

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 299/TT/2013**

**Coram:**

**Shri A. K. Singhal, Member  
Shri A. S. Bakshi, Member**

**Date of Hearing : 03.03.2015**

**Date of Order : 24.11.2015**

**In the matter of:**

Approval of transmission tariff form COD to 31.3.2014 for Asset-I 765 kV S/C Raichur-Sholapur line along with bay extensions at Raichur Sub-station with ICT- I & Switchable Line reactor at Raichur and Bays for Raichur Sholapur 765 kV S/C T/L at 765 kV Sholapur Sub-station along with 240 MVAR switchable line Reactor, Asset-II LILO of existing Raichur-Gooty 400 kV 400 kV D/C Quad line at Raichur (new) Sub-station Asset-III 240 MVAR Bus Reactor and associated bays at Sholapur Sub-station Asset-IV 1X1500 MVA ICT-1 and its associated bays at Sholapur Sub-station Asset-V 1X1500 MVA ICT-2 and its associated bays at Sholapur Sub-station elements under Transmission System associated with Krishnapatnam UMPP-Part-B in Southern and Western Region, under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Condition) Regulations, 2009.

**And in the matter of**

Power Grid Corporation of India Limited,  
"Saudamani", Plot No.2,  
Sector-29, Gurgaon -122 001

**.....Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation Ltd. (KPTCL),  
Kaveri Bhawan, Bangalore-560 009.
2. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO),  
Vidyut Soudha,  
Hyderabad-500 082.



3. Kerala State Electricity Board (KSEB),  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695 004.
4. Tamil Nadu Electricity Board (TNEB)  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600 002.
5. Electricity Department  
Government of Goa  
Vidyuti Bhawan, Panji,Goa-403001
6. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605 001.
7. Eastern Power Distribution Company of Andhra Pradesh Ltd. (APEPDCL),  
APEPDCL, P&T Colony,  
Seethmmadhara, Vishakhapatnam,  
Andhra Pradesh.
8. Southern Power Distribution Company of Andhra Pradesh Ltd. (APSPDCL),  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati-517 501.
9. Central Power Distribution Company of Andhra Pradesh Ltd. (APCPDCL),  
Corporate Office, Mint Compound,  
Hyderabad-500 063.
10. Northern Power Distribution Company of Andhra Pradesh Ltd. (APNPDCL),  
Opp. NIT Petrol Pump,  
Chaitanyapuri, Kazipet,  
Warangal-506 004.
11. Bangalore Electricity Supply Company Ltd. (BESCOM),  
Corporate Office, K. R. Circle,  
Bangalore-560 001.



12. Gulbarga Electricity Supply Company Ltd. (GESCOM),  
Station Main Road, Gulbarga.  
Karnataka.
13. Hubli Electricity Supply Company Ltd. (HESCOM),  
Navanagar, PB Road,  
Hubli, Karnataka.
14. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575 001.
15. Chamundeswari Electricity Supply Corporation Ltd. (CESC),  
# 927, L J Avenue, Ground Floor,  
New Kantharaj Urs Road,  
Saraswatipuram,  
Mysore-570 009.
16. Madhya Pradesh Power Management Company Ltd.,  
Shakti Bhawan, Rampur  
Jabalpur-482 008.
17. Maharashtra State Electricity Distribution Company Limited,  
Prakashgad, 4th floor  
Andehri (East), Mumbai-400 052.
18. Gujarat Urja Vikas Nigam Ltd.,  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara-390 007.
19. Electricity Department, Government of Goa,  
Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa-403 001.
20. Electricity Department,  
Administration of Daman and Diu,  
Daman-396210.
21. Electricity Department,  
Administration of Dadra Nagar Haveli,  
U.T. Silvassa-396 230.
22. Chhattisgarh State Electricity Board,



P.O. Sunder Nagar, Dangania, Raipur  
Chhattisgarh-492 013.

23. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,  
3/54, Press Complex, Agra-Bombay Road  
Indore-452 008.

.....**Respondents**

For Petitioner : Shri Jasbir Singh, PGCIL  
Shri Vivek Kumar Singh, PGCIL  
Shri Anshul Garg, PGCIL  
Shri Prashant Sharma, PGCIL  
Shri S.S. Raju, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri S.K. Venkatesan, PGCIL

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Ltd. (PGCIL) for approval of the transmission tariff for Asset-I: 765 kV S/C Raichur-Sholapur line along with bay extensions at Raichur Sub-station with ICT- I and Switchable Line reactor at Raichur and Bays for Raichur Sholapur 765 kV S/C T/L at 765 kV Sholapur Sub-station along with 240 MVAR switchable Line Reactor, Asset-II: LILO of existing Raichur-Gooty 400 kV 400 kV D/C Quad line at Raichur (new) Sub-station, Asset-III: 240 MVAR Bus Reactor and associated bays at Sholapur Sub-station, Asset-IV: 1X1500 MVA ICT-1 and its associated bays at Sholapur Sub-station, Asset-V: 1X1500 MVA ICT-2 and its associated bays at Sholapur Sub-station elements (hereinafter referred to as the "transmission assets") under Transmission System associated with Krishnapatnam UMPP-Part-B



in Southern and Western Region, for the tariff block 2009-14, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "the 2009 Tariff Regulations").

2. The investment approval for the transmission project was accorded by the Board of Directors of the petitioner company, vide C/CP/KUMPP-B, dated 9.2.2012, at an estimated cost of ₹192716 lakh, including IDC of ₹8813 lakh (based on 4<sup>th</sup> Quarter, 2011 price level). As per the investment approval dated 9.2.2012, the transmission asset was scheduled to be commissioned within 32 months from the date of investment approval, i.e. by 1.11.2014, against this the assets covered under the instant petition have been commissioned on 1.2.2014.

3. The scope of work covered under the scheme is as follows:-

#### **Transmission Line**

- (i) Raichur-Sholapur 765 kV S/C line.
- (ii) Sholapur-Pune 765 kV S/C line
- (iii) LILO of Parli-Pune 400 kV D/C and Pune-Aurangabad 400 kV D/C line at Pune (GIS) S/S (including M/C)
- (iv) LILO of existing Raichur-Gooty 400 kV Quad D/C line at Raichur (New) S/S.

#### **Sub Station**

- (i) Establishment of new 765/400 kV S/S at Raichur with 2x1500 MVA ICTs.
- (ii) Establishment of new 765/400 kV S/S at Sholapur with 2x1500 MVA ICTs.



- (iii) Establishment of new 765/400 kV substation at Pune (GIS) with 2x1500 MVA ICTs.

### **Line Reactors**

- (i) 1x240 MVAR switchable line reactors at each end of Raichur –Sholapur 765 kV S/C and Sholapur-Pune 765 kV S/C lines.
- (ii) 4x50 MVAR line reactors at Pune(GIS) substation for LILO of Parli-Pune and Pune Aurangabad 400 kV D/C line at Pune (GIS) substation.

### **Bus Reactor**

- (i) 1x240 MVAR bus reactor each at Raichur-Sholapur & Pune substations.

4. The assets covered in the instant petition have been approved in the 24<sup>th</sup> meeting of the standing committee on power system planning in Southern Region which was held on 17.7.2007.

5. Provisional tariff was approved by the Commission vide its order dated 18.12.2013, subject to adjustment as per Regulation 5 (4) of the 2009 Tariff Regulations.

6. The petitioner initially claimed transmission tariff for the five assets from the respective anticipated COD as per 2009 Tariff Regulations. Later, vide affidavit dated 13.10.2014 submitted that Asset-1 has been split into two assets. Details of the assets together with their respective dates of commercial operation are given overleaf:-



| S. No. | Name of the Asset   | Actual COD | Asset No as per petition | Asset No as per vide affidavit dated 13.10.2014 |
|--------|---|------------|--------------------------|---|
| 1.     | 765 kV S/C Raichur-Sholapur line along with bay extensions at Raichur S/S with ICT- I & Switchable Line reactor at Raichur and Bays for Raichur Sholapur 765 kV S/C T/L at 765 kV Sholapur S/S along with 240 MVAR switchable Line Reactor (hereinafter referred to as <b>Asset-I</b> ) | 1.1.2014   | Asset-I                  | Asset-I   |
| 2.     | 765/400 kV,1500 MVA ICT-2 and 765 kV, 4*80 MVAR bus reactors at 765/400 kV Raichur S/S (hereinafter referred to as <b>Asset-II</b> )  | 1.2.2014   | Asset-I                  | Asset-II  |
| 3.     | LILO of 400 kV Quad Raichur-Gooty D/C T/L along with the associated bay equipment at 765/400 kV Raichur Substation-(hereinafter referred to as <b>Asset-III</b> )   | 1.1.2014   | Asset-II                 | Asset-III                                       |
| 4.     | 765/400 kV Sholapur S/S along with 240 MVAR Bus Reactor and associated bays(hereinafter referred to as <b>Asset-IV</b> )  | 1.1.2014   | Asset-III                | Asset-IV  |
| 5.     | 765/400 kV Sholapur S/S along with 1X1500 MVA ICT-1 and its associated bays (hereinafter referred to as <b>Asset-V</b> )  | 1.1.2014   | Asset-IV                 | Asset-V   |
| 6.     | 765/400 kV Sholapur S/S along with 1X1500 MVA ICT-2 and its associated bays (hereinafter referred to as <b>Asset-VI</b> )   | 1.1.2014   | Asset-V                  | Asset-VI  |

