CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 208/TT/2015

Coram:

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

Date of Hearing : 06.04.2016 Date of Order : 26.04.2016

In the matter of:

Determination of transmission tariff of **Asset-1**: Bhiwani-Hisar 400 kV D/C line along with associated bays at Bhiwani and Hisar, **Asset-2**: LILO of Moga-Bhiwadi 400 kV D/C line at Hisar along with associated bays at Hisar under "Northern Region System Strengthening Scheme XXV" in Northern Region for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

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

.....Petitioner

Versus

- Rajasthan Rajya Vidyut Prasaran Nigam Ltd. Vidyut Bhawan, Vidyut Marg, Jaipur-302 005
- Ajmer Vidyut Vitran Nigam Ltd.
 400 kV GSS Building (Ground Floor), Ajmer Road Heerapura, Jaipur
- Jaipur Vidyut Vitran Nigam Ltd.
 400 kV GSS Building (Ground Floor), Ajmer Road Heerapura, Jaipur

- Jodhpur Vidyut Vitran Nigam Ltd.
 400 kV GSS Building (Ground Floor), Ajmer Road Heerapura, Jaipur
- Himachal Pradesh State Electricity Board, Vidyut Bhawan, Kumar House Complex Building II Shimla-171004
- 6. Punjab State Electricity Board, Thermal Shed T1 A, Near 22 Phatak Patiala-147001
- 7. Haryana Power Purchase Centre Shakti Bhawan, Sector-6 Panchkula (Haryana) 134 109
- Power Development Deptt. Govt. of Jammu & Kashmir Mini Secretariat, Jammu
- 9. Uttar Pradesh Power Corporation Ltd. Shakti Bhawan, 14, Ashok Marg Lucknow- 226001
- Delhi Transco Ltd.
 Shakti Sadan, Kotla Road
 New Delhi- 110002
- BSES Yamuna Power Ltd.
 BSES Bhawan, Nehru Place
 New Delhi
- BSES Rajdhani Power Ltd.
 BSES Bhawan, Nehru Place
 New Delhi
- North Delhi Power Ltd.
 Power Trading & Load Dispatch Group
 Cennet Building
 Pitampura, New Delhi-110034
- 14. Chandigarh Administration Sector-9, Chandigarh
- 15. Uttarakhand Power Corporation Ltd.



Urja Bhawan, Kanwali Road Dehradun

- 16. North Central Railway Allahabad
- 17. New Delhi Municipal Council Palika Kendra, Sansad Marg New Delhi-110002

....Respondents

The following were present:

For Petitioner: Smt Sangeeta Edwards, PGCIL

> Shri M.M. Mondal, PGCIL Shri S.K. Venkatesan, PGCIL Shri Rakesh Prasad, PGCIL

Shri S.S. Raju, PGCIL

Shri Subhash C.Taneja, PGCIL Shri Pankaj Sharma, PGCIL Shri Jasbir Singh, PGCIL

Shri Mayank Sharma, Advocate, PSPCL For Respondent:

Shri Gaurav Gupta, Advocate, PSPCL

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for Bhiwani-Hisar 400 kV D/C line along with associated bays at Bhiwani and Hisar (referred as "Asset-1") and LILO of Moga-Bhiwadi 400 kV D/C line at Hisar along with associated bays at Hisar (referred as "Asset-2") under "Northern Region System Strengthening Scheme XXV" in Northern Region (hereinafter referred as "transmission asset") under Central Electricity Regulatory Commission (Terms and Conditions of Tariff)

Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from COD of respective assets to 31.3.2019.

- 2. The respondents are mostly distribution licensees or centralised power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern Region.
- 3. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of Electricity Act, 2003 ("the Act"). The petitioner in original petition had submitted the tariff forms for the assets on the basis of management certificates and anticipated COD. The petitioner was directed to submit the status of commissioning of assets along with Auditor's Certificate and revised tariff forms. Further, the petitioner was directed to submit the RLDC certificates in support of trial operation or commercial operation date for the assets. In response, the petitioner, vide its affidavit dated 12.4.2016, has submitted the actual CODs of the assets along revised tariff forms and Auditor's Certificate. Further, the petitioner vide its affidavit dated 1.4.2016 has submitted the RLDC certificates for all the assets. No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. None of the respondents have filed any reply to the petition. The hearing in this matter was held on 6.4.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.
- 4. The brief facts of the case are as follows:-



- (a) Investment approval was accorded by Board of Directors of the petitioner vide the Memorandum No. C/CP/NRSS XXV dated 24.9.2013 at an estimated cost of ₹68069 lakh, which included IDC of ₹3595 lakh (based on June, 2013 price level).
- (b) The scope of work covered under the project is as follows:-

Transmission Lines:

- i) Jaipur (RVPNL)- Bhiwani 765 kV S/C line (2nd): 255 km
- ii) Bhiwani Hisar 400 kV D/C line: 55 km
- iii) LILO of Moga-Bhiwadi 400 kV D/C line at Hisar: 2 km

Sub-station:

- i) Extension of 765/400 kV Bhiwani Sub-station
- ii) Extension of 765/400 kV Hisar Sub-station
- iii) Extension of 765/400 kV Jaipur (RVPNL) Sub-station

Reactive Compensation:

- i) 765 kV, 240 MVAR bus reactors at each end of Jaipur (RVPNL)
 Bhiwani line
- (c) The transmission asset was scheduled to be commissioned within 30 months from the date of investment approval by Board of Directors i.e. 19.9.2013. Therefore, the scheduled date of commissioning (SCOD) of the transmission system works out to 18.3.2016 against which the Asset-1 and Asset-2 has been commissioned on 2.11.2015 and 2.7.2015, respectively. Hence, the assets have been commissioned much before the SCOD and there is no time over-run.

