

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 487/TT/2019

Coram:

**Shri P. K. Pujari, Chairperson
Shri I. S. Jha, Member
Shri Pravas Kumar Singh, Member**

Date of order: 07.07.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods and truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** Rangit-Melli Transmission Line of Rangit and Rangit-Rammam Transmission Line and **Asset-II:** 132 kV Rangit-Siliguri Transmission Line under Rangit Transmission System in Eastern Region.

And in the matter of:

Power Grid Corporation of India Ltd.,
"SAUDAMINI", Plot No-2,
Sector-29, Gurgaon-122001 (Haryana).

.....Petitioner

Versus

1. Bihar State Power (Holding) Company Ltd.,
(Formerly Bihar State Electricity Board-BSEB),
Vidyut Bhavan, Bailey Road, Patna-800001.
2. West Bengal State Electricity Distribution Company Ltd.,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lake City,
Calcutta-700091.
3. Grid Corporation of Orissa Ltd.,
Shahid Nagar, Bhubaneswar-751007.
4. Jharkhand State Electricity Board,
In Front of Main Secretariat,
Doranda, Ranchi-834002.



5. Damodar Valley Corporation,
DVC Tower, Maniktala,
Civic Centre, VIP Road, Calcutta-700054.

6. Power Department,
Government of Sikkim, Gangtok-737101.

.....Respondent(s)

For Petitioner: Shri A. K. Verma, PGCIL
Shri S. S. Raju, PGCIL
Shri B. Dash, PGCIL
Shri V. P. Rastogi, PGCIL

For Respondent: None

ORDER

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Ltd., a deemed transmission licensee, for revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods; truing up of the capital expenditure for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”); and determination of transmission tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of the period from 1.4.2019 to 31.3.2024 in respect of **Asset-I:** Rangit-Melli Transmission Line of Rangit and Rangit-Rammam Transmission Line, and **Asset-II:** 132 kV Rangit-Siliguri Transmission Line (hereinafter referred to as “the transmission assets”) under Rangit Transmission System in Eastern Region (hereinafter referred to as “the transmission system”).

2. Petitioner has made the following prayers in this Petition:

“1) Approve the revised Transmission Tariff for 2004-09 block and transmission tariff for 2009-14 block for the assets covered under this petition, as per para 8 above.



- 2) *Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per Para 9 and 10 above.*
- 3) *Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, 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 as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9 and 10 above for respective block.*
- 4) *Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 5) *Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) *Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.*
- 7) *Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.5 above.*
- 8) *Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice"

3. **Backdrop of the case:**

a) The execution of Rangit HEP (60 MW) with associated transmission system was approved by the Ministry of Power for ₹18116.00 lakh by letter dated 17.4.1990. Further, CEA vide its letter dated 31.10.1994 accorded techno-economic clearance to the DPR for the transmission system associated with Rangit HEP at an estimated cost of ₹3747.00 lakh, including an IDC of ₹138.00 lakh. The following works associated with Ranjit HEP were included under the transmission System:



- i. Rangit-Siliguri 132 kV D/C transmission line;
- ii. Rangit-Rammam 132 kV S/C transmission line;
- iii. Rangit-Melli 66 kV S/C transmission line;
- iv. Extension of Bays at 132 kV Silliguri and Rammam Sub-stations;
- v. Extension of Bay at 66 kV Melli Sub-station.

b) In line with the powers delegated to the Board of Directors of Public Enterprises to sanction capital outlay, the investment approval of ₹5075.00 lakh for the transmission system was accorded by Board of Directors of the Petitioner company vide letter dated 2.2.1999. The following elements of the transmission system were declared under commercial operation:

- i. 66 kV Rangit-Milli S/C Transmission Line with associated bays at Rangit and Melli Sub-station - 1.4.1997;
- ii. 132 kV Rangit-Rammam S/C Transmission Line with associated bays at Rangit and Rammam Sub-stations - 1.1.1998.

c) The entire scope of the work as per I.A. is covered in the instant petition.

d) The tariff of the two elements at sub-paragraph (b) above with capital cost of ₹1742 lakh was notified by the Ministry of Power vide notification dated 11.5.1999. The remaining assets of the transmission system i.e. Rangit-Silliguri 132 kV D/C Transmission Line along with associated bays was declared under commercial operation w.e.f. 1.12.1998 at a cost of ₹2788.85 lakh. The tariff of these assets was approved by the Commission vide order dated 7.6.2002 in Petition No. 65/2000 by considering the completion cost of ₹2788.85 lakh.