7. This order has been issued after considering the petitioner's affidavits dated 13.10.2015 and 3.8.2015.

8. The petitioner has claimed the following transmission charges for the instant assets:-



(₹ in lakh)

| Particulars                 | As per affidavit dated 3.8.2015 |               |               |
|-----------------------------|---------------------------------|---------------|---------------|
|                             | Asset-I                         | Asset-II      | Asset-III     |
|                             | 2013-14                         | 2013-14       | 2013-14       |
| Depreciation                | 489.44                          | 47.87         | 24.60         |
| Interest on Loan            | 158.68                          | 14.84         | 11.30         |
| Return on equity            | 591.35                          | 55.06         | 28.07         |
| Interest on Working Capital | 36.83                           | 4.89          | 5.06          |
| O & M Expenses              | 165.77                          | 41.46         | 66.99         |
| <b>Total</b>                | <b>1442.07</b>                  | <b>164.12</b> | <b>136.02</b> |

(₹ in lakh)

| Particulars                 | As per affidavit dated 3.8.2015 |               |               |
|-----------------------------|---------------------------------|---------------|---------------|
|                             | Asset-IV                        | Asset-V       | Asset-VI      |
|                             | 2013-14                         | 2013-14       | 2013-14       |
| Depreciation                | 40.11                           | 61.46         | 66.79         |
| Interest on Loan            | 13.82                           | 18.38         | 19.18         |
| Return on equity            | 48.93                           | 77.73         | 79.19         |
| Interest on Working Capital | 3.55                            | 5.67          | 5.84          |
| O & M Expenses              | 22.91                           | 39.28         | 39.28         |
| <b>Total</b>                | <b>129.32</b>                   | <b>202.52</b> | <b>210.28</b> |

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

(₹ in lakh)

| Particulars        | As per affidavit dated 3.8.2015 |               |               |
|--------------------|---------------------------------|---------------|---------------|
|                    | Asset-I                         | Asset-II      | Asset-III     |
|                    | 2013-14                         | 2013-14       | 2013-14       |
| Maintenance Spares | 99.46                           | 37.31         | 40.19         |
| O & M expenses     | 55.26                           | 20.73         | 22.33         |
| Receivables        | 961.38                          | 164.12        | 90.68         |
| <b>Total</b>       | <b>1116.10</b>                  | <b>222.16</b> | <b>153.20</b> |
| Interest           | 36.83                           | 4.89          | 5.06          |
| Rate of Interest   | <b>13.20%</b>                   | 13.20%        | 13.20%        |

(₹ in lakh)

| Particulars        | As per affidavit dated 3.8.2015 |               |               |
|--------------------|---------------------------------|---------------|---------------|
|                    | Asset-IV                        | Asset-V       | Asset-VI      |
|                    | 2013-14                         | 2013-14       | 2013-14       |
| Maintenance Spares | 13.75                           | 23.57         | 23.57         |
| O & M expenses     | 7.64                            | 13.09         | 13.09         |
| Receivables        | 86.21                           | 135.01        | 140.18        |
| <b>Total</b>       | <b>107.60</b>                   | <b>171.67</b> | <b>176.84</b> |
| Interest           | 3.55                            | 5.67          | 5.84          |
| Rate of Interest   | 13.20%                          | 13.20%        | 13.20%        |





10. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. Replies have been filed by M. P. Power Management Company Limited (MPPMCL), Respondent No. 15, vide affidavit dated 2.12.2013 and Maharashtra State Electricity Distribution Company Limited (MSEDCL), Respondent No. 16, vide affidavit dated 9.1.2014. The objections raised by the MPPMCL was already considered by the Commission in its provisional order dated 18.12.2013. The MSEDCL has raised issues like additional capital expenditure, additional RoE, petition filing fee and service tax. The objections raised by the MSEDCL in his reply are addressed in the relevant paragraphs of this order.

11. Having heard the representatives of the petitioner present at the hearing and perused the material on record, we proceed to dispose of the petition.

### **Capital cost**

12. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

**“(1) Capital cost for a project shall include:-**

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9.



Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

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

13. The Commission, vide Record of Proceedings of 17.3.2015, directed the petitioner to submit certain information in respect of un-discharged liabilities and Interest During Construction (IDC). In response, the petitioner, vide affidavit dated 3.8.2015 has submitted Auditor's certificate along with revised tariff forms referring to the directions of the Commission in the RoP of the hearing dated 24.3.2015 in Petition No. 47/TT/2014 wherein PGCIL was directed to submit the Auditor's Certificate as per audited books of accounts up to 31.3.2014 along with the tariff forms as per true up provisions of the 2009 Tariff Regulations in case of all the petitions pertaining to tariff period of 2009-14.

14. The information submitted by the petitioner is not adequate for the purpose of determination of transmission tariff as per the true-up provisions of the 2009 Tariff Regulations. Information submitted in support of IDC computation is also not adequate to determine the amount of interest capitalized in respect of foreign loans. In view of above, we have no option but to proceed with the determination of the



final tariff in the instant petition. The petitioner is hereby directed to submit the following information along with the true-up petition:-

- 1) Details of element wise (i.e. Land, building and civil work, TL and sub-station etc.) and year wise actual expenditure incurred up to 31.3.2014 along with element wise details of undischarged liability as on COD and at the end of each Financial year duly certified by the auditors;
- 2) Year wise and loan wise computation of the IDC in support of ₹408.83 lakh as claimed vide auditor's certificate along with the soft copy in excel format with links; and
- 3) Date of drawl, (b) date of infusion of the loan in the project, (c) interest rate applicable from date of drawl to COD in case of IBRD-V and (d) exchange rate as on date of payment of interest corresponding to foreign loan.

### **Apportioned approved cost**

15. The petitioner in form 6 of the petition, has submitted that the apportioned approved cost for all the assets. However, while submitting the revised tariff forms vide affidavit dated 3.8.2015, the petitioner has not submitted the apportioned approved cost of the assets. Accordingly, apportioned approved cost submitted in the original petition has been considered. The petitioner is directed to submit the apportioned approved cost duly certified by the competent authority at the time of filing petition for truing up.

16. The petitioner, vide affidavit dated 3.8.2015, has submitted the capital cost incurred up to COD and for the financial year 2013-14 as per actual COD for the asset through the Auditor's Certificates dated 27.5.2015 separately for all the assets. Further, as it is not clear from the Auditor's Certificate that it has been prepared on cash basis or accrual basis, it has been presumed that Auditor's Certificate has been submitted on cash basis. Accordingly, details of the capital



cost claimed as on COD(s) and additional capital expenditure incurred or to be incurred is as follows:-

(₹ in lakh)

| Particulars | Apportioned approved Cost | Capital cost as on COD | Additional capital expenditure for 2013-14 | Cost as on 31.3.2014 | Projected additional capital expenditure |         |         | Estimated completion cost |
|-------------|---------------------------|------------------------|--|----------------------|--|---------|---------|---------------------------|
|             |                           |                        |  |                      | 2014-15                                  | 2015-16 | 2016-17 |                           |
| Asset-I     | 56566.00                  | 37998.90               | 1902.96                                    | 39901.86             | 3919.17                                  | 2946.50 | 1358.02 | 48125.55                  |
| Asset-II    |                           | 4989.72                | 900.61                                     | 5890.33              | 1753.86                                  | 736.16  | 0.00    | 8380.35                   |
| Asset-III   | 3468.00                   | 1473.37                | 750.90                                     | 2224.27              | 750.17                                   | 0.00    | 0.00    | 2974.44                   |
| Asset-IV    | <b>4084.45</b>            | 2886.41                | 673.90                                     | 3560.31              | 1903.85                                  | 204.00  | 0.00    | <b>5668.16</b>            |
| Asset-V     | 5968.46                   | 4875.80                | 487.88                                     | 5363.68              | 229.54                                   | 295.94  | 0.00    | 5889.16                   |
| Asset-VI    | 6091.06                   | 4935.02                | 561.54                                     | 5496.56              | 377.54                                   | 112.37  | 0.00    | 5986.47                   |

### **Cost over-run**

17. Total estimated completion cost falls within the apportioned approved cost for all the assets except Asset-IV where total estimated completion cost i.e. ₹5668.16 lakh exceeds the apportioned approved cost i.e. ₹4084.45 lakh. Accordingly, there is cost over-run in case of the Asset-IV. The petitioner vide affidavit dated 13.10.2014 has submitted that the cost over-run in case of Asset-IV is mainly on account of variation of conversion rate of Rupee Vs Euro which increased from ₹71/Euro (considered in FR) to ₹76.8/Euro and higher rates received against competitive bidding. The petitioner has further submitted that there is an increase in cost of around ₹679 lakh during execution of civil works and increase of around ₹861 lakh in cost of structure for switchyard. The cost estimates for civil works and cost of structure for switchyard is prepared on thumb rule basis. The petitioner has further submitted that the, expenditure incurred depends on



actual site conditions which may happen to be lower or higher than the cost estimate. There is an increase in cost around ₹248 lakh in case of switchgear equipments which is mainly due to higher award cost and due to increase in exchange rate.