- 5. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.
- The petitioner has claimed the transmission charges as under:-6.

(₹ in lakh)

| Asset-1 | | | | | | | | |
|-----------------------------|-----------------------|---------|---------|---------|--|--|--|--|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | | | |
| Depreciation | 196.40 | 521.70 | 541.90 | 546.80 | | | | |
| Interest on Loan | 175.74 | 445.01 | 428.78 | 395.88 | | | | |
| Return on equity | 226.56 | 601.66 | 624.89 | 630.52 | | | | |
| Interest on Working Capital | 20.43 | 52.68 | 53.86 | 53.91 | | | | |
| O & M Expenses | 120.26 | 300.19 | 310.16 | 320.44 | | | | |
| Total | 739.39 | 1921.24 | 1959.59 | 1947.55 | | | | |

(₹ in lakh)

| Asset-2 | | | | | | | |
|-----------------------------|-----------------------|---------|---------|---------|--|--|--|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | | |
| Depreciation | 101.36 | 178.78 | 197.77 | 202.49 | | | |
| Interest on Loan | 72.87 | 122.95 | 126.92 | 118.43 | | | |
| Return on equity | 112.99 | 199.01 | 220.05 | 225.29 | | | |
| Interest on Working Capital | 16.93 | 25.79 | 27.28 | 27.80 | | | |
| O & M Expenses | 186.78 | 258.24 | 266.82 | 275.65 | | | |
| Total | 490.93 | 784.77 | 838.84 | 849.66 | | | |

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

| Asset-1 | | | | | | | |
|--------------------|---------|---------|---------|---------|--|--|--|
| Particulars | 2015-16 | 2016-17 | 2017-18 | 2018-19 | | | |
| Maintenance Spares | 43.58 | 45.03 | 46.52 | 48.07 | | | |
| O & M Expenses | 24.21 | 25.02 | 25.85 | 26.70 | | | |
| Receivables | 297.74 | 320.21 | 326.60 | 324.59 | | | |
| Total | 365.53 | 390.26 | 398.97 | 399.36 | | | |
| Rate of Interest | 13.50 | 13.50 | 13.50 | 13.50 | | | |
| Interest | 49.35 | 52.68 | 53.86 | 53.91 | | | |
| Pro-rata Interest | 20.43 | 52.68 | 53.86 | 53.91 | | | |

(₹ in lakh)

| Asset-2 | | | | | | | | |
|--------------------|---------|---------|---------|---------|--|--|--|--|
| Particulars | 2015-16 | 2016-17 | 2017-18 | 2018-19 | | | | |
| Maintenance Spares | 37.49 | 38.74 | 40.02 | 41.35 | | | | |
| O & M Expenses | 20.83 | 21.52 | 22.24 | 22.97 | | | | |
| Receivables | 109.49 | 130.80 | 139.81 | 141.61 | | | | |
| Total | 167.81 | 191.06 | 202.07 | 205.93 | | | | |
| Rate of Interest | 13.50 | 13.50 | 13.50 | 13.50 | | | | |
| Interest | 22.65 | 25.79 | 27.28 | 27.80 | | | | |
| Pro-rata Interest | 16.93 | 25.79 | 27.28 | 27.80 | | | | |

Commercial Operation Date ("COD")

- 8. The petitioner has claimed the date of the commercial operation of the Asset-1 and Asset-2 as 2.11.2015 and 2.7.2015, respectively. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-
 - **"4. Date of Commercial Operation:** The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

[xxx

- (3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:
- (i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:
- (ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."

9. The petitioner, vide its affidavit dated 1.4.2016, has submitted RLDC certificate issued by NRLDC, POSOCO for Assets-1 and 2 in support of the claim of commercial operation in accordance with Regulation 5(2) read with Regulation 4(3) of the 2014 Tariff Regulations indicating completion of successful trial operation. AAccordingly, the commercial operation date of the transmission asset has been considered as 2.11.2015 and 2.7.2015 for Asset-1 and Asset-2, respectively and the tariff is worked out from COD to 31.3.2019.

Capital Cost

10. The details of apportioned approved cost, capital cost as on date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the instant assets are as under:-

(₹ in lakh)

| <i>I</i> | Approved | Capital | Additio | nal capitali | Total | |
|----------|----------------|-------------------|---------|--------------|-------------|---------------------------------|
| Asset | set apportione | cost as on COD | 2015-16 | 2016- 17 | 2017- 18 | estimated completion cost |
| Asset-1 | 8693.38 | 8369.38 | 1201.70 | 576.80 | 184.67 | 10332.55 |
| Asset-2 | 2731.72 | 2016.19 | 1083.05 | 534.57 | 177.31 | 3811.12 |

- 11. Regulations 9 and 10 of the 2014 Tariff Regulations specify as follows:-
 - **"9. Capital Cost:** (1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.
 - (2) The Capital Cost of a new project shall include the following:
 - a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;



- b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
- c) Increase in cost in contract packages as approved by the Commission;
- d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.

. . .

- (6) The following shall be excluded or removed from the capital cost of the existing and new project:
 - a) The assets forming part of the project, but not in use;
 - b) Decapitalisation of Asset;
 - c) In case of hydro generating station any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State government by following a two stage transparent process of bidding; and
 - d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:

Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;

- **10. Prudence Check of Capital Expenditure:** The following principles shall be adopted for prudence check of capital cost of the existing or new projects:
- (1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time: Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff:"

12. As per the Auditor's Certificates, the capital cost of ₹8485.86 lakh and ₹2038.07 lakh of Asset-1 and Asset-2 respectively, as on COD is considered as discussed in the subsequent paragraphs.

