

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 109/TT/2014

Coram:

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

Date of Hearing : 06.04.2016

Date of Order : 23.05.2016

In the matter of:

Determination of transmission tariff for 2019 for Asset 1:400/220 kV 1X500 MVA Transformer at Navsari Substation, Asset 2: 2 nos. 400kV line bays at 765/400 kV Indore substation , Asset 3: 2 nos. 220 kV line bays at 400/220 kV Pirana substation under "Augmentation of Transformer and Bays in Western Region" for the 2014-19 tariff period 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. Madhya Pradesh Power Trading Company Limited
Shakti Bhawan, Rampur
Jabalpur - 482 008
2. Maharashtra State Electricity Distribution Co. Ltd.
Prakashgad, 4th Floor
Andheri (East), Mumbai - 400 052
3. Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhawan,
Race Course Road
Vadodara - 390 007



4. Electricity Department Govt. of Goa
Vidyut Bhawan, Panaji,
NerMandvi Hotel, Goa - 403 001
5. Electricity Department
Administration of Daman & Diu
Daman - 396 210
6. Electricity Department
Administration of Dadra Nagar Haveli
U.T., Silvassa - 396 230
7. Chhattisgarh State Electricity Board
P.O.Sunder Nagar, Dangania, Raipur
Chhatisgaarh-492013
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road,
Indore-452 008

....Respondents

The following were present:-

For Petitioner: Shri S.S. Raju, PGCIL
 Smti. Seema Gupta,PGCIL
 Shri S.K.Venketesan, PGCIL
 Shri Mohd. Mohsin, PGCIL
 Shri M.M. Mondal, PGCIL

For Respondent: None.

ORDER

1. The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for (i) 400/220 kV 1x500 MVA Transformer at Navsari Substation (referred as "Asset 1"); (ii) 2 nos. 400kV line bays at 765/400 kV Indore substation (referred as "Asset 2"); (iii) 2 nos. 220kV



line bays at 400/220 kV Pirana substation (referred as “Asset 3”) under “Augmentation of Transformer and Bays in Western Region” 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 Western Region.

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

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company, vide the Memorandum No. C/CP/WR-240 dated 4.6.2012 with an estimated cost of ₹6551 lakh including Interest during Construction of ₹227 lakh, at February, 2012 price level. Further, Revised Cost Estimate (RCE) for the project was accorded by Board of Directors of the petitioner company vide letter dated 9.12.2014 for ₹9771 lakh including an IDC of ₹322 lakh (based on February 2014 price level). The total revised approved apportioned cost for the instant assets is ₹7524.33 lakh.

(b) The scope of works under “Augmentation of Transformers and Bays in Western region” is as under:-



Sub-stations

- i) Installation of 400/220 kV 1X315 MVA transformer at Mapusa Substation along with 2 nos 220 kV line bays
- ii) Installation of 400/220kV 1X500 MVA transformer at Navsari Substation
- iii) 2 Nos 400 kV line bays at 765/400kV Indore substation
- iv) 2 Nos 220 kV line bays at 400/220kV Pirana Substation

(c) The petitioner vide its affidavit dated 21.4.2016 has submitted the actual COD of the subject assets. As regards Asset 2, the petitioner has obtained different CODs for Ckt II bay (referred as Asset 2(a)) and Ckt I bay (referred as Asset 2(b)). Therefore it has submitted separate CODs and tariff forms for both Asset 2(a) and Asset 2(b).

(d) The petitioner has revised the tariff forms based on actual COD and claimed the transmission charges vide affidavit dated 21.4.2016 as under:-

Asset 1

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------------|---------------|---------------|---------------|---------------|
| Depreciation | 164.64 | 249.94 | 260.30 | 260.30 | 260.30 |
| Interest on Loan | 155.65 | 223.10 | 214.38 | 194.73 | 173.66 |
| Return on Equity | 183.44 | 278.48 | 290.03 | 290.03 | 290.03 |
| Interest on Working Capital | 15.35 | 22.65 | 23.13 | 22.86 | 22.57 |
| O&M Expenses | 68.04 | 96.86 | 100.08 | 103.39 | 106.83 |
| Total | 587.12 | 871.03 | 887.92 | 871.31 | 853.39 |



Asset 2(a)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------------|---------------|---------------|---------------|---------------|
| Depreciation | 9.99 | 25.29 | 30.35 | 31.94 | 31.94 |
| Interest on Loan | 11.99 | 27.75 | 31.18 | 30.26 | 27.37 |
| Return on Equity | 10.99 | 27.82 | 33.37 | 35.14 | 35.14 |
| Interest on Working Capital | 2.91 | 5.30 | 5.74 | 5.91 | 5.97 |
| O&M Expenses | 38.90 | 62.30 | 64.37 | 66.51 | 68.71 |
| Total | 74.78 | 148.46 | 165.01 | 169.76 | 169.13 |

Asset 2(b)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------------|---------------|---------------|---------------|---------------|
| Depreciation | 8.84 | 25.30 | 30.36 | 31.94 | 31.94 |
| Interest on Loan | 10.64 | 27.86 | 31.28 | 30.36 | 27.47 |
| Return on Equity | 9.72 | 27.69 | 33.21 | 34.97 | 34.97 |
| Interest on Working Capital | 2.57 | 5.30 | 5.74 | 5.91 | 5.97 |
| O&M Expenses | 34.34 | 62.30 | 64.37 | 66.51 | 68.71 |
| Total | 66.11 | 148.45 | 164.96 | 169.69 | 169.06 |

Asset 3

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------------|---------------|---------------|---------------|---------------|
| Depreciation | 0.39 | 18.1 | 23.39 | 23.81 | 23.81 |
| Interest on Loan | 0.48 | 21.26 | 25.79 | 24.11 | 21.9 |
| Return on Equity | 0.43 | 20 | 25.84 | 26.31 | 26.31 |
| Interest on Working Capital | 0.17 | 6.18 | 6.71 | 6.85 | 6.97 |
| O&M Expenses | 2.5 | 87.22 | 90.12 | 93.1 | 96.2 |
| Total | 3.97 | 152.76 | 171.85 | 174.18 | 175.19 |

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



Asset 1

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------------|-----------------------|--------------|--------------|--------------|--------------|
| O & M Expenses | 7.81 | 8.07 | 8.34 | 8.62 | 8.9 |
| Maintenance Spares | 14.06 | 14.53 | 15.01 | 15.51 | 16.02 |
| Receivables | 134.82 | 145.17 | 147.99 | 145.22 | 142.23 |
| Total | 156.69 | 167.77 | 171.34 | 169.35 | 167.15 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest | 15.35 | 22.65 | 23.13 | 22.86 | 22.57 |

Asset 2(a)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------------|-----------------------|------------|-------------|-------------|-------------|
| O & M Expenses | 5.03 | 5.19 | 5.36 | 5.54 | 5.73 |
| Maintenance Spares | 9.05 | 9.35 | 9.66 | 9.98 | 10.31 |
| Receivables | 19.32 | 24.74 | 27.50 | 28.29 | 28.19 |
| Total | 33.4 | 39.28 | 42.52 | 43.81 | 44.23 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest | 2.91 | 5.3 | 5.74 | 5.91 | 5.97 |

Asset 2(b)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------------|-----------------------|------------|-------------|-------------|-------------|
| O & M Expenses | 5.03 | 5.19 | 5.36 | 5.54 | 5.73 |
| Maintenance Spares | 9.05 | 9.35 | 9.66 | 9.98 | 10.31 |
| Receivables | 19.35 | 24.74 | 27.49 | 28.28 | 28.18 |
| Total | 33.43 | 39.28 | 42.51 | 43.8 | 44.22 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest | 2.57 | 5.3 | 5.74 | 5.91 | 5.97 |

Asset 3

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------|-----------------------|---------|---------|---------|---------|
| O & M Expenses | 7.05 | 7.27 | 7.51 | 7.76 | 8.02 |
| Maintenance Spares | 12.68 | 13.08 | 13.52 | 13.97 | 14.43 |



| | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|
| Receivables | 22.37 | 25.46 | 28.64 | 29.03 | 29.2 |
| Total | 42.10 | 45.81 | 49.67 | 50.76 | 51.65 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest | 0.17 | 6.18 | 6.71 | 6.85 | 6.97 |

4. The annual fixed charges for the instant assets was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 23.6.2014 based on actual / anticipated COD. The petitioner has submitted the cash IDC, Auditor Certificates, and revised tariff forms vide affidavit dated 21.4.2016 and the same has been considered for the purpose of computation of tariff.

