

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 533/TT/2014

Coram:

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

**Date of Hearing : 21.12.2015
Date of Order :28.04.2016**

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for transmission assets under system strengthening-VIII in Southern Regional Grid in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

Versus

1. Karnataka Power Transmission Corporation Ltd.
Kaveri Bhawan, Bangalore-560009
2. Transmission Corporation of Andhra Pradesh Ltd.
(APTRANSCO), Vidyut Soudha
Hyderabad-500082
3. Kerala State Electricity Board (KSEB)
Vaidyuthi Bhavanam, Pattom
Thiruvananthapuram-695004
4. Tamil Nadu Generation and Distribution Corporation Ltd.
(Formerly Tamil Nadu Electricity Board)
NPKRR Maaligai, 800, Anna Salai
Chennai- 600002



5. Electricity Department
Government of Pondicherry
Pondicherry- 605001
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.
P&T Colony, Seethmmadhara, Vishakhapatnam
Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh
Srinivasasa Kalyana Mandapam Backside
Tiruchanoor Road, Kesavayana Gunta
Tirupati- 517 501
8. Central Power Distribution Company of Andhra Pradesh
Corporate Office, Mint Compound,
Hyderabad- 500 063
9. Northern Power Distribution Company of Andhra Pradesh
Opp. NIT Petrol Pump,
Chaitanyapuri, Kazipet
Warangal- 506 004
10. Bangalore Electricity Supply Company Ltd.
Corporate Office, K.R.Circle
Bangalore- 560 001
11. Gulbarga Electricity Supply Company Ltd.
Station Main Road, Gulbarga
12. Hubli Electricity Supply Company Ltd.
Navanagar, P B Road
Hubli, Karnataka
13. MESCOM Corporate Office
Paradigm Plaza, AB Shetty Circle
Mangalore- 575 001
14. Chamundeswari Electricity Supply Corporation Ltd.
New KantharajUrs Road, Saraswatipuram,
Mysore-570 009
15. Electricity Department
Government of Goa
Vidyuti Bhawan, Panaji
Goa- 403001

.....**Respondents**

The following were present:-



For Petitioner: Shri S. K. Venkatesan, PGCIL
Shri M. M. Mondal, PGCIL
Shri Anshul Garg, PGCIL
Shri Rakesh Prasad, PGCIL
Shri S. S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL

For Respondent: Shri S. Vallinayagam, Advocate, TANGEDCO

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner"), for trueing up of capital expenditure under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on actual capital expenditure for the period COD to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from 1.4.2014 to 31.3.2019 for transmission assets under system strengthening-VIII in Southern Regional Grid in Southern Region(hereinafter referred as "transmission asset").

2. The respondents are mostly distribution licensees or centralised power companies or transmission licensees who are procuring transmission service from the petitioner, mainly beneficiaries of the Southern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the



public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 21.12.2015. None of the respondents have filed their reply. In response to clarification sought the petitioner has submitted its replies vide affidavit dated 11.1.2016 and 8.4.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

(a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide Memorandum dated 26.2.2008 at an estimated cost of ₹10584 lakh, including IDC of ₹ 784 lakh.

(b) The actual COD of the assets covered in the instant petition is shown in the table below:-

| Asset | Actual COD | Tariff applicable for the tariff period 2009-14 |
|-------------------------------|------------|---|
| Asset-1 (Single Asset) | 1.12.2009 | Dec-2009 to Feb-2010 |
| Asset-2(Combined Assets 1&2) | 1.3.2010 | Mar-2010 |
| Asset-3 (Combined Assets 1-3) | 1.4.2010 | Apr-2010 |
| Asset-4 (Combined Assets 1-4) | 1.5.2010 | May-2010 |
| Asset-5 (Combined Assets 1-5) | 1.6.2010 | June-2010 |
| Asset-6 (Combined Assets 1-6) | 1.7.2010 | July-2010 to Sept-2010 |
| Asset-7 (Combined Assets 1-7) | 1.10.2010 | Oct-2010 to Mar-2014 |

(c) The tariff allowed from respective COD to 31.3.2014 in order dated 28.7.2011 in Petition No. 282/TT/2010 is as under:-

| Particulars | (₹ in lakh) | | | | | |
|-------------|---|--|--|--|--|--|
| | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
| | 2009-10 (pro-rata) 1.12.2009 to 28.2.2010 | 2009-10 (pro-rata) 1.3.2010 to 31.3.2010 | 2010-11 (pro-rata) 1.4.2010 to 30.4.2010 | 2010-11 (pro-rata) 1.5.2010 to 31.5.2010 | 2010-11 (pro-rata) 1.6.2010 to 30.6.2010 | 2010-11 (pro-rata) 1.7.2010 to 30.9.2010 |



| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|-----------------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| Depreciation | 12.83 | 9.92 | 14.45 | 24.53 | 29.51 | 95.90 |
| Interest on Loan | 14.92 | 11.53 | 16.18 | 27.56 | 33.17 | 107.57 |
| Return on equity | 12.75 | 9.85 | 14.35 | 24.37 | 29.31 | 95.25 |
| Interest on Working Capital | 0.84 | 1.09 | 1.56 | 2.86 | 3.39 | 9.92 |
| O & M Expenses | 0.00 | 8.73 | 13.85 | 27.70 | 32.32 | 96.95 |
| Total | 41.34 | 41.12 | 60.38 | 107.02 | 127.70 | 405.59 |

(₹ in lakh)

| Particulars (Asset-7) | 2010-11 (pro-rata) 1.10.2010 to 31.3.2011 | 2011-12 | 2012-13 | 2013-14 |
|--------------------------------|---|----------------|----------------|----------------|
| Depreciation | 206.96 | 468.01 | 471.97 | 473.03 |
| Interest on Loan | 229.82 | 493.24 | 456.19 | 415.53 |
| Return on equity | 205.55 | 464.83 | 468.76 | 469.81 |
| Interest on Working Capital | 20.69 | 45.01 | 45.52 | 45.91 |
| O & M Expenses | 193.90 | 409.99 | 433.44 | 458.22 |
| Total | 856.92 | 1881.08 | 1875.88 | 1862.50 |

- (d) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.

TRUING UP OF ANNUAL FIXED CHARGES FOR TARIFF PERIOD 2009-14

5. The truing up of tariff for 2009-14 tariff period has been determined based on actual capital cost and additional capital expenditure during 2009-14 tariff period.



Capital Cost

6. The petitioner has claimed revised capital cost as on COD for all the assets. The petitioner has submitted the Auditor's Certificate certifying the capital cost and additional capitalization claimed.

7. Clause (1) of 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 funds 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.”

8. It was observed that the Asset-7 i.e. 1 x 63 MVAR line reactor at Trivandrum Sub-station along with associated bay has been put under commercial operation on 1.10.2010, however in the Auditor Certificate, expenditure upto 31.8.2010 and additional capitalization from 1.9.2010 to 31.3.2011 has been submitted. In response to Commission's query regarding the breakup considered for Asset-7, the petitioner submitted that actual expenditure from 1.9.2010 to 30.9.2010 is nil and accordingly, expenditure upto COD i.e.



1.10.2010 is ₹510.90 lakh. We have considered the submissions of the petitioner.