COST OVER-RUN13. The estimated completion cost of the instant assets is higher than the FR approved apportioned cost. With regard to the cost variation, the petitioner submitted that the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of open competitive bidding. The award prices represent the lowest prices available at the time of bidding of various packages, thus capturing the price level at the bidding stage. The price variation from award of contract to final execution is mainly on account of Price Variation (PV) based on indices as per terms and conditions of respective contracts. The price variation from Feasibility Report (i.e. June, 2013) to date of award of contract (i.e. November, 2013 and February, 2014) and further one month prior to COD (i.e. October, 2015 and June, 2015) is attributable to inflationary trends prevalent during the execution of project and also market forces prevailing at the time of bidding process of various packages. The other reasons submitted by the petitioner for cost over-run are as follows:-

Asset-1:

 a. Increase in line length from 55 km to 56.57 km, due to which number of DD type towers increased,

- Increase in quantity as well as rate of towers steel, conductor, earth wire, conductor, insulators, hardware fittings, conductors and earth wire accessories
- c. BPI (Building Price Index) was not included in Feasibility Report (FR).

Asset-2

- d. Increase in rate of isolators, control, relay and protection panel, PLCC, power and control cables,
- e. BPI was not included in FR,
- f. Increase in amount of taxes and duties.
- 14. We have considered the submissions of the petitioner regarding the cost over-run. The estimated completion cost upto 31.3.2019, claimed by the petitioner is more than the approved apportioned cost. The cost increase is due to increase in line length, increase in material and increase in rate of equipments used in the project. The petitioner has submitted, vide affidavit dated 12.4.2016, that the RCE is under approval and will be submitted after the RCE is approved by its Board. The capital cost of the instant assets is restricted to the approved apportioned FR cost and the same will be reviewed at the time of truing-up.

IDC and IEDC

15. The petitioner was directed to submit the computation of IDC and IEDC on cash basis from the date of infusion of debt fund upto actual COD of the assets.

The petitioner, vide its affidavit dated 12.4.2016 has submitted the entire IEDC

has been discharged as on COD. The Asset-1 and Asset-2 have been commissioned within the schedule time and hence there is no time over-run. Further, details of accrued IDC to be discharged in 2015-16 and 2016-17 is as shown in table below:-

(₹ in lakh)

| Total | 116.48 | 21.88 |
|---|---------|---------|
| Accrued IDC to be discharged in 2016-17 | 22.79 | 2.65 |
| Accrued IDC to be discharged in 2015-16 | 93.69 | 19.23 |
| Particulars | Asset-1 | Asset-2 |

Initial Spares

16. Regulation 13(d) of the 2014 Tariff Regulations provides that initial spares shall be capitalised as a percentage of plant and machinery cost upto cut-off date, subject to following ceiling norms:-

"(d) Transmission System

Transmission line:

1.00%
Transmission sub-station (Green Field):

4.00%
Transmission sub-station (Brown Field):

6.00%

17. The petitioner has claimed initial spares of ₹241.48 lakh for Asset-1 pertaining to transmission line and ₹89.52 lakh and ₹122.95 lakh for Asset-1 and Asset-2, respectively, pertaining to sub-station. The details of the initial spares claimed and allowed as per provisions of 2014 Tariff Regulations for the assets covered in the instant petition are in the table given below:-



(₹ in lakh)

| Descripti | Cut-off | Claimed | Approved | Initial | Ceiling | Initial | Excess |
|--------------------------|------------|------------|--------------|---------|-------------|-------------|----------|
| on | date | Capital | Capital cost | spares | limits as | spares | initial |
| Sub- | | cost till | as on cut- | claimed | per | worked | spares |
| station | | cut-off | off date | | Regulation | out and | claimed |
| (includin | | date | (excluding | | 13 of the | allowed | |
| g PLCC) | | (including | initial | | 2014 Tariff | | |
| | | initial | spares) | | Regulation | | |
| | | spares) | (a) | (b) | (c) | (d)= ((a- | (e)=(d)- |
| | | | | | | b)*c)/(100- | (b) |
| | | | | | | c)% | |
| Transmis | ssion Line | | | | | | |
| Asset-1 | 31.3.2018 | 8079.37 | 6643.49 | 241.48 | 1.00% | 67.11 | 174.37 |
| | | | | | | | |
| Sub-station (Greenfield) | | | | | | | |
| Asset-1 | 31.3.2018 | 1634.45 | 1309.50 | 89.52 | 4.00% | 54.56 | 34.96 |
| Asset-2 | 31.3.2018 | 3386.83 | 2303.17 | 122.95 | 4.00% | 95.97 | 26.98 |

18. The capital cost for Asset-1 and Asset-2 has been worked out by adjusting accrued IDC and IEDC and excess initial spares as given below:-

(₹ in lakh)

| Particulars | Asset-1 | Asset-2 |
|--|---------|---------|
| Capital Cost as on COD as per Auditor's Certificate | 8485.86 | 2038.07 |
| Accrued IDC to be discharged in 2015-16 | 93.69 | 19.23 |
| Accrued IDC to be discharged in 2016-17 | 22.79 | 2.65 |
| Capital Cost as on COD (after deducting accrued IDC to be discharged in 2014-17) | 8369.38 | 2016.18 |
| Excess Initial Spares (for transmission line) | 174.37 | 0.00 |
| Excess Initial Spares (for sub-station) | 34.96 | 26.98 |
| Capital Cost as on COD (after deducting accrued IDC and excess initial spares) | 8160.06 | 1989.20 |

19. The estimated capital cost as on COD of ₹8160.06 lakh and ₹1989.20 lakh is within the approved apportioned cost of ₹8693.38 lakh and ₹2731.72 lakh for Asset-1 and Asset-2, respectively. Accordingly, capital cost as on COD as worked out above is allowed and considered for the purpose of tariff computation for 2014-19 tariff period on provisional basis, which shall be trued up at the time of truing up of tariff for 2014-19 period.