5. 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. None of the respondents have filed their reply. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Commercial Operation Date (“COD”)

6. The petitioner has claimed the date of the commercial operation of the instant transmission Asset 1 as 10.7.2014, Asset 2(a) as 9.8.2014, Asset 2(b) as 6.9.2014, and Asset 3 as 21.3.2015.



7. The petitioner has claimed the date of the commercial operation of transmission asset as 1.4.2014. 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

(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.

xxx

xxx”

8. The petitioner has sought approval of COD in accordance with Regulation 4 (3) (ii) of the Tariff Regulations 2014. The petitioner has submitted that due to non readiness of downstream system of MPSEB and GETCO, the petitioner was not able to provide services for the reasons not attributable to itself, its suppliers, or contractors. The petitioner has submitted that the case qualifies for consideration of the Commission for approval of date of commercial operation prior to the element of coming into regular service.



9. The Commission has considered the averments made by the petitioner. It is observed that the downstream system of GETCO was not ready, due to which commissioning of Asset 3 has been delayed. The petitioner has not submitted any correspondence regarding downstream system of MPSEB.

10. We have considered the submission and documents placed on record. It is evident that there were issues faced by the petitioner in commissioning of Asset 2(a), 2(b) and 3. The petitioner has supported the justifications by submitting documentary evidences in the form of written communication to the GETCO, reply from GETCO. We are of the view that the petitioner has acted diligently and the commissioning of the subject assets has been prevented due to the reasons not attributable to the petitioner. Accordingly, we hold that the petitioner is entitled for approval of COD as 9.8.2014, 6.9.2014 and 21.3.2015 for Asset 2(a), 2(b) and 3 without commissioning of downstream system under Regulation 4 (3) (ii) of the Tariff Regulations 2014.

11. The petitioner has submitted RLDC certificates in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation the instant assets vide its affidavit dated 21.4.2016. Accordingly, the commercial operation date considered for the instant transmission assets to work out the tariff from respective COD to 31.3.2019 as given hereunder:

| Asset | Actual COD |
|--------------|-------------------|
| Asset 1 | 10.7.2014 |
| Asset 2(a) | 9.8.2014 |
| Asset 2(b) | 6.9.2014 |
| Asset 3 | 21.3.2015 |



Capital Cost

12. The petitioner initially claimed the following capital cost for the instant transmission assets as on anticipated COD in its petition dated 31.5.2014.

- Asset 1: capital cost of ₹2584.54 lakh as on COD (Anticipated)
- Asset 2: capital cost of ₹1221.24 lakh as on COD (Anticipated)
- Asset 3: capital cost of ₹452.34 lakh as on COD (Anticipated)

13. Later, the petitioner has submitted, vide affidavit dated 21.4.2016, the actual COD, revised tariff forms and Auditor`s certificates for the assets. The petitioner has claimed the following costs:

(₹ in lakh)

| Asset | Approved Apportioned Cost as per FR | Approved Apportioned Cost as per RCE | Capital cost as on COD | Additional Capital Expenditure | | | Estimated Completion Cost as on 31.3.2019 |
|--------------|-------------------------------------|--------------------------------------|------------------------|--------------------------------|---------------|--------------|---|
| | | | | 2014-15 | 2015-16 | 2016-17 | |
| Asset 1 | 2584.54 | 5154.27 | 4141.55 | 395.86 | 392.60 | 0.00 | 4930.01 |
| Asset 2(a) | 610.62 | 921.98 | 173.28 | 233.58 | 127.66 | 59.95 | 594.47 |
| Asset 2(b) | 610.62 | 921.98 | 173.28 | 233.58 | 127.66 | 59.95 | 594.47 |
| Asset 3 | 452.34 | 526.1 | 256.35 | 0.00 | 175.07 | 15.80 | 447.22 |
| Total | 4258.12 | 7524.33 | 4744.46 | 863.02 | 822.99 | 135.7 | 6566.17 |

14. Regulation 9 (1), 9(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.”

15. The Capital cost claimed by the petitioner is considered for the purpose of tariff subjected to prudence check as discussed in subsequent paragraph.



IDC and IEDC

16. The petitioner has submitted Auditor certificates vide its affidavit dated 18.4.2016 and has submitted the IDC and IEDC up to COD for the instant transmission assets as given hereunder:

(₹in lakh)

| Asset | IEDC up to COD | IDC up to COD |
|--------------|-----------------------|----------------------|
| Asset 1 | 22.89 | 115.59 |
| Asset 2(a) | 0.00 | 5.26 |
| Asset 2(b) | 0.00 | 5.26 |
| Asset 3 | 0.00 | 7.78 |

17. The petitioner has further submitted the IDC discharged as below:

(₹in lakh)

| Asset | IDC discharged upto COD | Accrual IDC upto COD (discharged during 2014-15) | Accrual IDC upto COD (to be discharged during 2015-16) |
|--------------|--------------------------------|---|---|
| Asset 1 | 29.06 | 86.53 | 0.00 |
| Asset 2(a) | 4.16 | 1.10 | 0.00 |
| Asset 2(b) | 5.21 | 0.05 | 0.00 |
| Asset 3 | 0.00 | 0.00 | 7.78 |

18. For determination of tariff for the 2014-19 tariff period for the instant transmission assets we have considered the capital cost as on COD after adjusting the IDC & IEDC discharged on cash basis.

19. The petitioner has adjusted the IDC discharged on cash basis in the claim made in respect of capital cost on COD. We have considered the submission of



the petitioner and the capital cost of ₹4134.86 lakh, ₹172.18 lakh, ₹169.70 lakh and ₹248.57 lakh as on COD, for Asset- 1, 2(a), 2(b) and 3 has been considered.

Initial Spares

20. The petitioner has claimed initial spares for the instant transmission assets as per the following details:

| (₹in lakh) | | | | | |
|--|--|------------------------|-----------|-----------------------------|-----------------------|
| Particulars (As per Auditor's Certificate) | Capital Cost up to cut-off date (excluding IDC, IEDC and land and cost of civil works) | Initial spares claimed | Norms (%) | Initial spares as per norms | Excess initial spares |
| Asset 1 (Sub-station) | 4791.53 | 287.00 | 6% | 287.52 | 0.00 |
| Asset 2(a) (Sub-station) | 589.21 | 35.00 | 6% | 35.38 | 0.00 |
| Asset 2(b) (Sub-station) | 589.21 | 35.00 | 6% | 35.38 | 0.00 |
| Asset 3 (Sub-station) | 439.44 | 26.00 | 6% | 26.39 | 0.00 |

21. The initial spares claimed by the petitioner for instant assets are within the limits prescribed under Regulation 13 of the Tariff Regulation, 2014 and therefore allowed for capitalisation.

Time over-run

22. As per the investment approval, the commissioning schedule of the project is 24 months from the date of investment approval. The investment approval was



accorded on 4.6.2012 and hence the schedule date of commercial operation was 3.6.2014. There is time over-run in COD of all the subject assets as given below.

| Asset | Scheduled COD | Actual COD | Time over-run |
|--------------|----------------------|-------------------|----------------------|
| Asset 1 | 3.6.2014 | 10.7.2014 | 1 month and 7 days |
| Asset 2(a) | 3.6.2014 | 9.8.2014 | 2 months and 6 days |
| Asset 2(b) | 3.6.2014 | 6.9.2014 | 3 months and 3 days |
| Asset 3 | 3.6.2014 | 21.3.2015 | 9 months and 18 days |

23. The petitioner has submitted the following reasons for delay:

Asset 1

(a) The petitioner has submitted that as per CERC (Terms and Conditions of Tariff) Regulations, 2014 the time period for completion of a 400 kV project is 30 months. Asset 1 has been commissioned in 25 months from IA therefore there is no time overrun as compared to CERC timeline. Hence the petitioner has not submitted any clarification for the delay of 37 days in respect of Asset 1.

Asset 2

(a) The petitioner has submitted that the asset has been put under commercial operation matching with the transmission lines of MPSEB. There was a delay in commissioning of the transmission line of MPSEB. The petitioner has submitted that the delay in commissioning of MPSEB



transmission line was beyond its control therefore the time overrun in commissioning of Asset 2 may be condoned.