18. We have considered the submissions of the petitioner in respect of cost over-run and capital cost. The completion cost up to 31.3.2014 falls within the apportioned approved cost for all the assets. Hence, there is no cost over-run during 2009-14 tariff period. The petitioner has submitted capital cost of assets as on COD and projected additional capital expenditure from COD to 31.3.2014, 2014-15, 2015-16 and 2016-17. Since, the 2009 Tariff Regulations are applicable up to 31.3.2014, cost submitted by the petitioner till 31.3.2014 has been considered in the instant petition. The petitioner is directed to file fresh petition as per the 2014 Tariff Regulations, for approval of the additional capital expenditure incurred for the financial years 2014-15, 2015-16 and 2016-17.

19. As per the investment approval 9.2.2012, the assets were scheduled to be commissioned by 1.11.2014. The petitioner vide affidavit dated 13.10.2014 has submitted the actual COD of assets and there is no time over-run. The details of COD of assets are as follows:-



| Sl. No | Assets    | Scheduled COD | Actual COD | Delay    |
|--------|-----------|---------------|------------|----------|
| 1      | Asset I   | 1.11.2014     | 1.1.2014   | No delay |
| 2      | Asset II  |               | 1.2.2014   | No delay |
| 3      | Asset III |               | 1.1.2014   | No delay |
| 4      | Asset IV  |               | 1.1.2014   | No delay |
| 5      | Asset V   |               | 1.1.2014   | No delay |
| 6      | Asset VI  |               | 1.1.2014   | No delay |

### **Treatment of IDC & IEDC**

20. Details of the IDC amount capitalised upto COD as per Auditor's Certificates dated 27.5.2015 is as follows for the transmission assets:-

| (₹ in lakh) |                       |
|-------------|-----------------------|
| Particular  | Amount of IDC Claimed |
| Asset-1     | 900.67                |
| Asset-2     | 119.69                |
| Asset-3     | 37.56                 |
| Asset-4     | 31.02                 |
| Asset-5     | 55.74                 |
| Asset-6     | 56.31                 |

21. The Commission directed the petitioner vide RoP dated 3.3.2015 to submit computation of actual IDC on cash basis. In response, the petitioner vide affidavit dated 3.8.2015 has submitted the IDC computation, however the details submitted by the petitioner are inadequate as the petitioner has not submitted the computation in support of the IDC discharged after COD and computation of IDC on foreign loan. However, for the purpose of tariff the IDC upto COD on cash basis as submitted by the petitioner vide affidavit dated 3.8.2015 has been considered, subject to review of the same on the submission of the adequate information by the petitioner at the time of true up .



22. Detail of the IDC considered as on COD is as follows:-

| (₹ in lakh) |   |
|-------------|---|
| Particular  | Amount of IDC capitalised/allowed up to COD |
| Asset-1     | 637.66                                      |
| Asset-2     | 116.27                                      |
| Asset-3     | 25.26                                       |
| Asset-4     | 15.30                                       |
| Asset-5     | 29.19                                       |
| Asset-6     | 26.87                                       |

23. In respect of IEDC, petitioner submitted that the entire amount of IEDC has been discharged up to COD. Hence, amount capitalized on account of IEDC has been considered for the purpose of tariff determination.

#### **Treatment of initial spares**

24. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost , subject to following ceiling norms:-

|  |       |
|--|-------|
| Transmission line                          | 0.75% |
| Transmission sub-station                   | 2.5%  |
| Series compensation devices & HVDC Station | 3.5%  |

25. Details of the initial spares claimed by the petitioner initially are as follows:-

| (₹ in lakh) |                      |        |                                   |        |
|-------------|----------------------|--------|-----------------------------------|--------|
| Particulars | As per main petition |        | As per affidavit dated 13.10.2014 |        |
|             | TL                   | SS     | TL                                | S/S    |
| Asset-1     | 174.60               | 745.39 | 174.60                            | 745.39 |
| Asset-2     |                      |        | 0.00                              | 0.00   |
| Asset-3     | 0.00                 | 0.00   | 0.00                              | 0.00   |



|         |      |        |      |        |
|---------|------|--------|------|--------|
| Asset-4 | 0.00 | 218.54 | 0.00 | 218.54 |
| Asset-5 | 0.00 | 200.15 | 0.00 | 189.78 |
| Asset-6 | 0.00 | 0.00   | 0.00 | 0.00   |

26. Later, the petitioner vide affidavit dated 3.8.2015 in its Auditor's Certificate dated 27.5.2015 has claimed initial spares amounting to ₹200.15 lakh (sub-station) for Asset-V only. However, the petitioner has not submitted Form -5B "Break up of Project Cost for Transmission System" which could have been helpful in verifying the amount of initial spares and Auditor has not categorically mentioned that the initial spares are nil. Accordingly, initial spares has been considered for Asset-V only. Further, as the cut-off date of the asset falls beyond 2009-14 tariff block, initial spares have been computed on the basis of capital cost up to 31.3.2014. Initial spares so claimed exceed the ceiling limit defined under Regulation 8 of 2009 Tariff Regulation. Accordingly, the initial spares is restricted to 2.5% of the capital cost.

27. Details of the initial spares claimed and allowed for Asset-V is as follows:-

(₹ in lakh)

| Capital cost claimed up to 31.3.2014 | Initial spares claimed | Capital cost up to 31.3.2014 considering IDC on cash basis | proportionate initial spares | Ceiling limit | Initial spares worked out | Excess initial spares claimed |
|--------------------------------------|------------------------|--|------------------------------|---------------|---------------------------|-------------------------------|
| 5363.68                              | 200.15                 | 5337.13  | 199.16                       | 2.50%         | 131.74                    | <b>-68.41</b>                 |

As the capital cost has been considered only up to 31.3.2014 instead of the cut-off date and disallowance of IDC, admissible initial spares will be reviewed at the time of truing-up on the submission of the computation in support of IDC claimed.





Further, initial spares will be reviewed in the next tariff block considering additional capital expenditure up to cut-off date.

28. Details of capital cost as on COD considered for computation of tariff is as follows:-

**Asset-I**

(₹ in lakh)

| Particulars                  | Capital cost as on COD as per Auditor's Certificate dated 27.5.2015 | Admissible capital cost considering adjusting IDC on cash basis |
|------------------------------|---|---|
| Freehold Land                | 887.00  | 887.00  |
| Leasehold Land               | 0.00  | 0.00  |
| Building & Other Civil Works | 2432.80   | 2415.56   |
| Transmission Line            | 22759.69  | 22598.39  |
| Sub-Station Equipments       | 11796.25  | 11712.65  |
| PLCC                         | 122.70  | 121.83  |
| <b>Total</b>                 | <b>37998.44</b>   | <b>37735.43</b>   |

**Asset-II**

(₹ in lakh)

| Particulars                  | Capital cost as on COD as per Auditor's Certificate dated 27.5.2015 | Admissible capital cost considering adjusting IDC on cash basis |
|------------------------------|---|---|
| Freehold Land                | 0.00  | 0.00  |
| Leasehold Land               | 0.00  | 0.00  |
| Building & Other Civil Works | 0.00  | 0.00  |
| Transmission Line            | 0.00  | 0.00  |
| Sub-Station Equipments       | 4989.72   | 4986.30   |
| PLCC                         | 0.00  | 0.00  |
| <b>Total</b>                 | <b>4989.72</b>  | <b>4986.30</b>  |



**Asset-III**

(₹ in lakh)

| Particulars                  | Capital cost as on COD as per Auditor's certificate dated 27.5.2015 | Admissible capital cost considering adjusting IDC on cash basis and time over-run impact, if any |
|------------------------------|---|--|
| Freehold Land                | 0.00  | 0.00   |
| Leasehold Land               | 0.00  | 0.00   |
| Building & Other Civil Works | 0.00  | 0.00   |
| Transmission Line            | 626.76  | 621.53   |
| Sub-Station Equipments       | 780.85  | 774.33   |
| PLCC                         | 65.76   | 65.21  |
| <b>Total</b>                 | <b>1473.37</b>  | <b>1461.07</b>   |

**Asset-IV**

(₹ in lakh)

| Particulars                  | Capital cost as on COD as per Auditor's Certificate dated 27.5.2015 | Admissible capital cost considering adjusting IDC on cash basis |
|------------------------------|---|---|
| Freehold Land                | 0.00  | 0.00  |
| Leasehold Land               | 0.00  | 0.00  |
| Building & Other Civil Works | 445.06  | 442.64  |
| Transmission Line            | 0.00  | 0.00  |
| Sub-Station Equipments       | 2441.35   | 2428.05   |
| PLCC                         | 0.00  | 0.00  |
| <b>Total</b>                 | <b>2886.41</b>  | <b>2870.69</b>  |