Initial Spares

9. Regulation 8 of the 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%” |

10. Regulation 3(29) of the 2009 Tariff Regulations provides that:-

“(29) ‘original project cost’ means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;”

11. The petitioner has adjusted excess initial spares of ₹ 71.09 lakh from the capital cost as on COD for Asset-7 (Combined Asset 1 to 7) considering the cumulative initial spares for all the assets. We have computed asset wise excess initial spares. It is observed that petitioners claim for initial spares for Asset-1, Asset-6 and Asset-7 is within the specified ceiling limit. Excess initial spares for Asset-2, Asset-3, Asset-4 and Asset-5 is shown in the table below:-

(₹ in lakh)

| Description | Particulars | Capital cost as on cut off date | Initial Spares claimed | Ceiling limit as per Regulation 8 of 2009 regulations | Initial spares worked out | Excess initial spares claimed |
|-------------|-------------|---------------------------------|------------------------|---|---------------------------|-------------------------------|
| | | (a) | (b) | (c) | (d)=((a-b)*c)/(100-c)% | (e)=(b-d) |
| Asset-2 | Sub-station | 1552.07 | 52.78 | 2.50% | 38.44 | 14.34 |
| Asset-3 | Sub-station | 719.56 | 24.54 | 2.50% | 17.82 | 6.72 |
| Asset-4 | Sub-station | 2624.07 | 109.99 | 2.50% | 64.46 | 45.53 |
| Asset-5 | Sub-station | 1232.06 | 49.63 | 2.50% | 30.32 | 19.31 |



12. We have also adjusted excess initial spares shown in the above table from the capital cost as on COD for Asset-2, Asset-3, Asset-4 and Asset-5. The capital cost as on COD for all the seven assets claimed by the petitioner and considered by us is shown in table below:-

| Asset Name | (₹ in lakh) | |
|-------------------------------|--|---------------------------------|
| | Capital cost claimed by the petitioner as on COD | Capital cost approved as on COD |
| Asset-1 (Single Asset) | 907.90 | 907.90 |
| Asset-2(Combined Assets 1&2) | 2247.10 | 2232.76 |
| Asset-3 (Combined Assets 1-3) | 2949.87 | 2928.81 |
| Asset-4 (Combined Assets 1-4) | 4910.05 | 4843.47 |
| Asset-5 (Combined Assets 1-5) | 5951.95 | 5866.06 |
| Asset-6 (Combined Assets 1-6) | 6548.43 | 6562.54 |
| Asset-7 (Combined Assets 1-7) | 7290.15 | 7275.35 |

Additional Capital Expenditure

13. The petitioner has claimed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations for all the asset.

14. Clause (1)(i) of Regulation 9 of the 2009 Tariff Regulations provides that:-

“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.”

15. The petitioner has claimed additional capitalization towards balance and retention payment for all the assets. We have considered the submissions of the petitioner. The total capital cost of ₹8378.26 lakh including actual additional capitalisation for Combined Assets 1-7 is within the investment approval of ₹10584 lakh. Hence, the additional capitalization for Assets Combined Assets 1-



7 is allowed under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-

| (₹ in lakh) | | | |
|--------------|--|-----------------------------------|------------------------|
| Particulars | Balance and Retention Payment towards Work/Equipment | Additional Capitalization | |
| | | Approved in order dated 28.7.2011 | Approved in this order |
| 2009-10 | Sub-station | 207.18 | - |
| 2010-11 | Sub-station | 1939.18 | 693.36 |
| 2011-12 | Sub-station | 110.00 | 394.72 |
| 2012-13 | Sub-station | 40.00 | 3.08 |
| Total | | 2296.36 | 1091.16 |

Debt: Equity

16. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“(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.

.....

(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.”

17. The petitioner has claimed true up Annual Fixed Charge based on debt-equity ratio of 70:30. The admitted debt:equity ratio of 70:30 has been considered as on COD for the purpose of true up of the approved tariff of tariff period 2009-14. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for all the assets. The petitioner was directed to confirm that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30%. In response, the petitioner



vide affidavit dated 11.1.2016 submitted that actual loan deployed for funding the expenditure is 70%, accordingly the equity deployed is 30% as per Regulation 12(3) of the 2009 Tariff Regulations. The petitioner has claimed ROE only for 30% of the additional capitalization on normative basis. The overall debt:equity as on COD and as on 31.3.2014 for all the assets including additional capitalization is as under:-

(₹ in lakh)

| Asset-1 | As on 1.12.2009 | | Additional capitalization during 2009-14 | | As on 28.2.2010 | |
|--------------|-----------------|---------------|--|---------------|-----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 635.53 | 70.00 | 144.09 | 70.00 | 779.62 | 70.00 |
| Equity | 272.37 | 30.00 | 61.75 | 30.00 | 334.12 | 30.00 |
| Total | 907.90 | 100.00 | 205.84 | 100.00 | 1113.74 | 100.00 |

(₹ in lakh)

| Asset-2 | As on 1.3.2010 | | Additional capitalization during 2009-14 | | As on 31.3.2010 | |
|--------------|----------------|---------------|--|---------------|-----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 1562.93 | 70.00 | 293.10 | 70.00 | 1856.03 | 70.00 |
| Equity | 669.83 | 30.00 | 125.61 | 30.00 | 795.44 | 30.00 |
| Total | 2232.76 | 100.00 | 418.71 | 100.00 | 2651.47 | 100.00 |

(₹ in lakh)

| Asset-3 | As on 1.4.2010 | | Additional capitalization during 2009-14 | | As on 30.4.2010 | |
|--------------|----------------|---------------|--|---------------|-----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 2050.17 | 70.00 | 304.85 | 70.00 | 2355.02 | 70.00 |
| Equity | 878.64 | 30.00 | 130.65 | 30.00 | 1009.29 | 30.00 |
| Total | 2928.81 | 100.00 | 435.50 | 100.00 | 3364.31 | 100.00 |

(₹ in lakh)

| Asset-4 | As on 1.5.2010 | | Additional capitalization during 2009-14 | | As on 31.5.2010 | |
|--------------|----------------|---------------|--|---------------|-----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 3390.43 | 70.00 | 769.57 | 70.00 | 4160.00 | 70.00 |
| Equity | 1453.04 | 30.00 | 329.82 | 30.00 | 1782.86 | 30.00 |
| Total | 4843.47 | 100.00 | 1099.39 | 100.00 | 5942.86 | 100.00 |

(₹ in lakh)

| Asset-5 | As on 1.6.2010 | | Additional capitalization during | | As on 30.6.2010 | |
|---------|----------------|--|----------------------------------|--|-----------------|--|
| | | | | | | |



| | | | 2009-14 | | | |
|--------------|----------------|---------------|----------------|---------------|----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 4106.24 | 70.00 | 902.68 | 70.00 | 5008.92 | 70.00 |
| Equity | 1759.82 | 30.00 | 386.86 | 30.00 | 2146.68 | 30.00 |
| Total | 5866.06 | 100.00 | 1289.55 | 100.00 | 7155.61 | 100.00 |

(₹ in lakh)

| Asset-6 | As on 1.7.2010 | | Additional capitalization during 2009-14 | | As on 30.9.2010 | |
|----------------|----------------|---------------|--|---------------|-----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 4523.78 | 70.00 | 892.79 | 70.00 | 5416.57 | 70.00 |
| Equity | 1938.76 | 30.00 | 382.63 | 30.00 | 2321.39 | 30.00 |
| Total | 6462.54 | 100.00 | 1275.42 | 100.00 | 7737.96 | 100.00 |