Asset 3

- (a) As regards Asset 3, the petitioner has submitted that the construction of the 220 kV GETCO line is being delayed. The petitioner has deferred the award of Asset 3 to match with the construction of GETCO line and the award was finalised in June 2013 i.e. one year after the IA.
- (b) Further, the petitioner has submitted that vide GETCO's letter dated 4.1.2014 it was conveyed that the route alignment of GETCO's line has been finalized and detailed survey is about to take place. Accordingly, the petitioner commenced the commissioning of Asset 3 in January 2014.
- (c) The petitioner has also submitted that due to some problems in their procurement, M/s GETCO could not finalize the award of their transmission line. The petitioner however went on to commission Asset 3 as the bay extension work could not be prolonged by the contracting agency.
- (d) The petitioner has further quoted Regulation 4 (3) (iii) of CERC (Terms and Conditions of Tariff) in support of its claim for approval of COD of Asset 3 in case of non-readiness of the downstream system.



24. The asset-wise delays considered for each of the Asset1, Asset 2(a), 2(b) and Asset 3 are as follows:

Asset 1

(a) As regards Asset I, there is a time over-run of 1 month and 7 days in commissioning from SCOD to actual COD. The petitioner's claim for the 30 months time period for commissioning of Asset 1 based on CERC timelines is not admissible, as the same is meant only for the purpose of additional return on equity. Therefore, the delay of 1 month and 7 days is disallowed. Accordingly, the IDC and IEDC of 1 month and 7 days are deducted as follows:

| IDC/IEDC as per Auditor Certificate | Amount (₹ in lakh) | Period | Disallowed (₹ in lakh) |
|-------------------------------------|--------------------|--------------------|------------------------|
| IDC | 115.59# | 20 months 21 days* | 6.80 |
| IEDC | 22.89# | 25 months 6 days** | 1.11 |
| Total | | | 7.91 |

IDC/IEDC discharged as per Auditor Certificate

* From the date of infusion of IDC (19.10.2012) to the actual COD (10.7.2014)

** From the date of IA (4.6.2012) to the date of actual COD (10.7.2014)

(b) The petitioner has submitted capital cost on COD of ₹4141.55 lakh. The capital cost as on COD considered for tariff calculations is ₹4047.11 lakh, after deducting the total disallowed IDC and IEDC of ₹7.91 lakh and IDC disbursed on cash basis during 2014-15 of ₹86.53 lakh.



Asset 2(a) and (b)

As regards Asset 2, the petitioner has attributed the time overrun in commissioning of Asset 2 on the delay in commissioning of MPSEB line. Therefore, time overrun of 2 months and 6 days in case of Asset 2(a) (Ckt II bay) and time overrun of 3 months and 3 days in case of Asset 2(b) (Ckt I bay) is condoned.

(a) As regards Asset 2(a), the petitioner has submitted capital cost as on COD of ₹173.28 lakh. The capital cost as on COD considered for tariff calculations is ₹172.18 lakh, after adjusting the IDC disbursed on cash basis during 2014-15 after COD of ₹1.10 lakh. As regards Asset 2(b), the petitioner has submitted capital cost as on COD of ₹173.28 lakh. The capital cost as on COD considered for tariff calculations is ₹173.23 lakh, after adjusting the IDC disbursed on cash basis during 2014-15 of ₹0.05 lakh.

Asset 3

(a) There is a time overrun of 9 months and 18 days in commissioning of Asset 3. The petitioner has attributed the delay on the non-readiness of the downstream system. The petitioner has submitted letters dated 4.1.2013, 4.3.2014, 20.1.2014, and 2.2.2016 to substantiate its claim. The delay due to non-readiness of downstream system is beyond the control of



the petitioner, therefore the time overrun of 9 months and 18 days in commissioning of Asset 3 is condoned.

(b) The petitioner has submitted capital cost as on COD of ₹256.35 lakh. The capital cost as on COD considered for tariff calculations is ₹248.57 lakh, after deducting IDC to be discharged on cash basis during 2015-16 after COD of ₹7.78 lakh.

25. The capital cost considered for tariff determination after deducting the disallowed IDC /IEDC and the IDC discharged during additional capitalization for the subject assets are as shown below:

| (₹in lakh) | | | |
|-------------|-------------------------------------|--------------------------------------|------------------------|
| Asset | Approved AppORTIONED Cost as per FR | Approved AppORTIONED Cost as per RCE | Capital cost as on COD |
| Asset 1 | 2584.54 | 5154.27 | 4047.11 |
| Asset 2 (a) | 610.62 | 921.98 | 172.18 |
| Asset 2 (b) | 610.62 | 921.98 | 173.23 |
| Asset 3 | 452.34 | 526.10 | 248.57 |

Additional Capital Expenditure

26. The petitioner has proposed additional capitalization towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations. As regards Asset 1, the petitioner has claimed additional capitalization of ₹395.86 lakh and ₹392.60 lakh for the years 2014-15 and 2015-16 respectively. As regards Asset 2 (a), the petitioner has claimed additional capitalization of



₹233.58 lakh, ₹127.66 lakh, and ₹59.95 lakh for the years 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 2 (b), the petitioner has claimed additional capitalization of ₹233.58 lakh, ₹127.66 lakh, and ₹59.95 lakh for the years 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 3, the petitioner has claimed additional capitalization of ₹175.07 lakh and ₹15.80 lakh for the year 2015-16 and 2016-17 respectively.

27. It is observed that total estimated completion costs of the subject assets including the additional capitalizations are within the approved revised apportioned costs. Accordingly, additional capitalization for all the subject assets is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations as below:

(₹ in lakh)

| Asset | Approved Apportioned Cost as per FR | Approved Apportioned Cost as per RCE | Capital cost as on COD | Additional Capital Expenditure | | | Estimated Completion Cost as on 31.3.2019 |
|-------------|-------------------------------------|--------------------------------------|------------------------|--------------------------------|----------|---------|---|
| | | | | 2014-15 | 2015-16 | 2016-17 | |
| Asset 1 | 2584.54 | 5154.27 | 4047.11 | 395.86 | 392.60 | 0.00 | 4835.57 |
| Asset 2 (a) | 610.62 | 921.98 | 172.18 | 234.68* | 127.66 | 59.95 | 594.47 |
| Asset 2 (b) | 610.62 | 921.98 | 173.23 | 233.63# | 127.66 | 59.95 | 594.47 |
| Asset 3 | 452.34 | 526.10 | 248.57 | 0.00 | 182.85## | 15.80 | 447.22 |

* after addition of IDC of ₹1.10 lakh discharged on 2014-15

after addition of IDC of ₹0.05 lakh discharged on 2014-15

after addition of IDC of ₹7.78 lakh discharged on 2015-16

Debt: Equity Ratio

28. 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.”

29. The petitioner has considered debt:equity ratio as 70:30 as on COD for the subject asset. We have considered debt:equity ratio of 70:30 as on COD and for additional capitalization during 2014-15, 2015-16 and 2016-17 for all the subject assets. The details of the debt:equity as on the date of COD and 31.3.2019 of each subject asset considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹in lakh)

| Asset | | As on COD | | Additional capitalization during 2014-19 | | As on 31.3.2019 | |
|-------------|--------------|----------------|---------------|--|---------------|-----------------|---------------|
| | | Amount | (%) | Amount | (%) | Amount | (%) |
| Asset 1 | Equity | 1214.13 | 30.00 | 236.54 | 30.00 | 1450.67 | 30.00 |
| | Debt | 2832.98 | 70.00 | 551.92 | 70.00 | 3384.90 | 70.00 |
| | Total | 4047.11 | 100.00 | 788.46 | 100.00 | 4835.57 | 100.00 |
| Asset 2 (a) | Equity | 51.65 | 30.00 | 126.69 | 30.00 | 178.34 | 30.00 |
| | Debt | 120.53 | 70.00 | 295.60 | 70.00 | 416.13 | 70.00 |
| | Total | 172.18 | 100.00 | 422.29 | 100.00 | 594.47 | 100.00 |
| Asset 2 (b) | Equity | 51.97 | 30.00 | 126.37 | 30.00 | 178.34 | 30.00 |
| | Debt | 121.26 | 70.00 | 294.87 | 70.00 | 416.13 | 70.00 |
| | Total | 173.23 | 100.00 | 421.24 | 100.00 | 594.47 | 100.00 |
| Asset 3 | Equity | 74.57 | 30.00 | 59.60 | 30.00 | 134.17 | 30.00 |
| | Debt | 174.00 | 70.00 | 139.06 | 70.00 | 313.05 | 70.00 |
| | Total | 248.57 | 100.00 | 198.65 | 100.00 | 447.22 | 100.00 |



Interest on Loan (“IOL”)

30. 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.”