e) The transmission tariff for Assets-I and II was approved for the period from 1.4.2001 to 31.3.2004 vide order dated 6.8.2003 in Petition No. 62/2002. The transmission tariff for Assets-I and II was approved for the period from 1.4.2004 to 31.3.2009 vide order dated 17.1.2006 in Petition No. 118/2004. Transmission tariff for the period from 1.4.2009 to 31.3.2014 was approved vide order dated 13.1.2011 in Petition No. 169/2010. The tariff of the transmission assets for the 2009-14 tariff period was trued up and tariff for the period from 1.4.2014 to 31.3.2019 was determined vide order dated 26.11.2015 in Petition No. 224/TT/2014.



f) The Petitioner has sought revision of transmission tariff allowed for 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (IoL) and Interest on Working Capital (IWC) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (APTEL) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and 13.6.2007 in Appeal No. 139 of 2006 and batch matters. The Petitioner has sought consequential revision of transmission tariff allowed for 2009-14 tariff period, truing up of tariff of 2014-19 tariff period, and determination of transmission tariff for 2019-24 tariff period for the transmission assets.

g) APTEL in judgment dated 22.1.2007 in Appeal No.81 of 2005 and batch matters pertaining to generating stations of NTPC had considered 4 (four) issues. The issues considered by APTEL and its decisions are as given in the following table:

| Sr. No. | Issue | APTEL's decision/direction |
|----------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Whether APTEL can enquire into the validity of Regulations framed by the Commission | Challenge to the validity of Regulations framed by the Commission falls outside the purview of APTEL |
| 2 | Computation of interest on loan | In view of the order of APTEL dated 14.11.2016 in Appeal Nos. 94 and 96 of 2005 and order dated 24.1.2007 passed in Appeal Nos. 81 to 87, 89 to 93 of 2005, computation of loan has to be based on loan repayment on normative basis. The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis |
| 3(a) | O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages | Commission's view upheld |
| 3(b) | O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees | Commission's view upheld |
| 4 | Cost of spares for calculation of working capital | Commission's view upheld |

h) APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters pertaining to generating stations of NTPC had considered 9 (nine) issues. The issues considered and the decisions of APTEL are given in the following table:



| Sr. No. | Issue | APTEL's decision/direction |
|---------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I | Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004 | Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis |
| II | Consequence of refinance of loan | Commission to consider the issue afresh |
| III | Treating depreciation available as deemed repayment of loan | Commission to make a fresh computation of outstanding loan |
| IV | Admissibility of depreciation up to 90% | Commission to consider the issue afresh |
| V | Cost of Maintenance Spares | Commission to consider the issue afresh |
| VI | Impact of de-capitalisation of the assets on cumulative repayment of Loan | The cumulative repayment of the loan proportionate to the assets decapitalized required to be reduced. Commission to act accordingly |
| VII | Non-consideration of normative transit loss for coal import | Commission to consider afresh the transit losses for coal imported from coal mines other than the dedicated ones |
| VIII | Foreign Exchange Rate Variation (FERV) | FERV has been kept as pass through to ensure that any liability or gain, if any, arising on account of any variation in foreign exchange rates is passed on to the beneficiary as held in order dated 4.10.2006 in Appeal Nos.135 to 140 of 2005. Commission to act accordingly |
| IX | Computation of interest on loan in Singrauli Station | Net loan closing at the end of a year is reflected as net loan opening on the first day of the next year. Commission shall re-compute the interest accordingly. |

i) The Commission and certain interested parties preferred Civil Appeals against the APTEL's judgments before the Hon'ble Supreme Court in 2007. The Appeals were admitted and initially stay was granted by the Hon'ble Supreme Court. Subsequently, on an assurance by NTPC that the issues under Appeal would not be pressed for implementation during the pendency of the Appeals, the stay was vacated by the Hon'ble Supreme Court.

j) Based on APTEL's judgments dated 22.1.2007 and 13.6.2007, the Petitioner had sought re-determination of tariff of its transmission assets of 2001-04 and 2004-09 tariff periods vide Petition No. 121/2007. The Commission after taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the same be revived after the disposal of Civil Appeals by the Hon'ble Supreme Court.



k) The Hon'ble Supreme Court vide its judgment dated 10.4.2018, dismissed the said Civil Appeals filed against APTEL's said judgments. Thus, the judgments of APTEL have attained finality.