(₹ in lakh)

| Asset-7 | As on 1.10.2010 | | Additional capitalization during 2009-14 | | As on 31.3.2014 | |
|----------------|-----------------|---------------|--|---------------|-----------------|---------------|
| | Amount | (%) | Amount | (%) | Amount | (%) |
| Debt | 5092.74 | 70.00 | 763.81 | 70.00 | 5856.55 | 70.00 |
| Equity | 2182.60 | 30.00 | 327.35 | 30.00 | 2509.95 | 30.00 |
| Total | 7275.35 | 100.00 | 1091.16 | 100.00 | 8366.51 | 100.00 |

Interest on Loan ("IOL")

18. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

19. The Petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

20. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-



(₹ in lakh)

| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009-10 (pro-rata) | 2009-10 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) |
| Approved vide order dated 28.7.2011 | 14.92 | 11.53 | 16.18 | 27.56 | 33.17 | 107.57 |
| As claimed by petitioner | 14.96 | 11.77 | 15.73 | 27.13 | 32.65 | 105.49 |
| Allowed after true up | 14.96 | 11.70 | 15.62 | 26.79 | 32.21 | 104.19 |

(₹ in lakh)

| (Asset-7) | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|-------------------------------------|-----------------------|---------|---------|---------|
| Approved vide order dated 28.7.2011 | 229.82 | 493.24 | 456.19 | 415.53 |
| As claimed by petitioner | 223.92 | 454.14 | 428.25 | 389.00 |
| Allowed after true up | 223.55 | 453.46 | 427.64 | 388.47 |

21. The variation in allowed Interest on loan with respect to approved is on account of variation in capital cost as on COD and additional capitalization for 2009-14 tariff period. Further the variation in allowed Interest on loan with respect to the petitioners claim is on account of treatment of excess initial spares.

Return on Equity (“ROE”)

22. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provide that:-

“(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 maybe, 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 year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

23. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in tariff order. However, for truing up purpose, the computation of RoE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

| Particulars | MAT Rate (t) % | Grossed up ROE (Base rate/(1-t)) % |
|-------------|----------------|------------------------------------|
| 2009-10 | 16.995 | 18.674 |
| 2010-11 | 19.931 | 19.358 |
| 2011-12 | 20.008 | 19.377 |
| 2012-13 | 20.008 | 19.377 |
| 2013-14 | 20.961 | 19.610 |

24. Accordingly, ROE as allowed for all the assets is shown in the table below:-

| Particulars | (₹ in lakh) | | | | | |
|-------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | Asset-1 2009-10 (pro-rata) | Asset-2 2009-10 (pro-rata) | Asset-3 2010-11 (pro-rata) | Asset-4 2010-11 (pro-rata) | Asset-5 2010-11 (pro-rata) | Asset-6 2010-11 (pro-rata) |
| Approved vide order dated 28.7.2011 | 12.75 | 9.85 | 14.35 | 24.37 | 29.31 | 95.25 |
| As claimed by petitioner | 13.62 | 10.75 | 14.93 | 25.75 | 31.09 | 101.65 |
| Allowed after true up | 13.62 | 10.68 | 14.83 | 25.43 | 30.67 | 100.40 |

| (Asset-7) | (₹ in lakh) | | | |
|-------------------------------------|-----------------------|---------|---------|---------|
| | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
| Approved vide order dated 28.7.2011 | 205.55 | 464.83 | 468.76 | 469.81 |



| (Asset-7) | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|--------------------------|-----------------------|---------|---------|---------|
| As claimed by petitioner | 221.75 | 475.56 | 487.12 | 493.07 |
| Allowed after true up | 221.32 | 474.70 | 486.26 | 492.20 |

25. The variation in return on equity is on account of increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity and also due to variation in capital cost as on COD and additional capitalization. Further the variation in allowed RoE with respect to the petitioners claim is on account of treatment of excess initial spares.

Depreciation

26. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

“**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

| | |
|------------------------------|-----------|
| | |
| (c) AC and DC sub-station | 25 years |
| (d) Hydro generating station | 35 years |
| (e) Transmission line | 35 years” |

27. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

"17. Depreciation:

...
(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.”

28. The weighted average useful life of the transmission asset has been considered as per Regulations 3 (42) and 17 (4) of the 2009 Tariff Regulations.



For the purpose of calculation, the weighted average useful life of the asset has been considered as 25 years for all the assets. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under.

| Particulars | (₹ in lakh) | | | | | |
|-------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | Asset-1 2009-10 (pro-rata) | Asset-2 2009-10 (pro-rata) | Asset-3 2010-11 (pro-rata) | Asset-4 2010-11 (pro-rata) | Asset-5 2010-11 (pro-rata) | Asset-6 2010-11 (pro-rata) |
| Approved vide order dated 28.7.2011 | 12.83 | 9.92 | 14.45 | 24.53 | 29.51 | 95.90 |
| As claimed by petitioner | 12.83 | 10.13 | 13.57 | 23.41 | 28.26 | 92.42 |
| Allowed after true up | 12.83 | 10.07 | 13.48 | 23.12 | 27.89 | 91.28 |

| (Asset-7) | (₹ in lakh) | | | |
|-------------------------------------|-----------------------|---------|---------|---------|
| | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
| Approved vide order dated 28.7.2011 | 206.96 | 468.01 | 471.97 | 473.03 |
| As claimed by petitioner | 201.61 | 431.95 | 442.45 | 442.53 |
| Allowed after true up | 201.22 | 431.17 | 441.67 | 441.75 |

29. The variation in depreciation is on account of variation in capital cost as on COD and additional capitalization. Further the variation in allowed depreciation with respect to the petitioners claim is on account of treatment of excess initial spares.

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

30. The petitioner has computed O&M expenses for the assets mentioned in the petition and in accordance with the O&M norms for lines and bays specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are as follows:-

| Particulars | (₹ in lakh) | | | | | |
|---------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | Asset-1 2009-10 (pro-rata) | Asset-2 2009-10 (pro-rata) | Asset-3 2010-11 (pro-rata) | Asset-4 2010-11 (pro-rata) | Asset-5 2010-11 (pro-rata) | Asset-6 2010-11 (pro-rata) |
| Approved vide order | 0.00 | 8.73 | 13.85 | 27.70 | 32.32 | 96.95 |



| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009-10 (pro-rata) | 2009-10 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) |
| dated 28.7.2011 | | | | | | |
| As claimed by petitioner | 0.00 | 8.73 | 13.85 | 27.70 | 32.32 | 96.95 |
| Allowed after true up | 0.00 | 8.73 | 13.85 | 27.70 | 32.32 | 96.95 |

(₹ in lakh)

| (Asset-7) | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|-------------------------------------|-----------------------|---------|---------|---------|
| Approved vide order dated 28.7.2011 | 193.90 | 409.99 | 433.44 | 458.22 |
| As claimed by petitioner | 193.90 | 409.99 | 433.44 | 458.22 |
| Allowed after true up | 193.90 | 409.99 | 433.44 | 458.22 |

Interest on working capital("IWC")

31. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

32. The petitioner has submitted that the rate of interest on working capital as 12.25% (for Asset-1 and Asset-2), 11.75% (for Asset-3, Asset-4 and Asset-5) and 11.00% (for Asset-6 and Asset-7) and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

33. In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to short-term Prime Lending Rate applicable as on 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. State Bank of India short-term Prime Lending Rate on 1.4.2009 and 1.4.2010

was 12.25% and 11.75% respectively. Therefore, interest rate of 12.25% and 11.75% has been considered to work out the interest on working capital for Asset-1 &2 and Asset 3, 4 &5 respectively. Further for Asset-6 &7, in accordance with Regulation (3)(ii) of Regulation 18 of the 2009 Tariff Regulations (Second Amendment), rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation after 1.7.2010 shall be equal to SBI Base Rate plus 350 basis points as on 1st April of the year in which the transmission asset was declared under commercial operation. State Bank of India Base Rate as on 1.7.2010 was 7.50%. Therefore, interest rate of 11.00% for Asset-6 &7 has been considered to work out the interest on working capital.