Additional Capital Expenditure

- 20. The petitioner has claimed additional capital expenditure for Asset-1 and Asset-2, during 2014-19 tariff period, towards balance and retention payments under Clause 1(i) of Regulation 14 of the 2014 Tariff Regulations.
- 21. Clause 1, sub-clause (i) of Regulation 14 of the 2014 Tariff Regulations provides as follows:
 - "(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

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- (i) Undischarged liabilities recognized to be payable at a future date;
- 22. It is observed that total completion cost including claimed additional capital expenditure claimed by the petitioner exceeds the approved apportioned cost of the assets as stated in para 14 above. Therefore, we have restricted the completion cost to approved apportioned cost.
- 23. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines "cut-off" as follows:-

"Cut - off Date" means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut - off date shall be 31st March of the year closing after three years of the year of commercial operation:"

24. The cut-off date for Asset-1 and Asset-2 works out to be 31.3.2018. The additional capitalization claimed by the petitioner is within the cut-off date. The additional capitalization for 2015-16, 2016-17 and 2017-18 is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations for both Asset-1 and Asset-2. The details of additional capitalization allowed is as follows:-

(₹ in lakh)

| Name of | Particulars | Approved | Expenditure | Additi | ional Capital E | xpenditur | e [#] | Total |
|---------|--------------|-------------|-------------|--------------|-----------------|-----------|----------------|-----------|
| the | | Apportioned | upto COD* | 2015-16 | 2016-17 | 2017-18 | Total | estimated |
| element | | Cost | | | | | | completio |
| | | | | | | | | n cost |
| | Petitioner's | | | 1201.70 | 576.80 | | | |
| | Claim | 8693.38 | 8369.38 | | | | 1963.17 | 10332.55 |
| | | | | IDC of 93.69 | IDC of 22.79) | | | |
| Asset-1 | Approved | | | 510.53 | 77 /U | | | |
| | in this | 8693.38 | 8160.06 | (=416.84+ | (IDC of | | 533.32 | 8693.38 |
| | order | 0000.00 | 0100.00 | IDC of | 22 79) | | 000.02 | 0000.00 |
| | | | | 93.69) | 22.13) | | | |
| | Petitioner's | | | 1083.05 | 5345/ | | | |
| | Claim | 2731.72 | 2016.19 | (=1063.82+ | (-531 02+ | | 1794.93 | 3811.12 |
| | | 2701.72 | 2010.13 | IDC of | IDC of 2.65) | 177.01 | 1734.00 | 3011.12 |
| Asset-2 | | | | 19.23) | 100 01 2.00) | | | |
| | Approved | | | 739.87 | 2.65 | | | |
| | in this | 2731.72 | | \ | (IDC of 2.65) | 0.00 | 742.52 | 2731.72 |
| | order | | | IDC of19.23) | (100 01 2.03) | | | |

^{*} Capital Cost after deducting accrued IDC to be discharged and excess initial spares

Debt: Equity Ratio

- 25. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-
 - **"19. Debt-Equity Ratio**: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio."

[#] Additional capital expenditure after addition of IDC discharged/to be discharged in respective years

26. The petitioner has considered debt:equity ratio as 70:30 both for capital cost as on COD and for additional capitalization during the tariff period 2014-19. The details of the debt:equity as on COD and for the additional capital expenditure considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

(₹ in lakh)

| Asset-1 | | | | | | | |
|-------------|--------------------|--------|---|--------|--|--|--|
| Particulars | Capital cost as on | COD | Estimated completion cost including additional capitalization | | | | |
| | Amount | (%) | Amount | (%) | | | |
| Debt | 5712.04 | 70.00 | 6085.37 | 70.00 | | | |
| Equity | 2448.02 | 30.00 | 2608.01 | 30.00 | | | |
| Total | 8160.06 | 100.00 | 8693.38 | 100.00 | | | |

(₹ in lakh)

| Asset-2 | | | | | | | |
|-------------|------------------------|--------|---|--------|--|--|--|
| Particulars | Capital cost as on COD | | Estimated completion cost including additional capitalization | | | | |
| | Amount | (%) | Amount | (%) | | | |
| Debt | 1392.44 | 70.00 | 1912.20 | 70.00 | | | |
| Equity | 596.76 | 30.00 | 819.52 | 30.00 | | | |
| Total | 1989.20 | 100.00 | 2731.72 | 100.00 | | | |

Interest on Loan ("IOL")

- 27. 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."



- 28. The weighted average rate of IOL has been considered on the basis of rate prevailing as on COD. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted at the time of truing up.
- 29. We have considered the petitioner's submissions. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. Further, with regard to floating rate of interest, variation in interest rate if any shall be considered at the time of true up. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)

| | Asset-1 | | | |
|--|-----------------------|---------|---------|---------|
| Details of Loan | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 |
| Gross loan opening | 5712.04 | 6069.41 | 6085.37 | 6085.37 |
| Cumulative Repayment upto DOCO/previous year | 0.00 | 183.65 | 642.92 | 1102.79 |
| Net Loan-Opening | 5712.04 | 5885.77 | 5442.45 | 4982.58 |
| Additions during the year | 357.37 | 15.95 | 0.00 | 0.00 |
| Repayment during the year | 183.65 | 459.27 | 459.87 | 459.87 |
| Net Loan-Closing | 5885.77 | 5442.45 | 4982.58 | 4522.71 |
| Average Loan | 5798.90 | 5664.11 | 5212.51 | 4752.64 |
| Rate of Interest (%) | 6.8696 | 6.9054 | 6.9392 | 6.9461 |
| Interest | 164.35 | 391.13 | 361.71 | 330.12 |