l) Consequent to the Hon'ble Supreme Court's order dated 10.4.2018 in NTPC matters, Petition No. 121/2007 was listed for hearing on 8.1.2019. The Commission vide order dated 18.1.2019 in Petition No. 121/2007, directed the Petitioner to submit its claim separately for the assets at the time of filing of trueing up petition for 2014-19 tariff period.

m) The instant petition was heard on 18.5.2021 and in view of APTEL's judgments dated 22.1.2007 and 13.6.2007 and the order of Hon'ble Supreme Court dated 10.4.2018, tariff is being revised. Tariff period-wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions have been made at certain places and applied, which are indicated.

4. The Respondents are distribution licensees and power departments, which are procuring transmission service from the Petitioner, mainly beneficiaries of the Eastern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. None of the Respondents have filed any reply in the matter.

Re: Interest on Loan (IoL)

6. APTEL while dealing with the issue of computation of IoL, in judgment dated 22.1.2007 observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per its judgment dated 14.11.2006 in Appeal No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgment dated



14.11.2006 had set aside the Commission's methodology of computation of loan on the actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for working out IoL liability for the period 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for 2004-09 period is to be revised on the basis of the normative debt repayment methodology.

Re: Additional Capital Expenditure (ACE)

7. APTEL vide judgment dated 13.6.2007 in Appeal No. 139/2006 and others held that ACE after COD should also be considered for computation of maintenance spares. In view of the above, the maintenance spares to be considered for computation of working capital for 2004-09 period are also required to be revised taking into consideration ACE after COD.

Re: Depreciation

8. As regards depreciation, APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2006 observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. In view of the above directions of APTEL, the outstanding loan allowed for the transmission assets for 2004-09 period is revised in the instant order.

9. The revision of tariff allowed for 2001-04 and 2004-09 tariff periods necessitates the revision of transmission tariff allowed for 2009-14 tariff period, which is also being done in the present order. The implementation of the directions APTEL vide judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters was kept pending in case of the Petitioner awaiting the outcome of the Civil Appeals filed before the



Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and allowed in the instant order for 2001-04, 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the instant order. Further, the said difference in tariff shall be recovered/ paid over a period of six months from the date of issue of this order.

10. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 20.8.2019 and Petitioner's affidavit dated 30.7.2020 filed in compliance of Technical validation (TV) letter.

11. The hearing in this matter was held on 18.5.2021 through video conference and order was reserved. The Commission in Record of Proceeding (RoP) dated 18.5.2021 directed that the de-capitalization amount of ₹71.60 lakh pertaining to 132 kV AIS bays shall be taken into consideration for tariff determination. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

Revision of Transmission Charges Allowed for 2001-04, 2004-09 and 2009-14

Tariff Periods

2001-04 Period

12. The Commission vide order dated 6.8.2003 in Petition No. 62/2002 approved the following transmission charges for the transmission assets for 2001-04 tariff period:



(₹ in lakh)

| Asset-I | | | |
|------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| Depreciation | 47.29 | 47.29 | 47.29 |
| IoL | 33.68 | 10.58 | 9.80 |
| Return on Equity | 128.32 | 128.32 | 128.32 |
| Advance against Depreciation | 31.04 | 0.00 | 0.00 |
| IWC | 9.52 | 8.76 | 9.05 |
| O&M Expenses | 78.07 | 82.76 | 87.72 |
| Total | 327.93 | 277.70 | 282.18 |

(₹ in lakh)

| Asset-II | | | |
|------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| Depreciation | 73.36 | 73.36 | 73.36 |
| IoL | 52.89 | 16.71 | 15.48 |
| Return on Equity | 209.58 | 209.58 | 209.58 |
| Advance against Depreciation | 49.89 | 0.00 | 0.00 |
| IWC | 16.10 | 14.93 | 15.45 |
| O&M Expenses | 164.39 | 174.25 | 184.71 |
| Total | 566.21 | 488.83 | 498.57 |

13. The Petitioner has claimed the following revised transmission charges for the transmission assets for 2001-04 tariff period in the instant petition:

(₹ in lakh)

| Asset-I | | | |
|------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| Depreciation | 47.29 | 47.29 | 47.29 |
| IoL | 33.68 | 10.58 | 9.80 |
| Return on Equity | 128.32 | 128.32 | 128.32 |
| Advance against Depreciation | 31.04 | 0.00 | 0.00 |
| IWC | 9.52 | 8.76 | 9.05 |
| O&M Expenses | 78.07 | 82.76 | 87.72 |
| Total | 327.93 | 277.71 | 282.18 |