31. 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 petitioner has also prayed that they will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. 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:-

Asset 1

| Particulars | (₹in lakh) | | | | |
|---|-----------------------|---------------|---------------|---------------|---------------|
| | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Gross Normative Loan | 2832.98 | 3110.08 | 3384.90 | 3384.90 | 3384.90 |
| Cumulative Repayment upto Previous Year | 0.00 | 162.73 | 407.68 | 663.00 | 918.32 |
| Net Loan-Opening | 2832.98 | 2947.35 | 2977.22 | 2721.90 | 2466.58 |
| Additions | 277.10 | 274.82 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 162.73 | 244.95 | 255.32 | 255.32 | 255.32 |
| Net Loan-Closing | 2947.35 | 2977.22 | 2721.90 | 2466.58 | 2211.26 |
| Average Loan | 2890.17 | 2962.28 | 2849.56 | 2594.24 | 2338.92 |
| Weighted Average Rate of Interest on Loan (%) | 7.3347% | 7.3806% | 7.3793% | 7.3624% | 7.2824% |
| Interest on Loan | 153.91 | 218.63 | 210.28 | 191.00 | 170.33 |

Asset 2(a)

| Particulars | (₹in lakh) | | | | |
|---|-----------------------|--------------|--------------|--------------|--------------|
| | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Gross Normative Loan | 120.53 | 284.80 | 374.16 | 416.13 | 416.13 |
| Cumulative Repayment upto Previous Year | 0.00 | 9.98 | 35.27 | 65.63 | 97.56 |
| Net Loan-Opening | 120.53 | 274.83 | 338.89 | 350.50 | 318.57 |
| Additions | 164.28 | 89.36 | 41.97 | 0.00 | 0.00 |
| Repayment during the year | 9.98 | 25.30 | 30.35 | 31.94 | 31.94 |
| Net Loan-Closing | 274.83 | 338.89 | 350.50 | 318.57 | 286.63 |
| Average Loan | 197.68 | 306.86 | 344.70 | 334.53 | 302.60 |
| Weighted Average Rate of Interest on Loan (%) | 9.4029% | 9.0444% | 9.0444% | 9.0444% | 9.0444% |
| Interest on Loan | 11.97 | 27.75 | 31.18 | 30.26 | 27.37 |

Asset 2(b)

| Particulars | (₹in lakh) | | | | |
|-------------|-----------------------|---------|---------|---------|---------|
| | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |



| | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|
| Gross Normative Loan | 121.26 | 284.80 | 374.16 | 416.13 | 416.13 |
| Cumulative Repayment upto Previous Year | 0.00 | 8.80 | 34.10 | 64.45 | 96.39 |
| Net Loan-Opening | 121.26 | 276.00 | 340.07 | 351.68 | 319.74 |
| Additions | 163.54 | 89.36 | 41.97 | 0.00 | 0.00 |
| Repayment during the year | 8.80 | 25.30 | 30.35 | 31.94 | 31.94 |
| Net Loan-Closing | 276.00 | 340.07 | 351.68 | 319.74 | 287.80 |
| Average Loan | 198.63 | 308.03 | 345.87 | 335.71 | 303.77 |
| Weighted Average Rate of Interest on Loan (%) | 9.4045% | 9.0445% | 9.0445% | 9.0445% | 9.0445% |
| Interest on Loan | 10.59 | 27.86 | 31.28 | 30.36 | 27.47 |

Asset 3

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|-----------------------|--------------|--------------|--------------|--------------|
| Gross Normative Loan | 174.00 | 174.00 | 301.99 | 313.05 | 313.05 |
| Cumulative Repayment upto Previous Year | 0.00 | 0.40 | 18.51 | 41.89 | 65.70 |
| Net Loan-Opening | 174.00 | 173.60 | 283.49 | 271.16 | 247.36 |
| Additions | 0.00 | 128.00 | 11.06 | 0.00 | 0.00 |
| Repayment during the year | 0.40 | 18.11 | 23.39 | 23.80 | 23.80 |
| Net Loan-Closing | 173.60 | 283.49 | 271.16 | 247.36 | 223.55 |
| Average Loan | 173.80 | 228.54 | 277.32 | 259.26 | 235.45 |
| Weighted Average Rate of Interest on Loan (%) | 9.3000% | 9.3000% | 9.3000% | 9.3000% | 9.3000% |
| Interest on Loan | 0.49 | 21.25 | 25.79 | 24.11 | 21.90 |

Return on Equity ("ROE")

32. 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.”

33. The petitioner has claimed ROE at the rate of 20.961% 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.

34. 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.



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

Asset 1

(₹in lakh)

| | | | | | |
|--------------------------------------|---------|---------|---------|---------|---------|
| Return on Equity | | | | | |
| Opening Equity | 1214.13 | 1332.89 | 1450.67 | 1450.67 | 1450.67 |
| Additions | 118.76 | 117.78 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 1332.89 | 1450.67 | 1450.67 | 1450.67 | 1450.67 |
| Average Equity | 1273.51 | 1391.78 | 1450.67 | 1450.67 | 1450.67 |
| Return on Equity (Base Rate)(%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 20.961% | 20.961% | 20.961% | 20.961% |
| Rate of Return on Equity (%) | 19.610% | 19.610% | 19.610% | 19.610% | 19.610% |
| Return on Equity | 181.32 | 272.93 | 284.48 | 284.48 | 284.48 |

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------------------------|-----------------------|---------|---------|---------|---------|
| Opening Equity | 1214.13 | 1332.89 | 1450.67 | 1450.67 | 1450.67 |
| Additions | 118.76 | 117.78 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 1332.89 | 1450.67 | 1450.67 | 1450.67 | 1450.67 |
| Average Equity | 1273.51 | 1391.78 | 1450.67 | 1450.67 | 1450.67 |
| Return on Equity (Base Rate) (%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 20.961% | 20.961% | 20.961% | 20.961% |
| Rate of Return on Equity (%) | 19.610% | 19.610% | 19.610% | 19.610% | 19.610% |



| | | | | | |
|----------------------------|--------|--------|--------|--------|--------|
| Return on Equity (Pre Tax) | 181.32 | 272.93 | 284.48 | 284.48 | 284.48 |
|----------------------------|--------|--------|--------|--------|--------|

Asset 2 (a)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------------|--------------|--------------|--------------|--------------|
| Opening Equity | 51.65 | 122.06 | 160.36 | 178.34 | 178.34 |
| Additional Capitalization | 70.40 | 38.30 | 17.99 | 0.00 | 0.00 |
| Closing Equity | 122.06 | 160.36 | 178.34 | 178.34 | 178.34 |
| Average Equity | 86.86 | 141.21 | 169.35 | 178.34 | 178.34 |
| Return on Equity (Base Rate) (%) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| Tax rate for the year (%) | 20.961 | 21.342 | 21.342 | 21.342 | 21.342 |
| Rate of Return on Equity (Pre Tax) (%) | 19.610 | 19.705 | 19.705 | 19.705 | 19.705 |
| Return on Equity (Pre Tax) | 10.97 | 27.83 | 33.37 | 35.14 | 35.14 |

Asset 2 (b)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------------------------|-----------------------|--------------|--------------|--------------|--------------|
| Opening Equity | 51.97 | 122.06 | 160.36 | 178.34 | 178.34 |
| Additions | 70.09 | 38.30 | 17.99 | 0.00 | 0.00 |
| Closing Equity | 122.06 | 160.36 | 178.34 | 178.34 | 178.34 |
| Average Equity | 87.01 | 141.21 | 169.35 | 178.34 | 178.34 |
| Return on Equity (Base Rate) (%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 20.961% | 20.961% | 20.961% | 20.961% |
| Rate of Return on Equity (%) | 19.610% | 19.610% | 19.610% | 19.610% | 19.610% |
| Return on Equity (Pre Tax) | 9.68 | 27.69 | 33.21 | 34.97 | 34.97 |

Asset 3

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------|-----------------------|---------|---------|---------|---------|
| Opening Equity | 74.57 | 74.57 | 129.43 | 134.17 | 134.17 |



| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------------|--------------|--------------|--------------|--------------|
| Additional Capitalization | 0.00 | 54.86 | 4.74 | 0.00 | 0.00 |
| Closing Equity | 74.57 | 129.43 | 134.17 | 134.17 | 134.17 |
| Average Equity | 74.57 | 102.00 | 131.80 | 134.17 | 134.17 |
| Return on Equity (Base Rate) (%) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| Tax 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) | 0.44 | 20.00 | 25.85 | 26.31 | 26.31 |

Depreciation

36. 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.”