34. The IWC trued up is as under:-

(₹ in lakh)

| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009-10 (pro-rata) | 2009-10 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) |
| Maintenance Spares | 0.00 | 1.31 | 2.08 | 4.16 | 4.85 | 14.54 |
| O & M expenses | 0.00 | 0.73 | 1.15 | 2.31 | 2.69 | 8.08 |
| Receivables | 7.04 | 7.05 | 9.89 | 17.64 | 21.07 | 67.12 |
| Total | 7.04 | 9.09 | 13.12 | 24.11 | 28.61 | 89.74 |
| Rate of Interest (%) | 12.25% | 12.25% | 11.75% | 11.75% | 11.75% | 11.00% |
| Interest | 0.86 | 1.11 | 1.54 | 2.83 | 3.36 | 9.87 |

(₹ in lakh)

| (Asset-7) | 2010-11 (Pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|----------------------|-----------------------|--------------|--------------|--------------|
| Maintenance Spares | 29.09 | 61.50 | 65.02 | 68.73 |
| O & M expenses | 16.16 | 34.17 | 36.12 | 38.19 |
| Receivables | 143.46 | 302.18 | 305.63 | 304.31 |
| Total | 188.70 | 397.85 | 406.76 | 411.23 |
| Rate of Interest (%) | 11.00% | 11.00% | 11.00% | 11.00% |
| Interest | 20.76 | 43.76 | 44.74 | 45.24 |

(₹ in lakh)

| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009-10 (pro-rata) | 2009-10 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) |
| Approved vide order dated 28.7.2011 | 0.84 | 1.09 | 1.56 | 2.86 | 3.39 | 9.92 |
| As claimed by petitioner | 0.86 | 1.12 | 1.55 | 2.85 | 3.39 | 9.94 |
| Allowed after true up | 0.86 | 1.11 | 1.54 | 2.83 | 3.36 | 9.87 |

(₹ in lakh)

| (Asset-7) | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|-------------------------------------|-----------------------|---------|---------|---------|
| Approved vide order dated 28.7.2011 | 20.69 | 45.01 | 45.52 | 45.91 |
| As claimed by petitioner | 20.78 | 43.81 | 44.79 | 45.28 |
| Allowed after true up | 20.76 | 43.76 | 44.74 | 45.24 |

35. The variation in IWC is on account of variation in IOL, Depreciation and ROE and further increase in ROE on account of applicable MAT rate during 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

36. The detailed computation of the various components of the trued up annual fixed charges for Asset-1 to 7 for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009-10 (pro-rata) | 2009-10 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) | 2010-11 (pro-rata) |
| Gross Block | | | | | | |
| Gross Opening Block | 907.90 | 2232.76 | 2928.81 | 4843.47 | 5866.06 | 6462.54 |
| Additional Capitalisation | 128.60 | 110.73 | 270.25 | 820.41 | 943.26 | 905.74 |
| Gross Closing Block | 1036.50 | 2343.49 | 3199.06 | 5663.88 | 6809.32 | 7368.28 |
| Average Gross Block | 972.20 | 2288.13 | 3063.94 | 5253.67 | 6337.69 | 6915.41 |
| | | | | | | |
| Depreciation | | | | | | |
| Rate of Depreciation (%) | 5.280 | 5.280 | 5.280 | 5.280 | 5.280 | 5.280 |
| Depreciable Value | 874.98 | 2059.32 | 2757.55 | 4728.31 | 5703.92 | 6223.87 |
| Elapsed Life (Beginning of the year) | 0 | 0 | 0 | 0 | 0 | 0 |
| Weighted Balance Useful | 25 | 25 | 25 | 25 | 25 | 25 |



| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|---|--------------|--------------|--------------|---------------|---------------|---------------|
| life of the assets | | | | | | |
| Remaining Depreciable Value | 874.98 | 2059.32 | 2757.55 | 4728.31 | 5703.92 | 6223.87 |
| Depreciation | 12.83 | 10.07 | 13.48 | 23.12 | 27.89 | 91.28 |
| | | | | | | |
| Interest on Loan | | | | | | |
| Gross Normative Loan | 635.53 | 1562.93 | 2050.17 | 3390.43 | 4106.24 | 4523.78 |
| Cumulative Repayment upto Previous Year | 0.00 | 12.83 | 22.90 | 36.38 | 59.50 | 87.38 |
| Net Loan-Opening | 635.53 | 1550.10 | 2027.27 | 3354.05 | 4046.74 | 4436.39 |
| Additional Capitalisation | 90.02 | 77.51 | 189.18 | 574.29 | 660.28 | 634.02 |
| Repayment during the year | 12.83 | 10.07 | 13.48 | 23.12 | 27.89 | 91.28 |
| Net Loan-Closing | 712.72 | 1617.54 | 2202.96 | 3905.22 | 4679.14 | 4979.13 |
| Average Loan | 674.12 | 1583.82 | 2115.12 | 3629.63 | 4362.94 | 4707.76 |
| Weighted Average Rate of Interest on Loan (%) | 8.8738 | 8.8632 | 8.8634 | 8.8578 | 8.8587 | 8.8522 |
| Interest | 14.96 | 11.70 | 15.62 | 26.79 | 32.21 | 104.19 |
| | | | | | | |
| Return on Equity | | | | | | |
| Opening Equity | 272.37 | 669.83 | 878.64 | 1453.04 | 1759.82 | 1938.76 |
| Additional Capitalisation | 38.58 | 33.22 | 81.08 | 246.12 | 282.98 | 271.72 |
| Closing Equity | 310.95 | 703.05 | 959.72 | 1699.16 | 2042.80 | 2210.48 |
| Average Equity | 291.66 | 686.44 | 919.18 | 1576.10 | 1901.31 | 2074.62 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT rate for the year (%) | 16.995 | 16.995 | 19.931 | 19.931 | 19.931 | 19.931 |
| Rate of Return on Equity (Pre Tax) (%) | 18.674 | 18.674 | 19.358 | 19.358 | 19.358 | 19.358 |
| Return on Equity (Pre Tax) | 13.62 | 10.68 | 14.83 | 25.43 | 30.67 | 100.40 |
| | | | | | | |
| Interest on Working Capital | | | | | | |
| Maintenance Spares | 0.00 | 1.31 | 2.08 | 4.16 | 4.85 | 14.54 |
| O & M expenses | 0.00 | 0.73 | 1.15 | 2.31 | 2.69 | 8.08 |
| Receivables | 7.04 | 7.05 | 9.89 | 17.64 | 21.07 | 67.12 |
| Total | 7.04 | 9.09 | 13.12 | 24.11 | 28.61 | 89.74 |
| Interest | 0.86 | 1.11 | 1.54 | 2.83 | 3.36 | 9.87 |
| | | | | | | |
| Annual Transmission Charges | | | | | | |
| Depreciation | 12.83 | 10.07 | 13.48 | 23.12 | 27.89 | 91.28 |
| Interest on Loan | 14.96 | 11.70 | 15.62 | 26.79 | 32.21 | 104.19 |
| Return on Equity | 13.62 | 10.68 | 14.83 | 25.43 | 30.67 | 100.40 |
| Interest on Working Capital | 0.86 | 1.11 | 1.54 | 2.83 | 3.36 | 9.87 |
| O & M Expenses | 0.00 | 8.73 | 13.85 | 27.70 | 32.32 | 96.95 |
| Total | 42.27 | 42.29 | 59.32 | 105.87 | 126.44 | 402.69 |