**Asset-V**

(₹ in lakh)

| Particulars                  | Capital cost as on COD as per Auditor's Certificate dated 27.5.2015 | Admissible capital cost considering adjusting IDC on cash basis | Admissible capital cost after restricting initial spare as per ceiling limit |
|------------------------------|---|---|--|
| Freehold Land                | 222.19  | 222.19  | 222.19   |
| Leasehold Land               | 0.00  | 0.00  | 0.00   |
| Building & Other Civil Works | 626.13  | 622.56  | 622.56   |
| Transmission Line            | 0.00  | 0.00  | 0.00   |
| Sub-Station Equipments       | 4027.48   | 4004.50   | 3936.10  |
| PLCC                         | 0.00  | 0.00  | 0.00   |
| <b>Total</b>                 | <b>4875.80</b>  | <b>4849.25</b>  | <b>4780.84</b>   |



## Asset-VI

| Particulars                  | (₹ in lakh)   |   |
|------------------------------|---|---|
|                              | Capital cost as on COD as per Auditor's certificate dated 27.5.2015 | Admissible capital cost considering adjusting IDC on cash basis |
| Freehold Land                | 0.00  | 0.00  |
| Leasehold Land               | 0.00  | 0.00  |
| Building & Other Civil Works | 390.81  | 388.48  |
| Transmission Line            | 0.00  | 0.00  |
| Sub-Station Equipments       | 4544.21   | 4517.10   |
| PLCC                         | 0.00  | 0.00  |
| <b>Total</b>                 | <b>4935.02</b>  | <b>4905.58</b>  |

### Projected additional capital expenditure

29. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as under:-

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

30. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31<sup>st</sup> March of the year closing after 2 years of the year of commercial operation of the project, and in case 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 3 years of the year of commercial operation”.



As per the above definition, cut-off date in respect of the transmission assets covered in the instant petition falls in the next tariff block. Detail of the additional capital expenditure claimed from COD to 31.3.2014 for the instant assets is as follows:-

| (₹ in lakh)                  |                |               |               |               |               |               |
|------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|
| Particulars                  | Asset-I        | Asset-II      | Asset-III     | Asset-IV      | Asset-V       | Asset-VI      |
| Freehold Land                | 173.98         | 0.00          | 0.00          | 0.00          | 0.00          | 0.00          |
| Leasehold Land               | 0.00           | 0.00          | 0.00          | 0.00          | 0.00          | 0.00          |
| Building & Other Civil Works | 154.05         | 0.00          | 0.00          | 109.60        | 64.45         | 64.55         |
| Transmission Line            | 602.75         | 0.00          | 497.00        | 0.00          | 0.00          | 0.00          |
| Sub-Station Equipments       | 970.97         | 900.61        | 229.92        | 563.49        | 423.43        | 496.99        |
| PLCC                         | 1.21           | 0.00          | 23.98         | 0.00          | 0.00          | 0.00          |
| <b>Total</b>                 | <b>1902.96</b> | <b>900.61</b> | <b>750.90</b> | <b>673.09</b> | <b>487.88</b> | <b>561.54</b> |

31. MSEDCL has submitted that there are huge variations in capital cost when actual expenditure is compared to original estimates, as specified in form 5B of tariff filing formats.

32. Additional capital expenditure is mainly on account of balance retention payment. Hence, the same has been considered for the purpose of determination of tariff as per Regulation 9(1) of 2009 Tariff Regulations. Further, as mentioned in para no. 21 of Interest During Construction, IDC worked out on cash basis has been considered only upto COD and IDC discharged after COD will be allowed at the time of truing up under relevant regulation subject to submission of relevant information.



33. The total estimated cost allowed from COD to 31.3.2014 and admissible additional capital expenditure considered for, the purpose of tariff computation is summarized as under:-

**Asset-I**

**(₹ in lakh)**

| <b>Particulates</b>          | <b>As on COD</b> | <b>Additional capital expenditure</b> | <b>As on 31.3.2014</b> |
|------------------------------|------------------|---------------------------------------|------------------------|
| Freehold Land                | 887.00           | 173.98                                | 1060.98                |
| Leasehold Land               | 0.00             | 0.00                                  | 0.00                   |
| Building & Other Civil Works | 2415.56          | 154.05                                | 2569.61                |
| Transmission Line            | 22598.39         | 602.75                                | 23201.14               |
| Sub-Station Equipments       | 11712.65         | 970.97                                | 12683.62               |
| PLCC                         | 121.83           | 1.21                                  | 123.04                 |
| <b>Total</b>                 | <b>37735.43</b>  | <b>1902.96</b>                        | <b>39638.39</b>        |

**Asset-II**

**(₹ in lakh)**

| <b>Particulars</b>           | <b>As on COD</b> | <b>Additional capital expenditure</b> | <b>As on 31.3.2014</b> |
|------------------------------|------------------|---------------------------------------|------------------------|
| Freehold Land                | 0.00             | 0.00                                  | 0.00                   |
| Leasehold Land               | 0.00             | 0.00                                  | 0.00                   |
| Building & Other Civil Works | 0.00             | 0.00                                  | 0.00                   |
| Transmission Line            | 0.00             | 0.00                                  | 0.00                   |
| Sub-Station Equipments       | 4986.30          | 900.61                                | 5886.91                |
| PLCC                         | 0.00             | 0.00                                  | 0.00                   |
| <b>Total</b>                 | <b>4986.30</b>   | <b>900.61</b>                         | <b>5886.91</b>         |

**Asset-III**

**(₹ in lakh)**

| <b>Particulars</b>           | <b>As on COD</b> | <b>Additional capital expenditure</b> | <b>As on 31.3.2014</b> |
|------------------------------|------------------|---------------------------------------|------------------------|
| Freehold Land                | 0.00             | 0.00                                  | 0.00                   |
| Leasehold Land               | 0.00             | 0.00                                  | 0.00                   |
| Building & Other Civil Works | 0.00             | 0.00                                  | 0.00                   |
| Transmission Line            | 621.53           | 497.00                                | 1118.53                |
| Sub-Station Equipments       | 774.33           | 229.92                                | 1004.25                |
| PLCC                         | 65.21            | 23.98                                 | 89.19                  |
| <b>Total</b>                 | <b>1461.07</b>   | <b>750.90</b>                         | <b>2211.97</b>         |



#### Asset-IV

(₹ in lakh)

| Particulars                  | As on COD      | Additional capital expenditure | As on 31.3.2014 |
|------------------------------|----------------|--------------------------------|-----------------|
| Freehold Land                | 0.00           | 0.00                           | 0.00            |
| Leasehold Land               | 0.00           | 0.00                           | 0.00            |
| Building & Other Civil Works | 442.64         | 109.60                         | 552.24          |
| Transmission Line            | 0.00           | 0.00                           | 0.00            |
| Sub-Station Equipments       | 2428.05        | 563.49                         | 2991.54         |
| PLCC                         | 0.00           | 0.00                           | 0.00            |
| <b>Total</b>                 | <b>2870.69</b> | <b>673.09</b>                  | <b>3543.78</b>  |

#### Asset-V

(₹ in lakh)

| Particulars                  | As on COD      | Additional capital expenditure | As on 31.3.2014 |
|------------------------------|----------------|--------------------------------|-----------------|
| Freehold Land                | 222.19         | 0.00                           | 222.19          |
| Leasehold Land               | 0.00           | 0.00                           | 0.00            |
| Building & Other Civil Works | 622.56         | 64.45                          | 687.01          |
| Transmission Line            | 0.00           | 0.00                           | 0.00            |
| Sub-Station Equipments       | 3936.10        | 423.43                         | 4359.53         |
| PLCC                         | 0.00           | 0.00                           | 0.00            |
| <b>Total</b>                 | <b>4780.84</b> | <b>487.88</b>                  | <b>5268.72</b>  |

#### Asset-VI

(₹ in lakh)

| Particulars                  | As on COD      | Additional capital expenditure | As on 31.3.2014 |
|------------------------------|----------------|--------------------------------|-----------------|
| Freehold Land                | 0.00           | 0.00                           | 0.00            |
| Leasehold Land               | 0.00           | 0.00                           | 0.00            |
| Building & Other Civil Works | 388.48         | 64.55                          | 453.03          |
| Transmission Line            | 0.00           | 0.00                           | 0.00            |
| Sub-Station Equipments       | 4517.10        | 496.99                         | 5014.09         |
| PLCC                         | 0.00           | 0.00                           | 0.00            |
| <b>Total</b>                 | <b>4905.58</b> | <b>561.54</b>                  | <b>5467.12</b>  |

#### Debt- equity ratio

34. Regulation 12 of the 2009 Tariff Regulations provides as follows:-



“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**Explanation-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