12. 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”

37. The petitioner has claimed depreciation considering the following:

Asset 1

Capital expenditure of ₹4134.86 lakh as on COD with additional capitalization of ₹402.55 lakh and ₹392.60 lakh for the 2014-19 tariff period.

Asset 2 (a)

Capital expenditure of ₹172.18 lakh as on COD with additional capitalization of ₹234.68 lakh, ₹127.66 lakh and ₹59.95 for the 2014-19 tariff period.

Asset 2 (b)

Capital expenditure of ₹169.70 lakh as on COD with additional capitalization of ₹233.63 lakh, ₹127.66 lakh and ₹59.95 for the 2014-19 tariff period.

Asset 3



Capital expenditure of ₹248.57 lakh as on COD with additional capitalization of ₹182.85 lakh and ₹15.80 lakh for the 2014-19 tariff period.

38. As regards Asset 1, we have computed depreciation considering capital expenditure of ₹4047.11 lakh and additional capitalization of ₹395.86 lakh and ₹392.60 lakh for 2014-15 and 2015-16 respectively. As regards Asset 2 (a), we have computed depreciation considering capital expenditure of ₹172.18 lakh and additional capitalization of ₹234.68 lakh, ₹127.66 lakh and ₹59.95 lakh for 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 2 (b), we have computed depreciation considering capital expenditure of ₹173.23 lakh and additional capitalization of ₹233.63 lakh, ₹127.66 lakh and ₹59.95 lakh for 2014-15, 2015-16 and 2016-17 respectively. As regards Asset 3, we have computed depreciation considering capital expenditure of ₹248.57 lakh and additional capitalization of ₹182.85 lakh and ₹15.80 lakh for 2015-16 and 2016-17 respectively.

39. The weighted average useful life of the asset has been considered as 25 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

Asset 1

| Particulars | (₹in lakh) | | | | |
|---------------------------|-----------------------|---------|---------|---------|---------|
| | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Opening Gross Block | 4047.11 | 4442.97 | 4835.57 | 4835.57 | 4835.57 |
| Additional Capitalisation | 395.86 | 392.60 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 4442.97 | 4835.57 | 4835.57 | 4835.57 | 4835.57 |
| Average Gross Block | 4245.04 | 4639.27 | 4835.57 | 4835.57 | 4835.57 |



| | | | | | |
|--|---------|---------|---------|---------|---------|
| Rate of Depreciation (%) | 5.28% | 5.28% | 5.28% | 5.28% | 5.28% |
| Depreciable Value | 3820.54 | 4175.35 | 4352.02 | 4352.02 | 4352.02 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 3820.54 | 4012.62 | 3944.33 | 3689.01 | 3433.70 |
| Depreciation during the year | 162.73 | 244.95 | 255.32 | 255.32 | 255.32 |
| Depreciation upto previous year | 0.00 | 162.73 | 407.68 | 663.00 | 918.32 |
| Cumulative depreciation (incl. of AAD) | 162.73 | 407.68 | 663.00 | 918.32 | 1173.64 |

Asset 2 (a)

(₹ in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------------|---------|---------|---------|---------|
| Opening Gross Block | 172.18 | 406.86 | 534.52 | 594.47 | 594.47 |
| Additional Capitalisation | 234.68 | 127.66 | 59.95 | 0.00 | 0.00 |
| Closing Gross Block | 406.86 | 534.52 | 594.47 | 594.47 | 594.47 |
| Average Gross Block | 289.52 | 470.69 | 564.50 | 594.47 | 594.47 |
| Rate of Depreciation (%) | 5.35% | 5.37% | 5.38% | 5.37% | 5.37% |
| Depreciable Value | 260.57 | 423.62 | 508.05 | 535.02 | 535.02 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 260.57 | 413.64 | 472.77 | 469.40 | 437.46 |
| Depreciation during the year | 9.98 | 25.30 | 30.35 | 31.94 | 31.94 |
| Depreciation upto previous year | 0.00 | 9.98 | 35.27 | 65.63 | 97.56 |
| Cumulative depreciation (incl. of AAD) | 9.98 | 35.27 | 65.63 | 97.56 | 129.50 |

Asset 2 (b)

(₹ in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------------------------|-----------------------|---------|---------|---------|---------|
| Opening Gross Block | 173.23 | 406.86 | 534.52 | 594.47 | 594.47 |
| Additional Capitalisation | 233.63 | 127.66 | 59.95 | 0.00 | 0.00 |
| Closing Gross Block | 406.86 | 534.52 | 594.47 | 594.47 | 594.47 |
| Average Gross Block | 290.05 | 470.69 | 564.50 | 594.47 | 594.47 |
| Rate of Depreciation (%) | 5.35% | 5.37% | 5.38% | 5.37% | 5.37% |



| | | | | | |
|--|--------|--------|--------|--------|--------|
| Depreciable Value | 261.04 | 423.62 | 508.05 | 535.02 | 535.02 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 261.04 | 414.82 | 473.95 | 470.57 | 438.63 |
| Depreciation during the year | 8.80 | 25.30 | 30.35 | 31.94 | 31.94 |
| Depreciation upto previous year | 0.00 | 8.80 | 34.10 | 64.45 | 96.39 |
| Cumulative depreciation (incl. of AAD) | 8.80 | 34.10 | 64.45 | 96.39 | 128.33 |

Asset 3

(₹ in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------------|---------|---------|---------|---------|
| Opening Gross Block | 248.57 | 248.57 | 431.42 | 447.22 | 447.22 |
| Additional Capitalisation | 0.00 | 182.85 | 15.80 | 0.00 | 0.00 |
| Closing Gross Block | 248.57 | 431.42 | 447.22 | 447.22 | 447.22 |
| Average Gross Block | 248.57 | 340.00 | 439.32 | 447.22 | 447.22 |
| Rate of Depreciation (%) | 5.33% | 5.33% | 5.32% | 5.32% | 5.32% |
| Depreciable Value | 223.71 | 306.00 | 395.39 | 402.50 | 402.50 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 223.71 | 305.60 | 376.88 | 360.60 | 336.80 |
| Depreciation during the year | 0.40 | 18.11 | 23.39 | 23.80 | 23.80 |
| Depreciation upto previous year | 0.00 | 0.40 | 18.51 | 41.89 | 65.70 |
| Cumulative depreciation (incl. of AAD) | 0.40 | 18.51 | 41.89 | 65.70 | 89.50 |

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

40. The instant petition covers the following:

Asset 1

One 400 kV GIS bay and one 220 kV bay

Asset 2(a) (Ckt II bay)

One 400 kV bay



Asset 2(b) (Ckt I bay)

One 400 kV bay

Asset 3

Two 220 kV bays

41. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses for the bays and lines covered in the instant petition:-

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------|---------|---------|---------|---------|---------|
| Norm (₹lakh/bay) | | | | | |
| 400 kV GIS | 51.54 | 53.25 | 55.02 | 56.84 | 58.73 |
| 400 kV | 60.30 | 62.30 | 64.37 | 66.51 | 68.71 |
| 220 kV | 42.21 | 43.61 | 45.06 | 46.55 | 48.10 |

42. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

| Asset | Year | | | | |
|----------------|-----------------------|---------|---------|---------|---------|
| | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Asset 1 | 68.07 | 96.86 | 100.08 | 103.39 | 106.83 |
| Asset 2 (a) | 38.82 | 62.30 | 64.37 | 66.51 | 68.71 |
| Asset 2 (b) | 34.20 | 62.30 | 64.37 | 66.51 | 68.71 |
| Asset 3 | 2.54 | 87.22 | 90.12 | 93.10 | 96.20 |



43. 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.

44. 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.

Interest on Working Capital (“IWC”)

45. 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).