| | Asset-2 | | | |
|--|-----------------------|---------|---------|---------|
| Details of Loan | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 |
| Gross loan opening | 1392.44 | 1910.35 | 1912.20 | 1912.20 |
| Cumulative Repayment upto DOCO/previous year | 0.00 | 93.62 | 238.47 | 383.39 |

| Net Loan-Opening | 1392.44 | 1816.73 | 1673.74 | 1528.81 |
|---------------------------|---------|---------|---------|---------|
| Additions during the year | 517.91 | 1.86 | 0.00 | 0.00 |
| Repayment during the year | 93.62 | 144.85 | 144.92 | 144.92 |
| Net Loan-Closing | 1816.73 | 1673.74 | 1528.81 | 1383.89 |
| Average Loan | 1604.59 | 1745.23 | 1601.28 | 1456.35 |
| Rate of Interest (%) | 5.6050 | 5.6769 | 5.7000 | 5.6701 |
| Interest | 67.33 | 99.08 | 91.27 | 82.58 |

Return on Equity ("ROE")

- 30. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25 of the
- 2014 Tariff Regulations specify as under:-
 - **"24. Return on Equity**: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.
 - (2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system...

Provided that:

- i. in case of projects commissioned on or after 1st April, 2014, an additional return of **0.50** % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**:
- ii. the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- iii. additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:"

"25. Tax on Return on Equity:

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

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

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



company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess."

Additional Return on Equity

31. The petitioner has claimed the additional ROE of 0.50% for Asset-1 in accordance with Regulation 24(2)(i) of the 2014 Tariff Regulations. Appendix-I of the 2014 Tariff Regulations stipulates that in case a scheme having combination of various type of projects, the qualifying time schedule of the activity having maximum time period shall be considered for the scheme as a whole. Accordingly, the petitioner has claimed that the timeline for Asset-1 is same as that for 765 kV S/C line, i.e. 36 months for plain area from the date of Investment Approval. As Asset-1 has been commissioned on 2.11.2015, which is within the above timeline, the petitioner has claimed the additional ROE of 0.5% for Asset-1. However, in accordance with the Regulation 24(2)(iii) of the 2014 Tariff Regulations, the petitioner is also required to submit the certificate issued by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid, which is not provided by the petitioner. Accordingly, in absence of such certificate by RLDC, we have not allowed the additional ROE of 0.50% and direct the certificate petitioner to submit the issued the Regional Power by Committee/National Power Committee for Asset-1 stating clearly that commissioning of the particular element has benefitted the system operation in the regional/national grid at the time of truing-up.

- 32. The petitioner has computed ROE at the rate of 20.341% in case of Asset-1 and 19.705% in case of Asset-2 for tariff period 2014-19 after grossing up the ROE with MAT rate as per the above Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.
- 33. 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.
- 34. We have computed ROE at the rate of 19.610% for tariff period 2014-19 after grossing up the ROE with MAT rate as per the above Regulation. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been

considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE allowed is given below:-

(₹ in lakh)

| | Asset-1 | | | |
|---|-----------------------|---------|---------|---------|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 |
| Opening Equity | 2448.02 | 2601.18 | 2608.01 | 2608.01 |
| Addition due to Additional Capitalisation | 153.16 | 6.84 | 0.00 | 0.00 |
| Closing Equity | 2601.18 | 2608.01 | 2608.01 | 2608.01 |
| Average Equity | 2524.60 | 2604.60 | 2608.01 | 2608.01 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT rate for the year (%) | 20.961 | 20.961 | 20.961 | 20.961 |
| Rate of Return on Equity (Pre Tax)(%) | 19.610 | 19.610 | 19.610 | 19.610 |
| Return on Equity (Pre Tax) | 204.25 | 510.76 | 511.43 | 511.43 |

(₹ in lakh)

| | Asset-2 | | | |
|---|-----------------------|---------|---------|---------|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 |
| Opening Equity | 596.76 | 818.72 | 819.52 | 819.52 |
| Addition due to Additional Capitalisation | 221.96 | 0.80 | 0.00 | 0.00 |
| Closing Equity | 818.72 | 819.52 | 819.52 | 819.52 |
| Average Equity | 707.74 | 819.12 | 819.52 | 819.52 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT rate for the year (%) | 20.961 | 20.961 | 20.961 | 20.961 |
| Rate of Return on Equity (Pre Tax)(%) | 19.610 | 19.610 | 19.610 | 19.610 |
| Return on Equity (Pre Tax) | 103.90 | 160.63 | 160.71 | 160.71 |

Depreciation

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

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

(c) AC and DC Sub-station: 25 years



- (d) Gas Insulated Sub-station: 25 years
- (e) Transmission line (including HVAC & HVDC): 35 years"
- 36. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

- (2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis"
- "(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

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

- (6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."
- 37. The petitioner in its petition has computed depreciation considering capital cost as on COD of ₹ 8369.38 lakh and ₹2016.19 lakh for Asset-1 and Asset-2, respectively.
- 38. As per Clause 67 of Regulation 3 of the 2014 Tariff Regulations, weighted average value of asset as on COD has been considered to work out the weighted average life of the transmission system as 34 years for Asset-1 and 26 years for Asset-2.