(₹ in lakh)

| (Asset-7) | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|---|-----------------------|---------|---------|---------|
| Gross Block | | | | |
| Gross Opening Block | 7275.35 | 7968.71 | 8363.43 | 8366.51 |
| Additional Capitalisation | 693.36 | 394.72 | 3.08 | 0.00 |
| Gross Closing Block | 7968.71 | 8363.43 | 8366.51 | 8366.51 |
| Average Gross Block | 7622.03 | 8166.07 | 8364.97 | 8366.51 |
| | | | | |
| Depreciation | | | | |
| Rate of Depreciation (%) | 5.280 | 5.280 | 5.280 | 5.280 |
| Depreciable Value | 6859.83 | 7349.46 | 7528.47 | 7529.86 |
| Elapsed Life (Beginning of the year) | 0 | 1 | 2 | 3 |
| Weighted Balance Useful life of the assets | 25 | 24 | 23 | 22 |
| Remaining Depreciable Value | 6859.83 | 6969.57 | 6717.41 | 6277.13 |
| Depreciation | 201.22 | 431.17 | 441.67 | 441.75 |
| | | | | |
| Interest on Loan | | | | |
| Gross Normative Loan | 5092.74 | 5578.09 | 5854.40 | 5856.55 |
| Cumulative Repayment upto Previous Year | 178.67 | 379.89 | 811.06 | 1252.73 |
| Net Loan-Opening | 4914.08 | 5198.21 | 5043.34 | 4603.83 |
| Additional Capitalisation | 485.35 | 276.30 | 2.16 | 0.00 |
| Repayment during the year | 201.22 | 431.17 | 441.67 | 441.75 |
| Net Loan-Closing | 5198.21 | 5043.34 | 4603.83 | 4162.08 |
| Average Loan | 5056.14 | 5120.77 | 4823.58 | 4382.95 |
| Weighted Average Rate of Interest on Loan (%) | 8.8428 | 8.8554 | 8.8657 | 8.8632 |
| Interest | 223.55 | 453.46 | 427.64 | 388.47 |
| | | | | |
| Return on Equity | | | | |
| Opening Equity | 2182.60 | 2390.61 | 2509.03 | 2509.95 |
| Additional Capitalisation | 208.01 | 118.42 | 0.92 | 0.00 |
| Closing Equity | 2390.61 | 2509.03 | 2509.95 | 2509.95 |
| Average Equity | 2286.61 | 2449.82 | 2509.49 | 2509.95 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT rate for the year (%) | 19.931 | 20.008 | 20.008 | 20.961 |
| Rate of Return on Equity (Pre Tax) (%) | 19.358 | 19.377 | 19.377 | 19.610 |
| Return on Equity (Pre Tax) | 221.32 | 474.70 | 486.26 | 492.20 |
| | | | | |
| Interest on Working Capital | | | | |
| Maintenance Spares | 29.09 | 61.50 | 65.02 | 68.73 |
| O & M expenses | 16.16 | 34.17 | 36.12 | 38.19 |
| Receivables | 143.46 | 302.18 | 305.63 | 304.31 |



| (Asset-7) | 2010-11 (pro-rata) | 2011-12 | 2012-13 | 2013-14 |
|------------------------------------|-----------------------|----------------|----------------|----------------|
| Total | 188.70 | 397.85 | 406.76 | 411.23 |
| Interest | 20.76 | 43.76 | 44.74 | 45.24 |
| | | | | |
| Annual Transmission Charges | | | | |
| Depreciation | 201.22 | 431.17 | 441.67 | 441.75 |
| Interest on Loan | 223.55 | 453.46 | 427.64 | 388.47 |
| Return on Equity | 221.32 | 474.70 | 486.26 | 492.20 |
| Interest on Working Capital | 20.76 | 43.76 | 44.74 | 45.24 |
| O & M Expenses | 193.90 | 409.99 | 433.44 | 458.22 |
| Total | 860.75 | 1813.09 | 1833.76 | 1825.88 |

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

| | (₹ in lakh) | | | | |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| (Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | 445.59 | 448.64 | 448.64 | 448.64 | 448.64 |
| Interest on Loan | 353.24 | 317.25 | 277.50 | 237.74 | 197.96 |
| Return on equity | 496.47 | 499.87 | 499.87 | 499.87 | 499.87 |
| Interest on Working Capital | 53.13 | 53.23 | 53.11 | 53.03 | 52.96 |
| O & M Expenses | 422.10 | 436.10 | 450.59 | 465.57 | 480.97 |
| Total | 1770.53 | 1755.09 | 1729.71 | 1704.85 | 1680.40 |

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

| | (₹ in lakh) | | | | |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| (Combined Asset-1 to 7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Maintenance Spares | 63.32 | 65.42 | 67.59 | 69.84 | 72.15 |
| O & M expenses | 35.18 | 36.34 | 37.55 | 38.80 | 40.08 |
| Receivables | 295.09 | 292.52 | 288.29 | 284.14 | 280.07 |
| Total | 393.59 | 394.28 | 393.43 | 392.78 | 392.30 |
| Rate of Interest (%) | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% |
| Interest | 53.13 | 53.23 | 53.11 | 53.03 | 52.96 |

Capital Cost

39. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-



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

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

40. The petitioner has claimed capital expenditure of ₹8381.31 lakh as on 31.3.2014 for Combined Asset-1 to 7. We have considered trued up capital cost of ₹8366.51 lakh as on 31.3.2014 for Combined Asset-1 to 7 to workout the tariff for the tariff period 2014-19.

Additional Capital Expenditure

41. The petitioner has projected additional capitalization of ₹115.60 lakh for Combined Asset-1 to 7 for 2014-15 towards balance and retention payments. The total Capital Cost including additional capitalisation for Combined Asset-1 to 7 and is less than the apportioned approved cost. Hence, we have allowed additional capitalization of ₹115.60 lakh for Combined Asset-1 to 7 for 2014-15 towards balance and retention payments under Regulation 14(3)(v) of 2014 Tariff Regulations and have considered the same for tariff computation.