35. Details of debt-equity in respect of the asset as on the date of commercial operation are given hereunder:-

(₹ in lakh)

| Capital cost as on date of commercial operation |                 |               |              |                |               |
|---|-----------------|---------------|--------------|----------------|---------------|
| Asset-I   |                 |               | Asset-IV     |                |               |
| Particulars                                     | Amount          | %             | Particulars  | Amount         | %             |
| Debt  | 26414.80        | 70.00         | Debt         | 2009.48        | 70.00         |
| Equity  | 11320.63        | 30.00         | Equity       | 861.21         | 30.00         |
| <b>Total</b>                                    | <b>37735.43</b> | <b>100.00</b> | <b>Total</b> | <b>2870.69</b> | <b>100.00</b> |
| Asset-II  |                 |               | Asset-V      |                |               |
| Particulars                                     | Amount          | %             | Particulars  | Amount         | %             |
| Debt  | 3490.41         | 70.00         | Debt         | 3346.59        | 70.00         |
| Equity  | 1495.89         | 30.00         | Equity       | 1434.25        | 30.00         |
| <b>Total</b>                                    | <b>4986.30</b>  | <b>100.00</b> | <b>Total</b> | <b>4780.84</b> | <b>100.00</b> |
| Asset-III                                       |                 |               | Asset-VI     |                |               |
| Particulars                                     | Amount          | %             | Particulars  | Amount         | %             |
| Debt  | 1022.75         | 70.00         | Debt         | 3433.91        | 70.00         |
| Equity  | 438.32          | 30.00         | Equity       | 1471.67        | 30.00         |
| <b>Total</b>                                    | <b>1461.07</b>  | <b>100.00</b> | <b>Total</b> | <b>4905.58</b> | <b>100.00</b> |



36. Details of debt-equity for additional capital expenditure considered in computing tariff are given hereunder:-

(₹ in lakh)

| Additional capital expenditure |                |               |              |               |               |
|--------------------------------|----------------|---------------|--------------|---------------|---------------|
| Asset-I                        |                |               | Asset-IV     |               |               |
| Particulars                    | Amount         | %             | Particulars  | Amount        | %             |
| Debt                           | 1332.07        | 70.00         | Debt         | 471.16        | 70.00         |
| Equity                         | 570.89         | 30.00         | Equity       | 201.93        | 30.00         |
| <b>Total</b>                   | <b>1902.96</b> | <b>100.00</b> | <b>Total</b> | <b>673.09</b> | <b>100.00</b> |
| Asset-II                       |                |               | Asset-V      |               |               |
| Particulars                    | Amount         | %             | Particulars  | Amount        | %             |
| Debt                           | 630.43         | 70.00         | Debt         | 341.52        | 70.00         |
| Equity                         | 270.18         | 30.00         | Equity       | 146.36        | 30.00         |
| <b>Total</b>                   | <b>900.61</b>  | <b>100.00</b> | <b>Total</b> | <b>487.88</b> | <b>100.00</b> |
| Asset-III                      |                |               | Asset-VI     |               |               |
| Particulars                    | Amount         | %             | Particulars  | Amount        | %             |
| Debt                           | 525.63         | 70.00         | Debt         | 393.08        | 70.00         |
| Equity                         | 225.27         | 30.00         | Equity       | 168.46        | 30.00         |
| <b>Total</b>                   | <b>750.90</b>  | <b>100.00</b> | <b>Total</b> | <b>561.54</b> | <b>100.00</b> |

37. Detail of debt-equity ratio of asset as on 31.3.2014 is as per details given hereunder:-

(₹ in lakh)

| Capital cost as on 31.3.2014 |                 |               |              |                |               |
|------------------------------|-----------------|---------------|--------------|----------------|---------------|
| Asset-I                      |                 |               | Asset-IV     |                |               |
| Particulars                  | Amount          | %             | Particulars  | Amount         | %             |
| Debt                         | 27746.87        | 70.00         | Debt         | 2480.65        | 70.00         |
| Equity                       | 11891.52        | 30.00         | Equity       | 1063.13        | 30.00         |
| <b>Total</b>                 | <b>39638.39</b> | <b>100.00</b> | <b>Total</b> | <b>3543.78</b> | <b>100.00</b> |
| Asset-II                     |                 |               | Asset-V      |                |               |
| Particulars                  | Amount          | %             | Particulars  | Amount         | %             |
| Debt                         | 4120.84         | 70.00         | Debt         | 3688.11        | 70.00         |
| Equity                       | 1766.07         | 30.00         | Equity       | 1580.62        | 30.00         |
| <b>Total</b>                 | <b>5886.91</b>  | <b>100.00</b> | <b>Total</b> | <b>5268.72</b> | <b>100.00</b> |
| Asset-III                    |                 |               | Asset-VI     |                |               |
| Particulars                  | Amount          | %             | Particulars  | Amount         | %             |
| Debt                         | 1548.38         | 70.00         | Debt         | 3826.98        | 70.00         |
| Equity                       | 663.59          | 30.00         | Equity       | 1640.14        | 30.00         |
| <b>Total</b>                 | <b>2211.97</b>  | <b>100.00</b> | <b>Total</b> | <b>5467.12</b> | <b>100.00</b> |





## Return on equity

38. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

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

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

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

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations”.

39. The petitioner has claimed the return on equity as per Regulation 15 of the 2009 Tariff Regulations. The petitioner has also claimed additional return on equity



@ 0.5% under the first proviso to for commissioning the instant asset within the timeline specified in the Appendix-II of the 2009 Tariff Regulations. The timeline specified in the said Appendix for completion of instant assets is 32 months and against this the instant asset was commissioned within 24 months from the date of investment approval.

40. MSEDCL has submitted that additional RoE may be allowed by the Commission only after a prudent check. We have considered the submissions of the petitioner and the respondent. We are of the considered view that for grant of additional return on equity under first proviso to Regulation 15(2) read with Appendix II of 2009 Tariff Regulations, all the elements of the transmission systems need to be completed within the time schedule specified in Appendix II of the said Regulations. This view has also been upheld by the Appellate Tribunal of Electricity in its judgment dated 10.5.2012 in Appeal No. 155/2011. Additional RoE of 0.5% is only permissible if all the assets in the project were completed within the stipulated time line mentioned in the Appendix-II of the 2009 Tariff Regulations. Hence, additional RoE of 0.5% is not permissible as all the assets mentioned in the project have not been commissioned within the specified time mentioned in the Appendix-II of the 2009 Tariff Regulations.

41. Based on the above, the return on equity considered are as follows:-



(₹ in lakh)

| Particulars                               | Asset -I | Asset -II | Asset-III |
|---|----------|-----------|-----------|
|   | 2013-14  | 2013-14   | 2013-14   |
| Opening Equity                            | 11320.63 | 1495.89   | 438.32    |
| Addition due to Additional Capitalisation | 570.89   | 270.18    | 225.27    |
| Closing Equity                            | 11891.52 | 1766.07   | 663.59    |
| Average Equity                            | 11606.07 | 1630.98   | 550.96    |
| Return on Equity (Base Rate )             | 15.50%   | 15.50%    | 15.50%    |
| Tax rate for the year 2008-09 (MAT)       | 20.960%  | 20.960%   | 20.960%   |
| Rate of Return on Equity (Pre Tax )       | 19.610%  | 19.610%   | 19.610%   |
| Return on Equity (Pre Tax)                | 568.99   | 53.31     | 27.01     |

(₹ in lakh)

| Particulars                               | Asset -IV | Asset -V | Asset-VI |
|---|-----------|----------|----------|
|   | 2013-14   | 2013-14  | 2013-14  |
| Opening Equity                            | 861.21    | 1434.25  | 1471.67  |
| Addition due to Additional Capitalisation | 201.93    | 146.36   | 168.46   |
| Closing Equity                            | 1063.13   | 1580.62  | 1640.14  |
| Average Equity                            | 962.17    | 1507.43  | 1555.91  |
| Return on Equity (Base Rate )             | 15.50%    | 15.50%   | 15.50%   |
| Tax rate for the year 2008-09 (MAT)       | 20.960%   | 20.960%  | 20.960%  |
| Rate of Return on Equity (Pre Tax )       | 19.610%   | 19.610%  | 19.610%  |
| Return on Equity (Pre Tax)                | 47.17     | 73.90    | 76.28    |

42. The petitioner has submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly from the beneficiaries without making any application before the Commission under Regulation 15(5) of the 2009 Tariff Regulations. MSEDCL has submitted that Return on Equity may be allowed in such a way that it avoids unnecessary burden



on the beneficiaries and ultimately on end consumers and the Commission needs to conduct prudence check on loans availed by the petitioner and the average interest rate considered for computation of Return on Equity. We would like to clarify that the petitioner is allowed to recover the shortfall or refund the excess Annual Transmission Charges under Regulation 15(5) of the 2009 Tariff Regulations. Accordingly, RoE has been computed @ 19.610% p.a on average equity as per Regulation 15(5) of the 2009 Tariff Regulations

### **Interest on loan**

43. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.