39. We have computed depreciation considering approved capital cost as on COD and allowed additional capitalisation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)

| | Asset-1 | | | | | | |
|--|-----------------------|---------|---------|---------|--|--|--|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | | |
| Opening Gross Block | 8160.06 | 8670.59 | 8693.38 | 8693.38 | | | |
| Additional Capitalization | 510.53 | 22.79 | 0.00 | 0.00 | | | |
| Closing Gross block | 8670.59 | 8693.38 | 8693.38 | 8693.38 | | | |
| Average Gross block | 8415.32 | 8681.99 | 8693.38 | 8693.38 | | | |
| Rate of Depreciation (%) | 5.290 | 5.290 | 5.290 | 5.290 | | | |
| Depreciable Value | 7573.79 | 7813.79 | 7824.04 | 7824.04 | | | |
| Elapsed Life of the asset at beginning of the year | 0.00 | 1.00 | 2.00 | 3.00 | | | |
| Weighted Balance Useful life of the asset | 34.00 | 33.00 | 32.00 | 31.00 | | | |
| Remaining Depreciable Value | 7573.79 | 7630.14 | 7181.13 | 6721.25 | | | |
| Depreciation | 183.65 | 459.27 | 459.87 | 459.87 | | | |

| | Asset-2 | | | | | | |
|--|-----------------------|---------|---------|---------|--|--|--|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | | |
| Opening Gross Block | 1989.20 | 2729.07 | 2731.72 | 2731.72 | | | |
| Additional Capitalization | 739.87 | 2.65 | 0.00 | 0.00 | | | |
| Closing Gross block | 2729.07 | 2731.72 | 2731.72 | 2731.72 | | | |
| Average Gross block | 2359.13 | 2730.40 | 2731.72 | 2731.72 | | | |
| Rate of Depreciation (%) | 5.301 | 5.305 | 5.305 | 5.305 | | | |
| Depreciable Value | 2123.22 | 2457.36 | 2458.55 | 2458.55 | | | |
| Elapsed Life of the asset at beginning of the year | 1 | 2 | 3 | 4 | | | |
| Weighted Balance Useful life of the asset | 25 | 24 | 23 | 22 | | | |
| Remaining Depreciable Value | 2123.22 | 2363.74 | 2220.08 | 2075.16 | | | |
| Depreciation | 93.62 | 144.85 | 144.92 | 144.92 | | | |

Operation & Maintenance Expenses ("O&M Expenses")

- 40. The petitioner has computed normative O&M Expenses as per sub-clause(a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations.
- 41. We have considered the petitioner's submission. The petitioner's entitlement of O&M Expenses has been worked out as given hereunder:-

(₹ in lakh)

| Asset-1 | | | | | |
|-------------------------|--|------------|---------|---------|---------|
| Particulars | | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | | (Pro-rata) | | | |
| Actual line length (km) | Double Circuit (Twin & Triple Conductor) | 56.57 | 56.57 | 56.57 | 56.57 |
| Actual (No. of bays) | 400 kV bay | 4 | 4 | 4 | 4 |
| Norms as | Double Circuit (Twin & Triple Conductor) ((₹lakh/km)) | 0.731 | 0.755 | 0.780 | 0.806 |
| Regulation | 400 kV bay ((₹lakh/bay)) | 62.30 | 64.37 | 66.51 | 68.71 |
| Total | | 119.87 | 300.19 | 310.16 | 320.44 |

(₹ in lakh)

| | (c in latin) | | | | | | |
|-------------------------------------|--|-----------------------|---------|---------|---------|--|--|
| | Asset-2 | | | | | | |
| Particulars | | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | |
| Actual line length (km) | Double Circuit (Twin & Triple Conductor) | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Actual (No. of bays) | 400 kV bay | 4 | 4 | 4 | 4 | | |
| Norms as per | Double Circuit (Twin & Triple Conductor) ((₹lakh/km)) | 0.731 | 0.755 | 0.780 | 0.806 | | |
| Regulation 400 kV bay ((₹lakh/bay)) | 62.30 | 64.37 | 66.51 | 68.71 | | | |
| Total | | 187.11 | 258.24 | 266.82 | 275.65 | | |

42. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that

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

- 43. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.
- 44. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)

| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 |
|-------------|-----------------------|---------|---------|---------|
| Asset-1 | 119.87 | 300.19 | 310.16 | 320.44 |
| Asset-2 | 187.11 | 258.24 | 266.82 | 275.65 |

Interest on Working Capital ("IWC")

45. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

(i) Receivables

As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being



allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

(iv) Rate of interest on working capital

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the Bank Rate' means the base rate of interest as specified by the

State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).

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

(₹ in lakh)

| · | | | | | | |
|----------------------|-----------------------|---------|---------|---------|--|--|
| Asset-1 | | | | | | |
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | |
| Maintenance Spares | 17.98 | 45.03 | 46.52 | 48.07 | | |
| O & M expenses | 9.99 | 25.02 | 25.85 | 26.70 | | |
| Receivables | 115.24 | 284.88 | 281.83 | 278.25 | | |
| Total | 143.21 | 354.92 | 354.20 | 353.02 | | |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | | |
| Interest | 19.33 | 47.91 | 47.82 | 47.66 | | |

(₹ in lakh)

| Asset-2 | | | | | | | |
|----------------------|-----------------------|---------|---------|---------|--|--|--|
| Particulars | 2015-16 (Pro-rata) | 2016-17 | 2017-18 | 2018-19 | | | |
| Maintenance Spares | 28.07 | 38.74 | 40.02 | 41.35 | | | |
| O & M expenses | 15.59 | 21.52 | 22.24 | 22.97 | | | |
| Receivables | 78.06 | 114.40 | 114.60 | 114.67 | | | |
| Total | 121.72 | 174.65 | 176.86 | 178.99 | | | |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | | | |
| Interest | 16.43 | 23.58 | 23.88 | 24.16 | | | |