(₹ in lakh)

| Cost as per investment approval for combined Asset-1 to 7 is ₹10584 lakh | | | | | | | | |
|--|---------------------------------------|-------------------------------------|---------|---------|---------|---------|---------------------------------|--|
| Particulars | Admitted capital cost as on 31.3.2014 | Additional capitalisation projected | | | | | Total additional capitalisation | Total capital cost including additional capitalisation as on 31.3.2019 |
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | | |
| | | | | | | | | |



| Cost as per investment approval for combined Asset-1 to 7 is ₹10584 lakh | | | | | | | | |
|--|---------------------------------------|-------------------------------------|---------|---------|---------|---------|---------------------------------|--|
| Particulars | Admitted capital cost as on 31.3.2014 | Additional capitalisation projected | | | | | Total additional capitalisation | Total capital cost including additional capitalisation as on 31.3.2019 |
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | | |
| Approved | 8366.51 | 115.60 | 0.00 | 0.00 | 0.00 | 0.00 | 115.60 | 8482.11 |

Debt:EquityRatio

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

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

43. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014 and also for additional capitalization claimed during 2014-19. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. Further, we have considered debt:equity ratio of 70:30 for additional capitalization during 2014-15. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

| (Combined Asset-1 to 7) | As on 1.4.2014 | | Additional capitalization during 2014-15 | | As on 31.3.2019 | |
|-------------------------|--------------------|---------------|--|---------------|--------------------|---------------|
| | Amount (in ₹ lakh) | (%) | Amount (in ₹ lakh) | (%) | Amount (in ₹ lakh) | (%) |
| Debt | 5856.55 | 70.00 | 80.92 | 70.00 | 5937.47 | 70.00 |
| Equity | 2509.95 | 30.00 | 34.68 | 30.00 | 2544.63 | 30.00 |
| Total | 8366.51 | 100.00 | 115.60 | 100.00 | 8482.11 | 100.00 |

Interest on Loan (“IOL”)



44. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.”

45. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

| | (₹ in lakh) | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| (Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Gross loan opening | 5856.55 | 5937.47 | 5937.47 | 5937.47 | 5937.47 |
| Cumulative Repayment upto COD/previous year | 1694.48 | 2139.28 | 2587.14 | 3034.99 | 3482.85 |
| Net Loan-Opening | 4162.08 | 3798.19 | 3350.34 | 2902.48 | 2454.63 |
| Additions during the year | 80.92 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 444.80 | 447.86 | 447.86 | 447.86 | 447.86 |
| Net Loan-Closing | 3798.19 | 3350.34 | 2902.48 | 2454.63 | 2006.77 |
| Average Loan | 3980.13 | 3574.26 | 3126.41 | 2678.55 | 2230.70 |
| Rate of Interest (%) | 8.8634 | 8.8650 | 8.8658 | 8.8660 | 8.8659 |
| Interest | 352.77 | 316.86 | 277.18 | 237.48 | 197.77 |

Return on Equity("ROE")

46. Clause (1)& (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

"24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system"

"25. Tax on Return on Equity:

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

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

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess."

47. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE of 15.50% with MAT rate as per the above Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

48. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including

interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

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

| | (₹ in lakh) | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| (Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Opening Equity | 2509.95 | 2544.63 | 2544.63 | 2544.63 | 2544.63 |
| Addition to Equity during the year | 34.68 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 2544.63 | 2544.63 | 2544.63 | 2544.63 | 2544.63 |
| Average Equity | 2527.29 | 2544.63 | 2544.63 | 2544.63 | 2544.63 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT rate for the year (%) | 20.961 | 20.961 | 20.961 | 20.961 | 20.961 |
| Rate of Return on Equity (Pre Tax) (%) | 19.610 | 19.610 | 19.610 | 19.610 | 19.610 |
| Return on Equity (Pre Tax) | 495.60 | 499.00 | 499.00 | 499.00 | 499.00 |

Depreciation

50. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis"

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

51. We have computed depreciation considering capital expenditure of ₹8366.51 lakh as on 31.3.2014 for Combined Asset-1 to 7. In addition we have also considered additional capitalization of ₹115.60 lakh for 2014-19 tariff period. We have allowed depreciation under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)

| (Combined Asset-1 to 7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Opening Gross block | 8366.51 | 8482.11 | 8482.11 | 8482.11 | 8482.11 |
| Additional Capitalisation | 115.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gross block at the end of the year | 8482.11 | 8482.11 | 8482.11 | 8482.11 | 8482.11 |
| Average gross block | 8424.31 | 8482.11 | 8482.11 | 8482.11 | 8482.11 |
| Rate of Depreciation (%) | 5.280 | 5.280 | 5.280 | 5.280 | 5.280 |
| Depreciable Value | 7581.88 | 7633.90 | 7633.90 | 7633.90 | 7633.90 |
| Elapsed Life of the assets at beginning of the year | 4 | 5 | 6 | 7 | 8 |



| | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| (Combined Asset-1 to 7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Weighted Balance Useful life of the assets | 21 | 20 | 19 | 18 | 17 |
| Remaining Depreciable Value | 5887.40 | 5494.61 | 5046.76 | 4598.90 | 4151.05 |
| Depreciation | 444.80 | 447.86 | 447.86 | 447.86 | 447.86 |

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

52. The petitioner has computed normative O&M Expenses as per sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M Expenses have been worked out as given hereunder:-

| | | | | | |
|--|--------------|--------------|---------------|---------------|---------------|
| (Combined Asset-1 to 7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O&M Expense for Bay | | | | | |
| Norm (₹lakh/Bay) | | | | | |
| 400 kV | 60.30 | 62.30 | 64.37 | 66.51 | 68.71 |
| Bays | | | | | |
| 400 kV | 7 | 7 | 7 | 7 | 7 |
| Total O&M Expense (Bay) (₹lakh) | 422.1 | 436.1 | 450.59 | 465.57 | 480.97 |

53. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner Company is due during 2014-19 and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

54. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

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

| (₹ in lakh) | | | | | |
|------------------------------------|--------------|--------------|---------------|---------------|---------------|
| Particulars(Combined Asset-1 to 7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O&M Expenses Allowed | 422.1 | 436.1 | 450.59 | 465.57 | 480.97 |

Interest on Working Capital (“IWC”)

56. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

“28. Interest on Working Capital

(c)(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month”

“(5)Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

57. The petitioner has submitted that it has computed Interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.



58. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital as determined by the Commission is shown in the table below:-

| (₹ in lakh) | | | | | |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| (Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Maintenance Spares | 63.32 | 65.42 | 67.59 | 69.84 | 72.15 |
| O & M Expenses | 35.18 | 36.34 | 37.55 | 38.80 | 40.08 |
| Receivables | 294.73 | 292.17 | 287.95 | 283.81 | 279.75 |
| Total | 393.22 | 393.92 | 393.09 | 392.45 | 391.98 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest | 53.08 | 53.18 | 53.07 | 52.98 | 52.92 |