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

Asset 1

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|-----------------------|--------------|--------------|--------------|--------------|
| O & M expenses | 5.67 | 8.07 | 8.34 | 8.61 | 8.90 |
| Maintenance Spares | 10.21 | 14.53 | 15.01 | 15.51 | 16.02 |
| Receivables | 96.87 | 142.61 | 145.49 | 142.79 | 139.87 |
| Total | 112.75 | 165.21 | 168.84 | 166.91 | 164.79 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 15.22 | 22.30 | 22.79 | 22.53 | 22.25 |

Asset 2(a)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|-----------------------|-------------|-------------|-------------|-------------|
| O & M expenses | 3.23 | 5.19 | 5.36 | 5.54 | 5.72 |
| Maintenance Spares | 5.82 | 9.35 | 9.66 | 9.98 | 10.31 |
| Receivables | 12.44 | 24.75 | 27.50 | 28.29 | 28.19 |
| Total | 21.50 | 39.28 | 42.52 | 43.81 | 44.22 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 2.90 | 5.30 | 5.74 | 5.91 | 5.97 |

Asset 2 (b)

(₹in lakh)

| Particulars | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------|-----------------------|---------|---------|---------|---------|
| O & M expenses | 2.85 | 5.19 | 5.36 | 5.54 | 5.72 |
| Maintenance Spares | 5.13 | 9.35 | 9.66 | 9.98 | 10.31 |



| | | | | | |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Receivables | 10.97 | 24.74 | 27.49 | 28.28 | 28.18 |
| Total | 18.95 | 39.28 | 42.51 | 43.80 | 44.21 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 2.56 | 5.30 | 5.74 | 5.91 | 5.97 |

Asset 3

| Particulars | (₹in lakh) | | | | |
|------------------------------------|-----------------------|-------------|-------------|-------------|-------------|
| | 2014-15 (pro-rata) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O & M expenses | 0.21 | 7.27 | 7.51 | 7.76 | 8.01 |
| Maintenance Spares | 0.38 | 13.08 | 13.52 | 13.97 | 14.43 |
| Receivables | 0.67 | 25.46 | 28.64 | 29.03 | 29.20 |
| Total | 1.27 | 45.81 | 49.67 | 50.75 | 51.64 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 0.17 | 6.18 | 6.70 | 6.85 | 6.97 |

Annual Transmission Charges

47. 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:-

Asset 1

| Particulars | (₹in lakh) | | | | |
|----------------------------------|------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | | | | | |
| Opening Gross Block | 4047.11 | 4442.97 | 4835.57 | 4835.57 | 4835.57 |
| Additional Capitalisation | 395.86 | 392.60 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 4442.97 | 4835.57 | 4835.57 | 4835.57 | 4835.57 |
| Average Gross Block | 4245.04 | 4639.27 | 4835.57 | 4835.57 | 4835.57 |
| Rate of Depreciation (%) | 5.28% | 5.28% | 5.28% | 5.28% | 5.28% |
| Depreciable Value | 3820.54 | 4175.35 | 4352.02 | 4352.02 | 4352.02 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 3820.54 | 4012.62 | 3944.33 | 3689.01 | 3433.70 |
| Depreciation during the year | 162.73 | 244.95 | 255.32 | 255.32 | 255.32 |
| Depreciation upto previous year | 0.00 | 162.73 | 407.68 | 663.00 | 918.32 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Cumulative depreciation (incl. of AAD) | 162.73 | 407.68 | 663.00 | 918.32 | 1173.64 |
| | | | | | |
| Interest on Loan | | | | | |
| Gross Normative Loan | 2832.98 | 3110.08 | 3384.90 | 3384.90 | 3384.90 |
| Cumulative Repayment upto Previous Year | 0.00 | 162.73 | 407.68 | 663.00 | 918.32 |
| Net Loan-Opening | 2832.98 | 2947.35 | 2977.22 | 2721.90 | 2466.58 |
| Additions | 277.10 | 274.82 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 162.73 | 244.95 | 255.32 | 255.32 | 255.32 |
| Net Loan-Closing | 2947.35 | 2977.22 | 2721.90 | 2466.58 | 2211.26 |
| Average Loan | 2890.17 | 2962.28 | 2849.56 | 2594.24 | 2338.92 |
| Weighted Average Rate of Interest on Loan (%) | 7.3347% | 7.3806% | 7.3793% | 7.3624% | 7.2824% |
| Interest on Loan | 153.91 | 218.63 | 210.28 | 191.00 | 170.33 |
| | | | | | |
| Return on Equity | | | | | |
| Opening Equity | 1214.13 | 1332.89 | 1450.67 | 1450.67 | 1450.67 |
| Additions | 118.76 | 117.78 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 1332.89 | 1450.67 | 1450.67 | 1450.67 | 1450.67 |
| Average Equity | 1273.51 | 1391.78 | 1450.67 | 1450.67 | 1450.67 |
| Return on Equity (Base Rate)(%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 20.961% | 20.961% | 20.961% | 20.961% |
| Rate of Return on Equity (%) | 19.610% | 19.610% | 19.610% | 19.610% | 19.610% |
| Return on Equity | 181.32 | 272.93 | 284.48 | 284.48 | 284.48 |
| | | | | | |
| Interest on Working Capital | | | | | |
| O & M expenses | 5.67 | 8.07 | 8.34 | 8.61 | 8.90 |
| Maintenance Spares | 10.21 | 14.53 | 15.01 | 15.51 | 16.02 |
| Receivables | 96.87 | 142.61 | 145.49 | 142.79 | 139.87 |
| Total | 112.75 | 165.21 | 168.84 | 166.91 | 164.79 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 15.22 | 22.30 | 22.79 | 22.53 | 22.25 |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | 162.73 | 244.95 | 255.32 | 255.32 | 255.32 |
| Interest on Loan | 153.91 | 218.63 | 210.28 | 191.00 | 170.33 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| Return on Equity | 181.32 | 272.93 | 284.48 | 284.48 | 284.48 |
| Interest on Working Capital | 15.22 | 22.30 | 22.79 | 22.53 | 22.25 |
| O & M Expenses | 68.07 | 96.86 | 100.08 | 103.39 | 106.83 |
| Total | 581.24 | 855.69 | 872.95 | 856.72 | 839.21 |

Asset 2(a)

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Depreciation | | | | | |
| Opening Gross Block | 172.18 | 406.86 | 534.52 | 594.47 | 594.47 |
| Additional Capitalisation | 234.68 | 127.66 | 59.95 | 0.00 | 0.00 |
| Closing Gross Block | 406.86 | 534.52 | 594.47 | 594.47 | 594.47 |
| Average Gross Block | 289.52 | 470.69 | 564.50 | 594.47 | 594.47 |
| Rate of Depreciation (%) | 5.35% | 5.37% | 5.38% | 5.37% | 5.37% |
| Depreciable Value | 260.57 | 423.62 | 508.05 | 535.02 | 535.02 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 260.57 | 413.64 | 472.77 | 469.40 | 437.46 |
| Depreciation during the year | 9.98 | 25.30 | 30.35 | 31.94 | 31.94 |
| Depreciation upto previous year | 0.00 | 9.98 | 35.27 | 65.63 | 97.56 |
| Cumulative depreciation (incl. of AAD) | 9.98 | 35.27 | 65.63 | 97.56 | 129.50 |
| | | | | | |
| Interest on Loan | | | | | |
| Gross Normative Loan | 120.53 | 284.80 | 374.16 | 416.13 | 416.13 |
| Cumulative Repayment upto Previous Year | 0.00 | 9.98 | 35.27 | 65.63 | 97.56 |
| Net Loan-Opening | 120.53 | 274.83 | 338.89 | 350.50 | 318.57 |
| Additions | 164.28 | 89.36 | 41.97 | 0.00 | 0.00 |
| Repayment during the year | 9.98 | 25.30 | 30.35 | 31.94 | 31.94 |
| Net Loan-Closing | 274.83 | 338.89 | 350.50 | 318.57 | 286.63 |
| Average Loan | 197.68 | 306.86 | 344.70 | 334.53 | 302.60 |
| Weighted Average Rate of Interest on Loan (%) | 9.4029% | 9.0444% | 9.0444% | 9.0444% | 9.0444% |
| Interest on Loan | 11.97 | 27.75 | 31.18 | 30.26 | 27.37 |
| | | | | | |
| Return on Equity | | | | | |
| Opening Equity | 51.65 | 122.06 | 160.36 | 178.34 | 178.34 |
| Additions | 70.40 | 38.30 | 17.99 | 0.00 | 0.00 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------------------------|--------------|---------------|---------------|---------------|---------------|
| Closing Equity | 122.06 | 160.36 | 178.34 | 178.34 | 178.34 |
| Average Equity | 86.86 | 141.21 | 169.35 | 178.34 | 178.34 |
| Return on Equity (Base Rate)(%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 21.342% | 21.342% | 21.342% | 21.342% |
| Rate of Return on Equity (%) | 19.610% | 19.705% | 19.705% | 19.705% | 19.705% |
| Return on Equity | 10.97 | 27.83 | 33.37 | 35.14 | 35.14 |
| | | | | | |
| Interest on Working Capital | | | | | |
| O & M expenses | 3.23 | 5.19 | 5.36 | 5.54 | 5.72 |
| Maintenance Spares | 5.82 | 9.35 | 9.66 | 9.98 | 10.31 |
| Receivables | 12.44 | 24.75 | 27.50 | 28.29 | 28.19 |
| Total | 21.50 | 39.28 | 42.52 | 43.81 | 44.22 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 2.90 | 5.30 | 5.74 | 5.91 | 5.97 |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | 9.98 | 25.30 | 30.35 | 31.94 | 31.94 |
| Interest on Loan | 11.97 | 27.75 | 31.18 | 30.26 | 27.37 |
| Return on Equity | 10.97 | 27.83 | 33.37 | 35.14 | 35.14 |
| Interest on Working Capital | 2.90 | 5.30 | 5.74 | 5.91 | 5.97 |
| O & M Expenses | 38.82 | 62.30 | 64.37 | 66.51 | 68.71 |
| Total | 74.64 | 148.48 | 165.01 | 169.76 | 169.13 |