(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

44. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-

- (i) Gross amount of loan, repayment of instalments and rate of interest on loan have been considered as per petition ;
- (ii) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period;
- (iii) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed; and



(iv) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

45. MSEDCL submitted that the Commission needs to conduct prudence check on loans availed by the petitioner and the average interest rate considered for calculation of interest on long term basis. We would like to clarify that as provided under Regulation 16(5) actual loans have been considered for computation of weighted average rate of interest.

46. Detailed calculations in support of the weighted average rates of interest have been given in Annexure-I and VI to this order.

47. Based on the above, interest on loan has been calculated are given as follows:-

| Particulars                               | (₹ in lakh)        |                     |                      |
|---|--------------------|---------------------|----------------------|
|   | Asset-I<br>2013-14 | Asset-II<br>2013-14 | Asset-III<br>2013-14 |
| Gross Normative Loan                      | 26414.80           | 3490.41             | 1022.75              |
| Cumulative Repayment upto Previous Year   | 0.00               | 0.00                | 0.00                 |
| Net Loan-Opening                          | 26414.80           | 3490.41             | 1022.75              |
| Addition due to Additional capitalisation | 1332.07            | 630.43              | 525.63               |
| Repayment during the year                 | 486.04             | 47.84               | 24.44                |
| Net Loan-Closing                          | 27260.83           | 4072.99             | 1523.93              |
| Average Loan                              | 26837.82           | 3781.70             | 1273.34              |
| Weighted Average Rate of Interest on Loan | 2.2335%            | 2.2164%             | 3.4331%              |
| Interest                                  | 149.85             | 13.97               | 10.93                |



(₹ in lakh)

| Particulars                               | Asset-IV | Asset-V | Asset-VI |
|---|----------|---------|----------|
|   | 2013-14  | 2013-14 | 2013-14  |
| Gross Normative Loan                      | 2009.48  | 3346.59 | 3433.91  |
| Cumulative Repayment upto Previous Year   | 0.00     | 0.00    | 0.00     |
| Net Loan-Opening                          | 2009.48  | 3346.59 | 3433.91  |
| Addition due to Additional Capitalisation | 471.16   | 341.52  | 393.08   |
| Repayment during the year                 | 39.92    | 60.22   | 66.42    |
| Net Loan-Closing                          | 2440.72  | 3627.89 | 3760.56  |
| Average Loan                              | 2225.10  | 3487.24 | 3597.24  |
| Weighted Average Rate of Interest on Loan | 2.3587%  | 1.9484% | 2.0005%  |
| Interest                                  | 13.12    | 16.99   | 17.99    |

### **Depreciation**

48. Regulation 17 of the 2009 Tariff Regulations provides as under:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.



(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) 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.”

49. The assets in the instant petition were commissioned on 1.1.2014 except Asset-II which has been put under commercial operation on 1.2.2014 and will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually, based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations. Accordingly, depreciation has been worked out on the basis of capital expenditure as on the date of commercial operation and additional capital expenditure incurred/ projected to be incurred thereafter, wherein depreciation for the first year has been calculated on *pro-rata* basis for the part of year.

50. Based on the above, the following depreciation has been considered:-

| Particulars  | (₹ in lakh)        |                     |                      |
|--|--------------------|---------------------|----------------------|
|  | Asset-I<br>2013-14 | Asset-II<br>2013-14 | Asset-III<br>2013-14 |
| Opening Gross Block  | 37735.43           | 4986.30             | 1461.07              |
| Addition during 2009-14 due to Projected Additional Capitalisation | 1902.96            | 900.61              | 750.90               |
| Closing Gross Block  | 39638.39           | 5886.91             | 2211.97              |
| Average Gross Block  | 38686.91           | 5436.61             | 1836.52              |
| Rate of Depreciation   | 5.0254%            | 5.2800%             | 5.3241%              |
| Depreciable Value  | 33941.63           | 4892.94             | 1652.87              |
| Remaining Depreciable Value  | 33941.63           | 4892.94             | 1652.87              |
| Depreciation   | 486.04             | 47.84               | 24.44                |





(₹ in lakh)

| Particulars  | Asset-IV | Asset-V | Asset-VI |
|--|----------|---------|----------|
|  | 2013-14  | 2013-14 | 2013-14  |
| Opening Gross Block  | 2870.69  | 4780.84 | 4905.58  |
| Addition during 2009-14 due to Projected Additional Capitalisation | 673.09   | 487.88  | 561.54   |
| Closing Gross Block  | 3543.78  | 5268.72 | 5467.12  |
| Average Gross Block  | 3207.24  | 5024.78 | 5186.35  |
| Rate of Depreciation   | 4.9791%  | 4.7937% | 5.1226%  |
| Depreciable Value  | 2886.51  | 4322.33 | 4667.72  |
| Remaining Depreciable Value  | 2886.51  | 4322.33 | 4667.72  |
| Depreciation   | 39.92    | 60.22   | 66.42    |

### **Operation & Maintenance Expenses (O&M Expenses)**

51. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are as under:-

| Element                                 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---|---------|---------|---------|---------|---------|
| S/C Bundle conductor T/L (₹ in lakh/km) | 0.537   | 0.568   | 0.600   | 0.635   | 0.671   |
| D/C Bundle conductor T/L (₹ in lakh/km) | 0.940   | 0.994   | 1.051   | 1.111   | 1.174   |
| 765 kV bay (₹ in lakh/bay)              | 73.36   | 77.56   | 81.99   | 86.68   | 91.64   |
| 400 kV bay (₹ in lakh/bay)              | 52.40   | 55.40   | 58.57   | 61.92   | 65.46   |

52. The O&M expenses claimed by the petitioner is as under:-

(₹ in lakh)

| Sl. No | Asset     | O&M expenses claimed by the petitioner |
|--------|-----------|--|
| 1      | Asset -I  | 165.77                                 |
| 2      | Asset- II | 41.46                                  |
| 3      | Asset III | 66.99                                  |
| 4      | Asset IV  | 22.91                                  |
| 5      | Asset V   | 39.28                                  |
| 6      | Asset VI  | 39.28                                  |



53. Accordingly, the following operation and maintenance expenses are allowed in respect of the assets covered in this petition:-

| (₹ in lakh)                                  |                       |
|--|-----------------------|
| Element                                      | 2013-14<br>(Pro-rata) |
| Asset-I: (COD: 1.2.2014)                     |                       |
| 207.754 km, 765 kV S/C Bundled conductor T/L | 34.85                 |
| 5 nos 765 kV bays                            | 114.55                |
| 1 no 400 kV bay                              | 16.36                 |
| Asset-II: (COD: 1.2.2014)                    |                       |
| 2 nos. 765 kV bay                            | 30.54                 |
| 1 no. 400 kV bays                            | 10.91                 |
| Asset-III: (COD: 1.1.2014)                   |                       |
| 5.202Km, 400 kV D/C bundled conductor        | 1.52                  |
| 4 nos. 400 kV bay                            | 65.46                 |
| Asset-IV: (COD: 1.1.2014)                    |                       |
| 1 no 765 kV bay                              | 22.91                 |
| Asset-V: (COD: 1.1.2014)                     |                       |
| 1 no 765 kV bay                              | 22.91                 |
| 1 no. 400 kV bay                             | 16.36                 |
| Asset-VI: (COD: 1.1.2014)                    |                       |
| 1 no 765 kV bay                              | 22.91                 |
| 1 no. 400 kV bay                             | 16.36                 |

54. The petitioner has submitted that O & M Expenses for the period 2009-14 was arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M Expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.



55. While specifying the norms for the O & M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M expenses as per the existing norms.

### **Interest on working capital**

56. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

#### **(i) Receivables**

As per Regulation 18 (1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months' fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

#### **(ii) Maintenance spares**

Regulation 18(1)(c)(ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.



**(iii) O & M expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

**(iv) Rate of interest on working capital**

The SBI Base rate (9.70%) as on 1.4. plus 350 Bps i.e. 13.20% for all the assets has been considered as the rate of interest on working capital.