Annual Transmission Charges

59. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

| (₹ in lakh) | | | | | |
|--|---------|---------|---------|---------|---------|
| (Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Gross Block | | | | | |
| Opening Gross Block | 8366.51 | 8482.11 | 8482.11 | 8482.11 | 8482.11 |
| Additional Capitalisation | 115.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 8482.11 | 8482.11 | 8482.11 | 8482.11 | 8482.11 |
| Average Gross Block | 8424.31 | 8482.11 | 8482.11 | 8482.11 | 8482.11 |
| | | | | | |
| Depreciation | | | | | |
| Rate of Depreciation (%) | 5.280% | 5.280% | 5.280% | 5.280% | 5.280% |
| Depreciable Value | 7581.88 | 7633.90 | 7633.90 | 7633.90 | 7633.90 |
| Elapsed Life (Beginning of the year) | 4 | 5 | 6 | 7 | 8 |
| Weighted Balance Useful life of the assets | 21 | 20 | 19 | 18 | 17 |
| Remaining Depreciable Value | 5887.40 | 5494.61 | 5046.76 | 4598.90 | 4151.05 |
| Depreciation | 444.80 | 447.86 | 447.86 | 447.86 | 447.86 |
| | | | | | |
| Interest on Loan | | | | | |



| (Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Gross Normative Loan | 5856.55 | 5937.47 | 5937.47 | 5937.47 | 5937.47 |
| Cumulative Repayment upto Previous Year | 1694.48 | 2139.28 | 2587.14 | 3034.99 | 3482.85 |
| Net Loan-Opening | 4162.08 | 3798.19 | 3350.34 | 2902.48 | 2454.63 |
| Additions | 80.92 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 444.80 | 447.86 | 447.86 | 447.86 | 447.86 |
| Net Loan-Closing | 3798.19 | 3350.34 | 2902.48 | 2454.63 | 2006.77 |
| Average Loan | 3980.13 | 3574.26 | 3126.41 | 2678.55 | 2230.70 |
| Weighted Average Rate of Interest on Loan (%) | 8.8634 | 8.8650 | 8.8658 | 8.8660 | 8.8659 |
| Interest | 352.77 | 316.86 | 277.18 | 237.48 | 197.77 |
| | | | | | |
| Return on Equity | | | | | |
| Opening Equity | 2509.95 | 2544.63 | 2544.63 | 2544.63 | 2544.63 |
| Additions | 34.68 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 2544.63 | 2544.63 | 2544.63 | 2544.63 | 2544.63 |
| Average Equity | 2527.29 | 2544.63 | 2544.63 | 2544.63 | 2544.63 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT Rate for the year 2013-14 (%) | 20.961 | 20.961 | 20.961 | 20.961 | 20.961 |
| Rate of Return on Equity (Pre Tax) (%) | 19.610 | 19.610 | 19.610 | 19.610 | 19.610 |
| Return on Equity (Pre Tax) | 495.60 | 499.00 | 499.00 | 499.00 | 499.00 |
| | | | | | |
| Interest on Working Capital | | | | | |
| Maintenance Spares | 63.32 | 65.42 | 67.59 | 69.84 | 72.15 |
| O & M expenses | 35.18 | 36.34 | 37.55 | 38.80 | 40.08 |
| Receivables | 294.73 | 292.17 | 287.95 | 283.81 | 279.75 |
| Total | 393.22 | 393.92 | 393.09 | 392.45 | 391.98 |
| Interest | 53.08 | 53.18 | 53.07 | 52.98 | 52.92 |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | 444.80 | 447.86 | 447.86 | 447.86 | 447.86 |
| Interest on Loan | 352.77 | 316.86 | 277.18 | 237.48 | 197.77 |
| Return on Equity | 495.60 | 499.00 | 499.00 | 499.00 | 499.00 |
| Interest on Working Capital | 53.08 | 53.18 | 53.07 | 52.98 | 52.92 |
| O & M Expenses | 422.10 | 436.10 | 450.59 | 465.57 | 480.97 |
| Total | 1768.36 | 1753.00 | 1727.70 | 1702.89 | 1678.52 |

Deferred Tax Liability

60. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized.



However, the COD of the asset is after 2009, hence the claim of the petitioner is not maintainable.

Filing Fee and Publication Expenses

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

Licence Fee and RLDC Fees and Charges

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

Service Tax

63. The petitioner has sought to recover Service Tax on Transmission Charges separately from the Respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

64. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.

65. This Order disposes of Petition No. 533/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO****(₹ in lakh)**

| Particulars (Asset-1) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------------|
| BOND XXVIII-DRAWL ON 01-DEC-2009 | 9.33% | 38.00 | 0.00 | 38.00 |
| BOND XXIX-DRAWL ON 01-DEC-2009 | 9.20% | 80.00 | 0.00 | 80.00 |
| BOND XXX-ADDCAP FOR 2009-2010 Add Cap- | 8.80% | 0.00 | 67.52 | 67.52 |
| BOND XXX-DRAWL ON 01-DEC-2009 | 8.80% | 517.53 | 0.00 | 517.53 |
| BOND XXXIII-ADDCAP FOR 2009-2010 DRAWL ON 31-MAR-2010 | 8.64% | 0.00 | 22.50 | 22.50 |
| BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXIV-ADDCAP FOR 2010-2011 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 635.53 | 90.02 | 725.55 |

(₹ in lakh)

| Particulars (Asset-2) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------|
| BOND XXVIII-DOCO | 9.33% | 88.00 | 0.00 | 88.00 |
| BOND XXIX-DOCO | 9.20% | 147.00 | 0.00 | 147.00 |
| BOND XXX-ADDCAP FOR 2009-2010 Add Cap- | 8.80% | 0.00 | 27.41 | 27.41 |
| BOND XXX-DOCO | 8.80% | 1337.97 | 0.00 | 1337.97 |
| BOND XXXIII-ADDCAP FOR 2009-2010 Add Cap- | 8.64% | 0.00 | 50.08 | 50.08 |
| BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXIV-ADDCAP FOR 2010-2011 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |



| Particulars (Asset-2) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------|
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 1572.97 | 77.49 | 1650.46 |

(₹ in lakh)

| Particulars (Asset-3) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------|
| BOND XXVIII-DOCO | 9.33% | 113.00 | 0.00 | 113.00 |
| BOND XXIX-DOCO | 9.20% | 197.00 | 0.00 | 197.00 |
| BOND XXX-DOCO | 8.80% | 1665.41 | 0.00 | 1665.41 |
| BOND XXXI-DOCO | 8.90% | 39.40 | 0.00 | 39.40 |
| BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap- | 8.64% | 0.00 | 31.52 | 31.52 |
| BOND XXXIII-DOCO | 8.64% | 50.08 | 0.00 | 50.08 |
| BOND XXXIV-ADDCAP FOR 2010-2011 Add Cap- | 0.00% | 0.00 | 63.03 | 63.03 |
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 2064.89 | 94.55 | 2159.44 |

(₹ in lakh)

| Particulars (Asset-4) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------|
| BOND XXVIII-DOCO | 9.33% | 163.00 | 0.00 | 163.00 |
| BOND XXIX-DOCO | 9.20% | 247.00 | 0.00 | 247.00 |
| BOND XXX-DOCO | 8.80% | 2624.07 | 0.00 | 2624.07 |
| BOND XXXI-DOCO | 8.90% | 337.10 | 0.00 | 337.10 |
| BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap- | 8.64% | 0.00 | 68.69 | 68.69 |
| BOND XXXIII-DOCO | 8.64% | 65.84 | 0.00 | 65.84 |
| BOND XXXIV-ADDCAP FOR 2010-2011 Add Cap- | 8.84% | 0.00 | 284.36 | 284.36 |



| Particulars (Asset-4) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------|
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 3437.01 | 353.05 | 3790.06 |