Annual Transmission Charges

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

| | | | (* | tin lakh) |
|---|---------|---------|---------|-----------|
| Particulars | | Asset | t-1 | |
| Farticulars | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Gross Block | | | | |
| Opening Gross Block | 8160.06 | 8670.59 | 8693.38 | 8693.38 |
| Additional Capitalisation | 510.53 | 22.79 | 0.00 | 0.00 |
| Closing Gross Block | 8670.59 | 8693.38 | 8693.38 | 8693.38 |
| Average Gross Block | 8415.32 | 8681.99 | 8693.38 | 8693.38 |
| Rate of Depreciation | 5.290 | 5.290 | 5.290 | 5.290 |
| Depreciable Value | 7573.79 | 7813.79 | 7824.04 | 7824.04 |
| Elapsed Life of the assets at beginning of the year | 0.00 | 1.00 | 2.00 | 3.00 |
| Weighted Balance Useful life of the assets | 34.00 | 33.00 | 32.00 | 31.00 |
| Remaining Depreciable Value | 7573.79 | 7630.14 | 7181.13 | 6721.25 |
| Depreciation | 183.65 | 459.27 | 459.87 | 459.87 |
| | | | | |
| Interest on Loan | | | | |
| Gross Normative Loan | 5712.04 | 6069.41 | 6085.37 | 6085.37 |
| Cumulative Repayment upto Previous Year | 0.00 | 183.65 | 642.92 | 1102.79 |
| Net Loan-Opening | 5712.04 | 5885.77 | 5442.45 | 4982.58 |
| Additions | 357.37 | 15.95 | 0.00 | 0.00 |
| Repayment during the year | 183.65 | 459.27 | 459.87 | 459.87 |
| Net Loan-Closing | 5885.77 | 5442.45 | 4982.58 | 4522.71 |
| Average Loan | 5798.90 | 5664.11 | 5212.51 | 4752.64 |
| Weighted Average Rate of Interest on Loan (%) | 6.8696 | 6.9054 | 6.9392 | 6.9461 |
| Interest | 164.35 | 391.13 | 361.71 | 330.12 |
| | | | | |
| Return on Equity | | | | |
| Opening Equity | 2448.02 | 2601.18 | 2608.01 | 2608.01 |
| Additions | 153.16 | 6.84 | 0.00 | 0.00 |
| Closing Equity | 2601.18 | 2608.01 | 2608.01 | 2608.01 |
| Average Equity | 2524.60 | 2604.60 | 2608.01 | 2608.01 |
| Return on Equity (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT Rate for the year 2013-14 (%) | 20.961 | 20.961 | 20.961 | 20.961 |
| Rate of Return on Equity (Pre Tax) (%) | 19.610 | 19.610 | 19.610 | 19.610 |
| Return on Equity (Pre Tax) | 204.25 | 510.76 | 511.43 | 511.43 |
| | | | | |
| Interest on Working Capital | | | | |
| Maintenance Spares | 17.98 | 45.03 | 46.52 | 48.07 |
| O & M expenses | 9.99 | 25.02 | 25.85 | 26.70 |
| Receivables | 115.24 | 284.88 | 281.83 | 278.25 |
| Total | 143.21 | 354.92 | 354.20 | 353.02 |
| Interest | 19.33 | 47.91 | 47.82 | 47.66 |
| | | | | |
| Annual Transmission Charges | | | | |



| Particulars | Asset-1 | | | |
|-----------------------------|---------|---------|---------|---------|
| Particulars | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | 183.65 | 459.27 | 459.87 | 459.87 |
| Interest on Loan | 164.35 | 391.13 | 361.71 | 330.12 |
| Return on Equity | 204.25 | 510.76 | 511.43 | 511.43 |
| Interest on Working Capital | 19.33 | 47.91 | 47.82 | 47.66 |
| O & M Expenses | 119.87 | 300.19 | 310.16 | 320.44 |
| Total | 691.46 | 1709.26 | 1690.99 | 1669.52 |

| (< in takn) | | | | |
|---|---------|---------|---------|---------|
| Particulars | Asset-2 | | | |
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Gross Block | | | | |
| Opening Gross Block | 1989.20 | 2729.07 | 2731.72 | 2731.72 |
| Additional Capitalisation | 739.87 | 2.65 | 0.00 | 0.00 |
| Closing Gross Block | 2729.07 | 2731.72 | 2731.72 | 2731.72 |
| Average Gross Block | 2359.13 | 2730.40 | 2731.72 | 2731.72 |
| Rate of Depreciation | 5.301 | 5.305 | 5.305 | 5.305 |
| Depreciable Value | 2123.22 | 2457.36 | 2458.55 | 2458.55 |
| Elapsed Life of the assets at beginning of the year | 1 | 2 | 3 | 4 |
| Weighted Balance Useful life of the assets | 25 | 24 | 23 | 22 |
| Remaining Depreciable Value | 2123.22 | 2363.74 | 2220.08 | 2075.16 |
| Depreciation | 93.62 | 144.85 | 144.92 | 144.92 |
| | | | | |
| Interest on Loan | | | | |
| Gross Normative Loan | 1392.44 | 1910.35 | 1912.20 | 1912.20 |
| Cumulative Repayment upto Previous Year | 0.00 | 93.62 | 238.47 | 383.39 |
| Net Loan-Opening | 1392.44 | 1816.73 | 1673.74 | 1528.81 |
| Additions | 517.91 | 1.86 | 0.00 | 0.00 |
| Repayment during the year | 93.62 | 144.85 | 144.92 | 144.92 |
| Net Loan-Closing | 1816.73 | 1673.74 | 1528.81 | 1383.89 |
| Average Loan | 1604.59 | 1745.23 | 1601.28 | 1456.35 |
| Weighted Average Rate of Interest on Loan (%) | 5.6050 | 5.6769 | 5.7000 | 5.6701 |
| Interest | 67.33 | 99.08 | 91.27 | 82.58 |
| | | | | |
| Return on Equity | | | | |
| Opening Equity | 596.76 | 818.72 | 819.52 | 819.52 |
| Additions | 221.96 | 0.80 | 0.00 | 0.00 |
| Closing Equity | 818.72 | 819.52 | 819.52 | 819.52 |
| Average Equity | 707.74 | 819.12 | 819.52 | 819.52 |
| Return on Equity (Base Rate) (%) | 15.500 | 15.500 | 15.500 | 15.500 |
| MAT Rate for the year 2013-14 (%) | 20.961 | 20.961 | 20.961 | 20.961 |
| Rate of Return on Equity (Pre Tax) (%) | 19.610 | 19.610 | 19.610 | 19.610 |
| Return on Equity (Pre Tax) | 103.90 | 160.63 | 160.71 | 160.71 |
| | | | | |