57. Necessary computations in support of interest on working capital are given hereunder:-

(₹ in lakh)

| Particulars        | Asset-I  | Asset-II | Asset-III |
|--------------------|----------|----------|-----------|
|                    | 2013-14  | 2013-14  | 2013-14   |
| Maintenance Spares | 99.46    | 37.31    | 40.19     |
| O & M expenses     | 55.25    | 20.73    | 22.33     |
| Receivables        | 937.80   | 161.40   | 89.59     |
| Total              | 1,092.51 | 219.43   | 152.10    |
| Interest           | 36.05    | 4.83     | 5.02      |
| Rate of interest   | 13.20%   | 13.20%   | 13.20%    |

(₹ in lakh)

| Particulars        | Asset-IV | Asset-V | Asset-VI |
|--------------------|----------|---------|----------|
|                    | 2013-14  | 2013-14 | 2013-14  |
| Maintenance Spares | 13.75    | 23.56   | 23.56    |
| O & M expenses     | 7.64     | 13.09   | 13.09    |
| Receivables        | 84.41    | 130.60  | 137.13   |
| Total              | 105.79   | 167.25  | 173.78   |
| Interest           | 3.49     | 5.52    | 5.73     |
| Rate of interest   | 13.20%   | 13.20%  | 13.20%   |



## Transmission charges

58. The transmission charges being allowed for the assets are as follows:-

(₹ in lakh)

| Particulars                 | Asset-I | Asset-II | Asset-III |
|-----------------------------|---------|----------|-----------|
|                             | 2013-14 | 2013-14  | 2013-14   |
| Depreciation                | 486.04  | 47.84    | 24.44     |
| Interest on Loan            | 149.85  | 13.97    | 10.93     |
| Return on equity            | 568.99  | 53.31    | 27.01     |
| Interest on Working Capital | 36.05   | 4.83     | 5.02      |
| O & M Expenses              | 165.76  | 41.45    | 66.98     |
| Total                       | 1406.70 | 161.40   | 134.38    |

(₹ in lakh)

| Particulars                 | Asset-IV | Asset-V | Asset-VI |
|-----------------------------|----------|---------|----------|
|                             | 2013-14  | 2013-14 | 2013-14  |
| Depreciation                | 39.92    | 60.22   | 66.42    |
| Interest on Loan            | 13.12    | 16.99   | 17.99    |
| Return on equity            | 47.17    | 73.90   | 76.28    |
| Interest on Working Capital | 3.49     | 5.52    | 5.73     |
| O & M Expenses              | 22.91    | 39.27   | 39.27    |
| Total                       | 126.62   | 195.90  | 205.69   |

## Filing fee and the publication expenses

59. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. MSEDCL submitted that the issue of filing fee has been taken up with the Commission against its order dated 20.08.2010 in Petition No. 70/2010 and as such the claim should not be considered by the Commission. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42 of the 2009 Tariff Regulations.



### **Licence fee**

60. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. MSEDCL have submitted that the Commission may pass such orders in respect to petitioner's request for reimbursement for licence fee, as it thinks just and proper to avoid unnecessary burden on beneficiaries and ultimately on end consumers. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations.

### **Service tax**

61. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. MSEDCL has submitted that as the petitioner itself submitted that service tax on transmission has been put in the negative list it will be too early to make any comment on such an issue. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

62. 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.



63. This order disposes of Petition No. 299/TT/2013.

sd/-

**(A.S. Bakshi)**  
**Member**

sd/-

**(A.K. Singhal)**  
**Member**



**Annexure I****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****(₹ in lakh)**

|          | Details of Loan                              | 2013-14  |
|----------|--|--|
| <b>2</b> | <b>IBRD Loan V @ Rs 62.41/\$</b>             |  |
|          | Gross loan opening                           | 24895.97   |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 24895.97   |
|          | Additions during the year                    | 0.00   |
|          | Repayment during the year                    | 0.00   |
|          | Net Loan-Closing                             | 24895.97   |
|          | Average Loan                                 | 24895.97   |
|          | Rate of Interest                             | 1.6193%  |
|          | Interest                                     | <b>403.15</b>                                    |
|          | Rep Schedule                                 | 49 Half yearly payments w.e.f. 15.1.2015         |
| <b>6</b> | <b>Bond XLIII</b>                            |  |
|          | Gross loan opening                           | 40.88  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 40.88  |
|          | Additions during the year                    | 0.00   |
|          | Repayment during the year                    | 0.00   |
|          | Net Loan-Closing                             | 40.88  |
|          | Average Loan                                 | 40.88  |
|          | Rate of Interest                             | 7.93%  |
|          | Interest                                     | 3.24   |
|          | Rep Schedule                                 | 12 annual instalments from 20.5.2017             |
| <b>8</b> | <b>Bond XLIV</b>                             |  |
|          | Gross loan opening                           | 1662.38  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 1662.38  |
|          | Additions during the year                    | 0.00   |
|          | Repayment during the year                    | 0.00   |
|          | Net Loan-Closing                             | 1662.38  |
|          | Average Loan                                 | 1662.38  |
|          | Rate of Interest                             | 8.70%  |
|          | Interest                                     | 144.63   |
|          | Rep Schedule                                 | 3 instalments on 15.7.2018, 15.7.2023, 15.7.2028 |
| <b>5</b> | <b>Bond XLIV (AddCap for 2013-14)</b>        |  |
|          | Gross loan opening                           | 0.00   |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 0.00   |
|          | Additions during the year                    | 1332.07  |





|  |  |
|--|--|
| Repayment during the year                    | 0.00   |
| Net Loan-Closing                             | 1332.07  |
| Average Loan                                 | 666.04   |
| Rate of Interest                             | 8.70%  |
| Interest                                     | 57.95  |
| Rep Schedule                                 | 3 instalments on 15.7.2018, 15.7.2023, 15.7.2028 |
| <b>Total Loan</b>                            |  |
| Gross loan opening                           | 26599.23   |
| Cumulative Repayment upto DOCO/previous year | 0.00   |
| Net Loan-Opening                             | 26599.23   |
| Additions during the year                    | 1332.07  |
| Repayment during the year                    | 0.00   |
| Net Loan-Closing                             | 27931.30   |
| Average Loan                                 | 27265.27   |
| <b>Weighted Average Rate of Interest</b>     | <b>2.2335%</b>                                   |
| <b>Interest</b>                              | <b>608.96</b>                                    |



**Annexure II****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****(₹ in lakh)**

|          | <b>Details of Loan</b>                       | <b>2013-14</b>                                   |
|----------|--|--|
| <b>2</b> | <b>IBRD Loan V @ Rs 62.41/\$</b>             |  |
|          | Gross loan opening                           | 3482.44  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 3482.44  |
|          | Additions during the year                    | 0.00   |
|          | Repayment during the year                    | 0.00   |
|          | Net Loan-Closing                             | 3482.44  |
|          | Average Loan                                 | 3482.44  |
|          | Rate of Interest                             | 1.61%  |
|          | Interest                                     | 56.07  |
|          | Rep Schedule                                 | 49 Half yearly payments w.e.f. 15.1.2015         |
| <b>6</b> | <b>Bond XLII</b>                             |  |
|          | Gross loan opening                           | 10.36  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 10.36  |
|          | Additions during the year                    | 0.00   |
|          | Repayment during the year                    | 0.00   |
|          | Net Loan-Closing                             | 10.36  |
|          | Average Loan                                 | 10.36  |
|          | Rate of Interest                             | 8.80%  |
|          | Interest                                     | 0.91   |
|          | Rep Schedule                                 | Bullet payment 13.3.2023                         |
| <b>8</b> | <b>Bond XLIV</b>                             |  |
|          | Gross loan opening                           | 0.00   |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 0.00   |
|          | Additions during the year                    | 0.00   |
|          | Repayment during the year                    | 0.00   |
|          | Net Loan-Closing                             | 0.00   |
|          | Average Loan                                 | 0.00   |
|          | Rate of Interest                             | 8.70%  |
|          | Interest                                     | 0.00   |
|          | Rep Schedule                                 | 3 instalments on 15.7.2018, 15.7.2023, 15.7.2028 |
| <b>5</b> | <b>Bond XLIV (AddCap for 2013-14)</b>        |  |
|          | Gross loan opening                           | 0.00   |
|          | Cumulative Repayment upto DOCO/previous year | 0.00   |
|          | Net Loan-Opening                             | 0.00   |



|  |  |
|--|--|
| Additions during the year                    | 630.43   |
| Repayment during the year                    | 0.00   |
| Net Loan-Closing                             | 630.43   |
| Average Loan                                 | 315.22   |
| Rate of Interest                             | 8.70%  |
| Interest                                     | 27.42  |
| Rep Schedule                                 | 3 instalments on 15.7.2018, 15.7.2023, 15.7.2028 |
| <b>Total Loan</b>                            |  |
| Gross loan opening                           | 3492.80  |
| Cumulative Repayment upto DOCO/previous year | 0.00   |
| Net Loan-Opening                             | 3492.80  |
| Additions during the year                    | 630.43   |
| Repayment during the year                    | 0.00   |
| Net Loan-Closing                             | 4123.23  |
| Average Loan                                 | 3808.02  |
| <b>Weighted Average Rate of Interest</b>     | <b>2.2164%</b>                                   |
| <b>Interest</b>                              | <b>84.40</b>                                     |