(₹ in lakh)

| Particulars (Asset-5) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|---------|
| BOND XXVIII-DOCO | 9.33% | 193.00 | 0.00 | 193.00 |
| BOND XXIX-DOCO | 9.20% | 422.00 | 0.00 | 422.00 |
| BOND XXX-DOCO | 8.80% | 2848.04 | 0.00 | 2848.04 |
| BOND XXXI-DOCO | 8.90% | 357.10 | 0.00 | 357.10 |
| BOND XXXIII-ADDCAP FOR 2010-2011 Add Cap- | 8.64% | 0.00 | 30.31 | 30.31 |
| BOND XXXIII-DOCO | 8.64% | 346.19 | 0.00 | 346.19 |
| BOND XXXIV-ADDCAP FOR 2010-2011 Add Cap- | 8.84% | 0.00 | 408.74 | 408.74 |
| BOND XXXV-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 4166.33 | 439.05 | 4605.38 |

(₹ in lakh)

| Particulars (Asset-6) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|-----------------------|-------------------|--------------------|------------------------------------|---------|
| BOND XXVIII-DOCO | 9.33% | 203.00 | 0.00 | 203.00 |
| BOND XXIX-DOCO | 9.20% | 447.00 | 0.00 | 447.00 |
| BOND XXX-DOCO | 8.80% | 2965.00 | 0.00 | 2965.00 |
| BOND XXXI-DOCO | 8.90% | 397.00 | 0.00 | 397.00 |



| Particulars (Asset-6) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|----------------|
| BOND XXXIII-DOCO | 8.64% | 536.15 | 0.00 | 536.15 |
| BOND XXXIV-ADDCAP FOR 2010-2011 Add Cap- | 8.84% | 0.00 | 386.29 | 386.29 |
| BOND XXXIV-DOCO | 8.84% | 35.71 | 0.00 | 35.71 |
| BOND XXXV-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 4583.86 | 386.29 | 4970.15 |

(₹ in lakh)

| Particulars (Asset-7) | Interest Rate (%) | Gross opening loan | Additions during the tariff period | Total |
|---|-------------------|--------------------|------------------------------------|----------------|
| BOND XXVIII-DOCO | 9.33% | 215.00 | 0.00 | 215.00 |
| BOND XXIX-DOCO | 9.20% | 459.00 | 0.00 | 459.00 |
| BOND XXX-DOCO | 8.80% | 2985.00 | 0.00 | 2985.00 |
| BOND XXXI-DOCO | 8.90% | 397.00 | 0.00 | 397.00 |
| BOND XXXIII-DOCO | 8.64% | 800.00 | 0.00 | 800.00 |
| BOND XXXIV-ADDCAP FOR Add Cap- | 8.84% | 0.00 | 174.94 | 174.94 |
| BOND XXXIV-DOCO | 8.84% | 247.06 | 0.00 | 247.06 |
| BOND XXXV-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 0.00% | 0.00 | 0.00 | 0.00 |
| Total | | 5103.06 | 174.94 | 5278.00 |



**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR TARIFF PERIOD 2009-14**

(₹ in lakh)

| Particulars | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 |
|--|---------|---------|---------|---------|---------|---------|
| | 2009-10 | 2009-10 | 2010-11 | 2010-11 | 2010-11 | 2010-11 |
| Gross Opening Loan | 635.53 | 1572.97 | 2064.89 | 3437.01 | 4166.33 | 4583.86 |
| Cummulative Repayment of loan upto previous year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Opening | 635.53 | 1572.97 | 2064.89 | 3437.01 | 4166.33 | 4583.86 |
| Additions during the year | 90.02 | 77.49 | 94.58 | 353.05 | 439.05 | 386.29 |
| Repayment during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Net Loan Closing | 725.55 | 1650.46 | 2159.47 | 3790.06 | 4605.38 | 4970.15 |
| Average Loan | 680.54 | 1611.72 | 2112.18 | 3613.54 | 4385.86 | 4777.01 |
| Weighted Average Rate of Interest | 8.8738% | 8.8632% | 8.8634% | 8.8578% | 8.8587% | 8.8522% |
| Interest | 60.39 | 142.85 | 187.21 | 320.08 | 388.53 | 422.87 |

(₹ in lakh)

| Details of Loan(Asset-7) | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---|---------|---------|---------|---------|
| Gross Opening Loan | 5103.06 | 5278.00 | 5554.29 | 5556.45 |
| Cumulative Repayment of loan upto previous year | 0.00 | 0.00 | 0.00 | 56.17 |
| Net Loan Opening | 5103.06 | 5278.00 | 5554.29 | 5500.28 |
| Additions during the year | 174.94 | 276.29 | 2.16 | 0.00 |
| Repayment during the year | 0.00 | 0.00 | 56.17 | 338.00 |
| Net Loan Closing | 5278.00 | 5554.29 | 5500.28 | 5162.28 |
| Average Loan | 5190.53 | 5416.15 | 5527.29 | 5331.28 |
| Weighted Average Rate of Interest (%) | 8.8428% | 8.8554% | 8.8657% | 8.8632% |
| Interest | 458.99 | 479.62 | 490.03 | 472.52 |



ANNEXURE-II**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO****(₹ in lakh)**

| Particulars (Combined Asset-1 to 7) | Interest Rate (%) | Loan deployed as on 1.4.2014 | Additions during the tariff period | Total |
|---|-------------------|------------------------------|------------------------------------|----------------|
| BOND XXVIII-DOCO | 9.33% | 215.00 | 0.00 | 215.00 |
| BOND XXIX-DOCO | 9.20% | 459.00 | 0.00 | 459.00 |
| BOND XXX-DOCO | 8.80% | 2985.00 | 0.00 | 2985.00 |
| BOND XXXI-DOCO | 8.90% | 397.00 | 0.00 | 397.00 |
| BOND XXXIII-DOCO | 8.64% | 800.00 | 0.00 | 800.00 |
| BOND XXXIV-ADDCAP FOR Add Cap- | 8.84% | 174.94 | 0.00 | 174.94 |
| BOND XXXIV-DOCO | 8.84% | 247.06 | 0.00 | 247.06 |
| BOND XXXV-ADDCAP FOR 2011-2012 Add Cap- | 9.64% | 17.00 | 0.00 | 17.00 |
| BOND XXXVI-ADDCAP FOR 2011-2012 Add Cap- | 9.35% | 173.00 | 0.00 | 173.00 |
| BOND XXXVII-ADDCAP FOR 2011-2012 Add Cap- | 9.25% | 86.29 | 0.00 | 86.29 |
| BOND XXXVII-ADDCAP FOR 2012-2013 Add Cap- | 9.25% | 2.16 | 0.00 | 2.16 |
| Total | | 5556.45 | 0.00 | 5556.45 |

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2014-19**(₹ in lakh)**

| Details of Loan(Combined Asset-1 to7) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Gross Opening Loan | 5556.45 | 5556.45 | 5556.45 | 5556.45 | 5556.45 |
| Cumulative Repayment of loan upto previous year | 394.16 | 834.00 | 1282.63 | 1742.79 | 2202.95 |
| Net Loan Opening | 5162.29 | 4722.45 | 4273.82 | 3813.66 | 3353.50 |
| Additions during the year | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 439.84 | 448.63 | 460.16 | 460.16 | 460.16 |
| Net Loan Closing | 4722.45 | 4273.82 | 3813.66 | 3353.50 | 2893.34 |
| Average Loan | 4942.37 | 4498.14 | 4043.74 | 3583.58 | 3123.42 |
| Weighted Average Rate of Interest (%) | 8.86% | 8.87% | 8.87% | 8.87% | 8.87% |
| Interest | 438.06 | 398.76 | 358.51 | 317.72 | 276.92 |