Asset 2 (b)

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|----------------------------------|---------|---------|---------|---------|---------|
| Depreciation | | | | | |
| Opening Gross Block | 173.23 | 406.86 | 534.52 | 594.47 | 594.47 |
| Additional Capitalisation | 233.63 | 127.66 | 59.95 | 0.00 | 0.00 |
| Closing Gross Block | 406.86 | 534.52 | 594.47 | 594.47 | 594.47 |
| Average Gross Block | 290.05 | 470.69 | 564.50 | 594.47 | 594.47 |
| Rate of Depreciation (%) | 5.35% | 5.37% | 5.38% | 5.37% | 5.37% |
| Depreciable Value | 261.04 | 423.62 | 508.05 | 535.02 | 535.02 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 261.04 | 414.82 | 473.95 | 470.57 | 438.63 |
| Depreciation during the year | 8.80 | 25.30 | 30.35 | 31.94 | 31.94 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Depreciation upto previous year | 0.00 | 8.80 | 34.10 | 64.45 | 96.39 |
| Cumulative depreciation (incl. of AAD) | 8.80 | 34.10 | 64.45 | 96.39 | 128.33 |
| | | | | | |
| Interest on Loan | | | | | |
| Gross Normative Loan | 121.26 | 284.80 | 374.16 | 416.13 | 416.13 |
| Cumulative Repayment upto Previous Year | 0.00 | 8.80 | 34.10 | 64.45 | 96.39 |
| Net Loan-Opening | 121.26 | 276.00 | 340.07 | 351.68 | 319.74 |
| Additions | 163.54 | 89.36 | 41.97 | 0.00 | 0.00 |
| Repayment during the year | 8.80 | 25.30 | 30.35 | 31.94 | 31.94 |
| Net Loan-Closing | 276.00 | 340.07 | 351.68 | 319.74 | 287.80 |
| Average Loan | 198.63 | 308.03 | 345.87 | 335.71 | 303.77 |
| Weighted Average Rate of Interest on Loan (%) | 9.4045% | 9.0445% | 9.0445% | 9.0445% | 9.0445% |
| Interest on Loan | 10.59 | 27.86 | 31.28 | 30.36 | 27.47 |
| | | | | | |
| Return on Equity | | | | | |
| Opening Equity | 51.97 | 122.06 | 160.36 | 178.34 | 178.34 |
| Additions | 70.09 | 38.30 | 17.99 | 0.00 | 0.00 |
| Closing Equity | 122.06 | 160.36 | 178.34 | 178.34 | 178.34 |
| Average Equity | 87.01 | 141.21 | 169.35 | 178.34 | 178.34 |
| Return on Equity (Base Rate)(%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 20.961% | 20.961% | 20.961% | 20.961% |
| Rate of Return on Equity (%) | 19.610% | 19.610% | 19.610% | 19.610% | 19.610% |
| Return on Equity | 9.68 | 27.69 | 33.21 | 34.97 | 34.97 |
| | | | | | |
| Interest on Working Capital | | | | | |
| O & M expenses | 2.85 | 5.19 | 5.36 | 5.54 | 5.72 |
| Maintenance Spares | 5.13 | 9.35 | 9.66 | 9.98 | 10.31 |
| Receivables | 10.97 | 24.74 | 27.49 | 28.28 | 28.18 |
| Total | 18.95 | 39.28 | 42.51 | 43.80 | 44.21 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 2.56 | 5.30 | 5.74 | 5.91 | 5.97 |
| | | | | | |
| Annual Transmission Charges | | | | | |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|--------------|---------------|---------------|---------------|---------------|
| Depreciation | 8.80 | 25.30 | 30.35 | 31.94 | 31.94 |
| Interest on Loan | 10.59 | 27.86 | 31.28 | 30.36 | 27.47 |
| Return on Equity | 9.68 | 27.69 | 33.21 | 34.97 | 34.97 |
| Interest on Working Capital | 2.56 | 5.30 | 5.74 | 5.91 | 5.97 |
| O & M Expenses | 34.20 | 62.30 | 64.37 | 66.51 | 68.71 |
| Total | 65.83 | 148.45 | 164.96 | 169.70 | 169.06 |

Asset 3

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Depreciation | | | | | |
| Opening Gross Block | 248.57 | 248.57 | 431.42 | 447.22 | 447.22 |
| Additional Capitalisation | 0.00 | 182.85 | 15.80 | 0.00 | 0.00 |
| Closing Gross Block | 248.57 | 431.42 | 447.22 | 447.22 | 447.22 |
| Average Gross Block | 248.57 | 340.00 | 439.32 | 447.22 | 447.22 |
| Rate of Depreciation (%) | 5.33% | 5.33% | 5.32% | 5.32% | 5.32% |
| Depreciable Value | 223.71 | 306.00 | 395.39 | 402.50 | 402.50 |
| Balance useful life of the asset | 25.00 | 24.00 | 23.00 | 22.00 | 21.00 |
| Elapsed life | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 |
| Remaining Depreciable Value | 223.71 | 305.60 | 376.88 | 360.60 | 336.80 |
| Depreciation during the year | 0.40 | 18.11 | 23.39 | 23.80 | 23.80 |
| Depreciation upto previous year | 0.00 | 0.40 | 18.51 | 41.89 | 65.70 |
| Cumulative depreciation (incl. of AAD) | 0.40 | 18.51 | 41.89 | 65.70 | 89.50 |
| | | | | | |
| Interest on Loan | | | | | |
| Gross Normative Loan | 174.00 | 174.00 | 301.99 | 313.05 | 313.05 |
| Cumulative Repayment upto Previous Year | 0.00 | 0.40 | 18.51 | 41.89 | 65.70 |
| Net Loan-Opening | 174.00 | 173.60 | 283.49 | 271.16 | 247.36 |
| Additions | 0.00 | 128.00 | 11.06 | 0.00 | 0.00 |
| Repayment during the year | 0.40 | 18.11 | 23.39 | 23.80 | 23.80 |
| Net Loan-Closing | 173.60 | 283.49 | 271.16 | 247.36 | 223.55 |
| Average Loan | 173.80 | 228.54 | 277.32 | 259.26 | 235.45 |
| Weighted Average Rate of Interest on Loan (%) | 9.3000% | 9.3000% | 9.3000% | 9.3000% | 9.3000% |
| Interest on Loan | 0.49 | 21.25 | 25.79 | 24.11 | 21.90 |
| | | | | | |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------------------------|-------------|---------------|---------------|---------------|---------------|
| Return on Equity | | | | | |
| Opening Equity | 74.57 | 74.57 | 129.43 | 134.17 | 134.17 |
| Additions | 0.00 | 54.86 | 4.74 | 0.00 | 0.00 |
| Closing Equity | 74.57 | 129.43 | 134.17 | 134.17 | 134.17 |
| Average Equity | 74.57 | 102.00 | 131.80 | 134.17 | 134.17 |
| Return on Equity (Base Rate)(%) | 15.500% | 15.500% | 15.500% | 15.500% | 15.500% |
| MAT rate for the respective year (%) | 20.961% | 20.961% | 20.961% | 20.961% | 20.961% |
| Rate of Return on Equity (%) | 19.610% | 19.610% | 19.610% | 19.610% | 19.610% |
| Return on Equity | 0.44 | 20.00 | 25.85 | 26.31 | 26.31 |
| | | | | | |
| Interest on Working Capital | | | | | |
| O & M expenses | 0.21 | 7.27 | 7.51 | 7.76 | 8.01 |
| Maintenance Spares | 0.38 | 13.08 | 13.52 | 13.97 | 14.43 |
| Receivables | 0.67 | 25.46 | 28.64 | 29.03 | 29.20 |
| Total | 1.27 | 45.81 | 49.67 | 50.75 | 51.64 |
| Rate of Interest | 13.500% | 13.500% | 13.500% | 13.500% | 13.500% |
| Interest on Working Capital | 0.17 | 6.18 | 6.70 | 6.85 | 6.97 |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | 0.40 | 18.11 | 23.39 | 23.80 | 23.80 |
| Interest on Loan | 0.49 | 21.25 | 25.79 | 24.11 | 21.90 |
| Return on Equity | 0.44 | 20.00 | 25.85 | 26.31 | 26.31 |
| Interest on Working Capital | 0.17 | 6.18 | 6.70 | 6.85 | 6.97 |
| O & M Expenses | 2.54 | 87.22 | 90.12 | 93.10 | 96.20 |
| Total | 4.04 | 152.77 | 171.85 | 174.18 | 175.18 |