| Particulars | Asset-2 | | | | |
|-----------------------------|---------|---------|---------|---------|--|
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| | | | | | |
| Interest on Working Capital | | | | | |
| Maintenance Spares | 28.07 | 38.74 | 40.02 | 41.35 | |
| O & M expenses | 15.59 | 21.52 | 22.24 | 22.97 | |
| Receivables | 78.06 | 114.40 | 114.60 | 114.67 | |
| Total | 121.72 | 174.65 | 176.86 | 178.99 | |
| Interest | 16.43 | 23.58 | 23.88 | 24.16 | |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | 93.62 | 144.85 | 144.92 | 144.92 | |
| Interest on Loan | 67.33 | 99.08 | 91.27 | 82.58 | |
| Return on Equity | 103.90 | 160.63 | 160.71 | 160.71 | |
| Interest on Working Capital | 16.43 | 23.58 | 23.88 | 24.16 | |
| O & M Expenses | 187.11 | 258.24 | 266.82 | 275.65 | |
| Total | 468.39 | 686.37 | 687.60 | 688.01 | |

Filing Fee and the Publication Expenses

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

Foreign Exchange Rate Variation

49. The petitioner has sought recovery of FERV on foreign loans deployed as provided in Clause 50 of the 2014 Tariff Regulations. The petitioner is entitled to recover the FERV directly from the beneficiaries or the long term transmission customers/DICs as the case may be, in accordance with Regulation 51(1) of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

50. 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

51. 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

- 52. 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.
- 53. This order disposes of Petition No. 208/TT/2015.

Sd/-(Dr. M. K. lyer) Member Sd/-(A.S. Bakshi) Member



-// ANNEXURE-I //-

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

| | ASSET-1 | | | | |
|----------------------|----------------------|----------------------------------|---|---------|--|
| | 2014-19 | | | | |
| Particulars | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total | |
| IBRD V-Doco 65.91 | 1.69 | 1647.75 | 0.00 | 1647.75 | |
| SBI (21.3.2012)-DOCO | 9.55 | 250.00 | 0.00 | 250.00 | |
| BOND XLV-Doco | 9.65 | 600.00 | 0.00 | 600.00 | |
| BOND XLVI-Doco | 9.30 | 250.00 | 0.00 | 250.00 | |
| BOND XLVII-Doco | 8.93 | 1100.00 | 0.00 | 1100.00 | |
| BOND XLVIII-Doco | 8.20 | 715.00 | 0.00 | 715.00 | |
| BOND LI - Doco | 8.40 | 1295.81 | 0.00 | 1295.81 | |
| Total | | 5858.56 | 0.00 | 5858.56 | |

| | ASSET-2 | | | | |
|---------------------|----------------------|----------------------------------|------------------------------------|---------|--|
| | 2014-19 | | | | |
| Particulars | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total | |
| IBRD V- DOCO- 68.15 | 1.69 | 681.50 | 0.00 | 681.50 | |
| BOND XLV-DOCO | 9.65 | 425.00 | 0.00 | 425.00 | |
| BOND L-DOCO | 8.40 | 304.83 | 0.00 | 304.83 | |
| | - | 1411.33 | 0.00 | 1411.33 | |

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

(₹ in lakh)

| Particulars | ASSET-1 | | | | |
|---|---------|---------|---------|---------|--|
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Gross Opening Loan | 5858.56 | 5858.56 | 5858.56 | 5858.56 | |
| Cumulative Repayments of Loans upto Previous Year | 59.81 | 89.96 | 173.49 | 307.68 | |
| Net Loans Opening | 5798.75 | 5768.60 | 5685.07 | 5550.88 | |
| Add: Drawl(s) during the year | 0.00 | 0.00 | 0.00 | 0.00 | |
| Less: Repayment(s) of Loan during the year | 30.15 | 83.53 | 134.19 | 226.19 | |
| Net Closing Loan | 5768.60 | 5685.07 | 5550.88 | 5324.69 | |
| Average Net Loan | 5783.68 | 5726.84 | 5617.98 | 5437.79 | |
| Interest on Loan | 397.31 | 395.46 | 389.84 | 377.71 | |
| Rate of Interest on Loan (%) | 6.8696 | 6.9054 | 6.9392 | 6.9461 | |

| | | | | ` ' | |
|---|---------|---------|---------|---------|--|
| Particulars | ASSET-2 | | | | |
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Gross Opening Loan | 1411.33 | 1411.33 | 1411.33 | 1411.33 | |
| Cumulative Repayments of Loans upto Previous Year | 12.34 | 37.21 | 62.36 | 123.20 | |
| Net Loans Opening | 1398.99 | 1374.12 | 1348.97 | 1288.13 | |
| Add: Drawl(s) during the year | 0.00 | 0.00 | 0.00 | 0.00 | |
| Less: Repayment(s) of Loan during the year | 24.87 | 25.15 | 60.84 | 60.98 | |
| Net Closing Loan | 1374.12 | 1348.97 | 1288.13 | 1227.15 | |
| Average Net Loan | 1386.56 | 1361.55 | 1318.55 | 1257.64 | |
| Interest on Loan | 77.72 | 77.29 | 75.16 | 71.31 | |
| Rate of Interest on Loan (%) | 5.6050 | 5.6769 | 5.7000 | 5.6701 | |