## Annexure-III

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**  
(₹ in lakh)

| Details of Loan |  | 2013-14  |
|-----------------|--|--|
| <b>2</b>        | <b>IBRD Loan V @ Rs 62.41/\$</b>             |  |
|                 | Gross loan opening                           | 963.61   |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00   |
|                 | Net Loan-Opening                             | 963.61   |
|                 | Additions during the year                    | 0.00   |
|                 | Repayment during the year                    | 0.00   |
|                 | Net Loan-Closing                             | 963.61   |
|                 | Average Loan                                 | 963.61   |
|                 | Rate of Interest                             | 1.6193%  |
|                 | Interest                                     | 15.60  |
|                 | Rep Schedule                                 | 49 Half yearly payments w.e.f. 15.1.2015         |
| <b>6</b>        | <b>Bond XLII</b>                             |  |
|                 | Gross loan opening                           | 67.75  |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00   |
|                 | Net Loan-Opening                             | 67.75  |
|                 | Additions during the year                    | 0.00   |
|                 | Repayment during the year                    | 0.00   |
|                 | Net Loan-Closing                             | 67.75  |
|                 | Average Loan                                 | 67.75  |
|                 | Rate of Interest                             | 8.80%  |
|                 | Interest                                     | 5.96   |
|                 | Rep Schedule                                 | Bullet payment 13.3.2023                         |
| <b>5</b>        | <b>Bond XLIV (AddCap for 2013-14)</b>        |  |
|                 | Gross loan opening                           | 0.00   |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00   |
|                 | Net Loan-Opening                             | 0.00   |
|                 | Additions during the year                    | 525.63   |
|                 | Repayment during the year                    | 0.00   |
|                 | Net Loan-Closing                             | 525.63   |
|                 | Average Loan                                 | 262.82   |
|                 | Rate of Interest                             | 8.70%  |
|                 | Interest                                     | 22.86  |
|                 | Rep Schedule                                 | 3 instalments on 15.7.2018, 15.7.2023, 15.7.2028 |
|                 | <b>Total Loan</b>                            |  |
|                 | Gross loan opening                           | 1031.36  |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00   |



|  |                |
|--|----------------|
| Net Loan-Opening                         | 1031.36        |
| Additions during the year                | 525.63         |
| Repayment during the year                | 0.00           |
| Net Loan-Closing                         | 1556.99        |
| Average Loan                             | 1294.18        |
| <b>Weighted Average Rate of Interest</b> | <b>3.4331%</b> |
| <b>Interest</b>                          | <b>44.43</b>   |



## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

|          |  | (₹ in lakh)                                     |
|----------|--|---|
|          | <b>Details of Loan</b>                       | <b>2013-14</b>                                  |
| <b>2</b> | <b>IBRD Loan V @ Rs 62.41/\$</b>             |   |
|          | Gross loan opening                           | 2020.49   |
|          | Cumulative Repayment upto DOCO/previous year | 0.00  |
|          | Net Loan-Opening                             | 2020.49   |
|          | Additions during the year                    | 0.00  |
|          | Repayment during the year                    | 0.00  |
|          | Net Loan-Closing                             | 2020.49   |
|          | Average Loan                                 | 2020.49   |
|          | Rate of Interest                             | 1.6193%   |
|          | Interest                                     | 32.72   |
|          | Rep Schedule                                 | 49 Half yearly payments w.e.f. 15.1.2015        |
| <b>5</b> | <b>Bond XLIV (AddCap for 2013-14)</b>        |   |
|          | Gross loan opening                           | 0.00  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00  |
|          | Net Loan-Opening                             | 0.00  |
|          | Additions during the year                    | 471.16  |
|          | Repayment during the year                    | 0.00  |
|          | Net Loan-Closing                             | 471.16  |
|          | Average Loan                                 | 235.58  |
|          | Rate of Interest                             | 8.70%   |
|          | Interest                                     | 20.50   |
|          | Rep Schedule                                 | 3 instamment on 15.7.2018, 15.7.2023, 15.7.2028 |
|          | <b>Total Loan</b>                            |   |
|          | Gross loan opening                           | 2020.49   |
|          | Cumulative Repayment upto DOCO/previous year | 0.00  |
|          | Net Loan-Opening                             | 2020.49   |
|          | Additions during the year                    | 471.16  |
|          | Repayment during the year                    | 0.00  |
|          | Net Loan-Closing                             | 2491.65   |
|          | Average Loan                                 | 2256.07   |
|          | <b>Weighted Average Rate of Interest</b>     | <b>2.3587%</b>                                  |
|          | <b>Interest</b>                              | <b>53.21</b>                                    |



Annexure-V

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

|                        |  | (₹ in lakh)                              |
|------------------------|--|--|
| <b>Details of Loan</b> |  | <b>2013-14</b>                           |
| <b>2</b>               | <b>IBRD Loan V @ Rs 62.41/\$</b>             |  |
|                        | Gross loan opening                           | 3413.05                                  |
|                        | Cumulative Repayment upto DOCO/previous year | 0.00                                     |
|                        | Net Loan-Opening                             | 3413.05                                  |
|                        | Additions during the year                    | 0.00                                     |
|                        | Repayment during the year                    | 0.00                                     |
|                        | Net Loan-Closing                             | 3413.05                                  |
|                        | Average Loan                                 | 3413.05                                  |
|                        | Rate of Interest                             | 1.6193%                                  |
|                        | Interest                                     | 55.27                                    |
|                        | Rep Schedule                                 | 49 Half yearly payments w.e.f. 15.1.2015 |
| <b>6</b>               | <b>Bond XLII (AddCap for 2013-14)</b>        |  |
|                        | Gross loan opening                           | 0.00                                     |
|                        | Cumulative Repayment upto DOCO/previous year | 0.00                                     |
|                        | Net Loan-Opening                             | 0.00                                     |
|                        | Additions during the year                    | 233.56                                   |
|                        | Repayment during the year                    | 0.00                                     |
|                        | Net Loan-Closing                             | 233.56                                   |
|                        | Average Loan                                 | 116.78                                   |
|                        | Rate of Interest                             | 8.80%                                    |
|                        | Interest                                     | 10.28                                    |
|                        | Rep Schedule                                 | Bullet payment 13.3.2023                 |
| <b>5</b>               | <b>Bond XLIII (AddCap for 2013-14)</b>       |  |
|                        | Gross loan opening                           | 0.00                                     |
|                        | Cumulative Repayment upto DOCO/previous year | 0.00                                     |
|                        | Net Loan-Opening                             | 0.00                                     |
|                        | Additions during the year                    | 107.96                                   |
|                        | Repayment during the year                    | 0.00                                     |
|                        | Net Loan-Closing                             | 107.96                                   |
|                        | Average Loan                                 | 53.98                                    |
|                        | Rate of Interest                             | 7.93%                                    |
|                        | Interest                                     | 4.28                                     |
|                        | Rep Schedule                                 | 12 annual installments w.e.f. 20.5.2017  |
|                        | <b>Total Loan</b>                            |  |



|   |                |
|---|----------------|
| Gross loan opening                              | 3413.05        |
| Cumulative Repayment upto<br>DOCO/previous year | 0.00           |
| Net Loan-Opening                                | 3413.05        |
| Additions during the year                       | 341.52         |
| Repayment during the year                       | 0.00           |
| Net Loan-Closing                                | 3754.57        |
| Average Loan                                    | 3583.81        |
| <b>Weighted Average Rate of Interest</b>        | <b>1.9484%</b> |
| <b>Interest</b>                                 | <b>69.83</b>   |





Annexure-VI

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

|                        |  | <b>(₹ in lakh)</b>                              |
|------------------------|--|---|
| <b>Details of Loan</b> |  | <b>2013-14</b>                                  |
| <b>2</b>               | <b>IBRD Loan V @ Rs 62.41/\$</b>             |   |
|                        | Gross loan opening                           | 3454.51   |
|                        | Cumulative Repayment upto DOCO/previous year | 0.00  |
|                        | Net Loan-Opening                             | 3454.51   |
|                        | Additions during the year                    | 0.00  |
|                        | Repayment during the year                    | 0.00  |
|                        | Net Loan-Closing                             | 3454.51   |
|                        | Average Loan                                 | 3454.51   |
|                        | Rate of Interest                             | 1.6193%   |
|                        | Interest                                     | 55.94   |
|                        | Rep Schedule                                 | 49 Half yearly payments w.e.f. 15.1.2015        |
| <b>5</b>               | <b>Bond XLIII (AddCap for 2013-14)</b>       |   |
|                        | Gross loan opening                           | 0.00  |
|                        | Cumulative Repayment upto DOCO/previous year | 0.00  |
|                        | Net Loan-Opening                             | 0.00  |
|                        | Additions during the year                    | 393.08  |
|                        | Repayment during the year                    | 0.00  |
|                        | Net Loan-Closing                             | 393.08  |
|                        | Average Loan                                 | 196.54  |
|                        | Rate of Interest                             | 8.70%   |
|                        | Interest                                     | 17.10   |
|                        | Rep Schedule                                 | 3 instamment on 15.7.2018, 15.7.2023, 15.7.2028 |
|                        | <b>Total Loan</b>                            |   |
|                        | Gross loan opening                           | 3454.51   |
|                        | Cumulative Repayment upto DOCO/previous year | 0.00  |
|                        | Net Loan-Opening                             | 3454.51   |
|                        | Additions during the year                    | 393.08  |
|                        | Repayment during the year                    | 0.00  |
|                        | Net Loan-Closing                             | 3847.59   |
|                        | Average Loan                                 | 3651.05   |
|                        | <b>Weighted Average Rate of Interest</b>     | <b>2.0005%</b>                                  |
|                        | <b>Interest</b>                              | <b>73.04</b>                                    |