Filing Fee and Publication Expenses

48. 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

49. 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

50. 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

51. The transmission charges for the instant assets shall be borne by the discoms whose downstream system was not ready, till the commissioning of the downstream system. After the commissioning of downstream system, 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.



52. This order disposes of Petition No. 109/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19****Asset 1**

| Particulars | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total |
|---|--------------------------|--------------------------------|---|----------------|
| SBI (21.03.2012)-DOCO- | 10.25 | 14.94 | 0.00 | 14.94 |
| BOND- XLI-DOCO | 8.85 | 35.00 | 0.00 | 35.00 |
| ADB VI-DOCO-60.21 | 1.76 | 706.32 | 0.00 | 706.32 |
| BOND XLIII- DOCO- | 7.93 | 129.67 | 0.00 | 129.67 |
| BOND XLIV- DOCO- | 8.70 | 622.00 | 0.00 | 622.00 |
| BOND XLV- DOCO- | 9.65 | 795.31 | 0.00 | 795.31 |
| SBI (2014-15)- DOCO- | 10.25 | 140.40 | 0.00 | 140.40 |
| BOND XLVI- DOCO- | 9.30 | 87.55 | 0.00 | 87.55 |
| BOND XLVII- DOCO- | 8.93 | 95.00 | 0.00 | 95.00 |
| BOND XLVIII- ADDCAP FOR 2014-15 ADDCAP-1- | 8.20 | 0.00 | 260.12 | 260.12 |
| BOND XLVIII <ADDCAP> | 8.20 | 0.00 | 60.58 | 60.58 |
| BOND XLVIII -DOCO- | 8.20 | 212.31 | 0.00 | 212.31 |
| BOND- XLIX-ADDCAP FOR 2014-15 ADD CAP -1- | 8.15 | 16.98 | 0.00 | 16.98 |
| Total | | 2838.50 | 337.68 | 3176.18 |

Asset 2 (Ckt II bay)

| Particulars | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total |
|---|--------------------------|--------------------------------|---|---------------|
| SBI (2014-15)- ADDCAP FOR 2014-15 addcap- | 10.25 | 0.00 | 0.77 | 0.77 |
| SBI (2014-15)- doco- | 10.25 | 120.53 | 0.00 | 120.53 |
| BOND XLIX- ADDCAP FOR 2014-15 addcap- | 8.15 | 0.00 | 163.51 | 163.51 |
| Total | | 120.53 | 164.28 | 284.81 |



Asset 2 (Ckt I bay)

| Particulars | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total |
|---|-------------------|-------------------------|------------------------------------|---------------|
| SBI (2014-15)- ADDCAP FOR 2014-15 addcap- | 10.25 | 0.04 | 0.04 | 0.04 |
| SBI (2014-15)- doco- | 10.25 | 121.28 | 0.00 | 121.28 |
| BOND XLIX- ADDCAP FOR 2014-15 addcap- | 8.15 | 0.00 | 163.51 | 163.51 |
| Total | | 121.28 | 163.55 | 284.83 |

Asset 3

| Particulars | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total |
|-----------------|-------------------|-------------------------|------------------------------------|---------------|
| BOND XLVI- DOCO | 9.30 | 174.00 | 0.00 | 174.00 |
| Total | | 174.00 | 0.00 | 174.00 |



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

Asset 1

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Gross Opening Loan | 2838.50 | 3176.18 | 3176.18 | 3176.18 | 3176.18 |
| Cumulative Repayment of loan upto previous year | 0.00 | 0.00 | 0.00 | 4.28 | 97.64 |
| Net Loan Opening | 2838.50 | 3176.18 | 3176.18 | 3171.90 | 3078.54 |
| Additions during the year | 337.68 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 | 4.28 | 93.36 | 301.92 |
| Net Loan Closing | 3176.18 | 3176.18 | 3171.90 | 3078.54 | 2776.62 |
| Average Loan | 3007.34 | 3176.18 | 3174.04 | 3125.22 | 2927.58 |
| Rate of Interest | 7.3347% | 7.3806% | 7.3793% | 7.3624% | 7.2824% |
| Interest | 220.58 | 234.42 | 234.22 | 230.09 | 213.20 |

Asset 2 (Ckt II bay)

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Gross Opening Loan | 120.53 | 284.81 | 284.81 | 284.81 | 284.81 |
| Cumulative Repayment of loan upto previous year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Opening | 120.53 | 284.81 | 284.81 | 284.81 | 284.81 |
| Additions during the year | 164.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Closing | 284.81 | 284.81 | 284.81 | 284.81 | 284.81 |
| Average Loan | 202.67 | 284.81 | 284.81 | 284.81 | 284.81 |
| Rate of Interest | 9.4029% | 9.0444% | 9.0444% | 9.0444% | 9.0444% |
| Interest | 19.06 | 25.76 | 25.76 | 25.76 | 25.76 |



Asset 2 (Ckt I bay)

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------------|---------------|---------------|---------------|---------------|
| Gross Opening Loan | 121.28 | 284.83 | 284.83 | 284.83 | 284.83 |
| Cumulative Repayment of loan upto previous year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Opening | 121.28 | 284.83 | 284.83 | 284.83 | 284.83 |
| Additions during the year | 163.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Closing | 284.83 | 284.83 | 284.83 | 284.83 | 284.83 |
| Average Loan | 203.06 | 284.83 | 284.83 | 284.83 | 284.83 |
| Rate of Interest | 9.4045% | 9.0445% | 9.0445% | 9.0445% | 9.0445% |
| Interest | 19.10 | 25.76 | 25.76 | 25.76 | 25.76 |

Asset 3

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------------|---------------|---------------|---------------|---------------|
| Gross Opening Loan | 174.00 | 174.00 | 174.00 | 174.00 | 174.00 |
| Cumulative Repayment of loan upto previous year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Opening | 174.00 | 174.00 | 174.00 | 174.00 | 174.00 |
| Additions during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Closing | 174.00 | 174.00 | 174.00 | 174.00 | 174.00 |
| Average Loan | 87.00 | 174.00 | 174.00 | 174.00 | 174.00 |
| Rate of Interest | 9.3000% | 9.3000% | 9.3000% | 9.3000% | 9.3000% |
| Interest | 8.09 | 16.18 | 16.18 | 16.18 | 16.18 |

