	<b>561.38</b>	<b>551.93</b>

### **Filing Fee and Publication Expenses**

52. 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**

53. 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**

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

### **Sharing of Transmission Charges**

55. The billing, collection and disbursement of the transmission charges approved for the assets 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.

56. The transmission charges for Combined Asset I & III(A) and Asset II & III(B) has been worked out from anticipated COD submitted by the petitioner. The transmission charges of these assets shall be applicable from the actual date of commissioning of these assets.

57. This order disposes of Petition No. 277/TT/2015.

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

Sd/-  
**(A.S. Bakshi)**  
**Member**



**ANNEXURE-I****Combined Asset I & III(A):****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19**

(in ₹ lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2016	Additions during the tariff period	Total
SBI (21.03.2012)-Doco-	9.55	1000.00	0.00	1000.00
BOND - XLI-DOCO-	8.85	1046.00	0.00	1046.00
BOND - XLII-DOCO-	8.80	580.00	0.00	580.00
BOND - XLIII-DOCO-	7.93	856.00	0.00	856.00
BOND - XLIV-DOCO-	8.70	2086.91	0.00	2086.91
SBI (2014-15)-DOCO-	9.55	5963.00	0.00	5963.00
SBI (2014-15)-DOCO.-	9.55	1000.00	0.00	1000.00
BOND XLVI -DOCO-	9.30	1697.00	0.00	1697.00
Bond XLVII-DOCO-	8.93	6477.61	0.00	6477.61
Bond XLVIII-DOCO-	8.20	237.00	0.00	237.00
BOND XLIX-DOCO-	8.15	265.00	0.00	265.00
BOND L-DOCO-	8.40	827.00	0.00	827.00
BOND LI-DOCO-	8.40	2717.09	0.00	2717.09
<b>Total</b>		<b>24752.61</b>	<b>0.00</b>	<b>24752.61</b>

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

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
Gross Opening Loan	24752.61	24752.61	24752.61
Cumulative Repayments of Loans upto Previous Year	0.00	178.08	427.49
Net Loans Opening	<b>24752.61</b>	<b>24574.53</b>	<b>24325.12</b>
Add: Draw(s) during the Year	0.00	0.00	0.00
Less: Repayments of Loan during the year	178.08	249.41	1484.85
Net Closing Loan	24574.53	24325.12	22840.27



Particulars	2016-17	2017-18	2018-19
Average Net Loan	24663.57	24449.83	23582.70
Rate of Interest on Loan (%)	9.0025%	9.0025%	9.0095%
Interest on Loan	2220.33	2201.10	2124.69

**Combined Asset II & III(B):**

**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19**

(in ₹ lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2016	Additions during the tariff period	Total
BOND - XLIV- DOCO-	8.70	1300.00	0.00	1300.00
BOND XLVI - DOCO-	9.30	50.00	0.00	50.00
BOND LI- DOCO-	8.40	151.52	0.00	151.52
BOND LIII- DOCO-	8.13	97.71	0.00	97.71
<b>Total</b>		<b>1599.23</b>	<b>0.00</b>	<b>1599.23</b>

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

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
Gross Opening Loan	1599.23	1599.23	1599.23
Cumulative Repayments of Loans up to Previous Year	0.00	0.00	0.00
<b>Net Loans Opening</b>	<b>1599.23</b>	<b>1599.23</b>	<b>1599.23</b>
Add: Draw(s) during the Year	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	433.33
<b>Net Closing Loan</b>	<b>1599.23</b>	<b>1599.23</b>	<b>1165.90</b>
Average Net Loan	1599.23	1599.23	1382.57
Rate of Interest on Loan (%)	8.6554%	8.6554%	8.6484%
Interest on Loan	138.42	138.42	119.57