(₹ in lakh)

| Asset-II | | | |
|------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| Depreciation | 73.36 | 73.36 | 73.36 |
| IoL | 52.89 | 16.71 | 15.48 |
| Return on Equity | 209.58 | 209.58 | 209.58 |
| Advance against Depreciation | 49.89 | 0.00 | 0.00 |
| IWC | 16.10 | 14.93 | 15.45 |
| O&M Expenses | 164.39 | 174.25 | 184.71 |
| Total | 566.21 | 488.84 | 498.58 |



14. We have considered the submissions of the Petitioner. The transmission tariff is allowed for the transmission assets on the basis of following:

- a) Admitted capital cost as on 1.4.2001 vide order dated 6.8.2003 in Petition No. 62/2002 of ₹1742.00 lakh for Asset-I and ₹2788.85 lakh for Asset-II;
- b) Weighted Average Rate of Interest on actual loan derived/ adopted from order dated 6.8.2003 in Petition No. 62/2002;
- c) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O & M Expenses as per order dated 6.8.2003 in Petition No. 62/2002;
- d) As there was no additional capital expenditure (ACE) during 2001-04 tariff period, there is no requirement to revise the maintenance spares component for calculating IWC.
- e) Admitted capital cost as on 31.3.2004 vide order dated 6.8.2003 in Petition No. 62/2002 for the transmission asset of ₹1742.00 lakh for Asset-I and ₹2788.85 lakh for Asset-II.

15. In view of the above, the revised transmission charges allowed for the transmission assets for 2001-04 tariff period are as follows:

(₹ in lakh)

| Asset-I | | | |
|------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| Depreciation | 47.29 | 47.29 | 47.29 |
| IoL | 33.68 | 10.58 | 9.80 |
| Return on Equity | 128.32 | 128.32 | 128.32 |
| Advance against Depreciation | 31.04 | 0.00 | 0.00 |
| IWC | 9.52 | 8.76 | 9.05 |
| O&M Expenses | 78.07 | 82.76 | 87.72 |
| Total | 327.93 | 277.70 | 282.18 |

(₹ in lakh)

| Asset-II | | | |
|------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| Depreciation | 73.36 | 73.36 | 73.36 |
| IoL | 52.89 | 16.71 | 15.48 |
| Return on Equity | 209.58 | 209.58 | 209.58 |
| Advance against Depreciation | 49.89 | 0.00 | 0.00 |
| IWC | 16.10 | 14.93 | 15.45 |
| O&M Expenses | 164.39 | 174.25 | 184.71 |
| Total | 566.21 | 488.83 | 498.58 |



16. The Annual Fixed Charges (AFC) allowed for 2001-04 period vide order dated 6.8.2003 in Petition No. 62/2002, revised AFC claimed in the instant petition and the revised AFC allowed in the instant order is as follows:

(₹ in lakh)

| Asset-I | | | |
|----------------------------------------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| AFC approved vide order dated 6.8.2003 in Petition No. 62/2002 | 327.93 | 277.70 | 282.18 |
| AFC claimed by the Petitioner in the instant petition | 327.92 | 277.71 | 282.18 |
| AFC allowed in the instant order | 327.93 | 277.70 | 282.18 |

(₹ in lakh)

| Asset-II | | | |
|----------------------------------------------------------------|----------------|----------------|----------------|
| Particulars | 2001-02 | 2002-03 | 2003-04 |
| AFC approved vide order dated 6.8.2003 in Petition No. 62/2002 | 566.21 | 488.83 | 498.57 |
| AFC claimed by the Petitioner in the instant petition | 566.21 | 488.84 | 498.58 |
| AFC allowed in the instant order | 566.21 | 488.83 | 498.58 |

2004-09 Period

17. The Commission vide order dated 17.1.2006 in Petition No. 118/2004 approved the following transmission charges for the transmission assets for 2004-09 tariff period:

(₹ in lakh)

| Asset-I | | | | | |
|------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Depreciation | 47.29 | 47.29 | 37.57 | 37.57 | 37.57 |
| IoL | 6.33 | 1.94 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 112.28 | 112.28 | 112.28 | 112.28 | 112.28 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IWC | 7.41 | 7.57 | 7.62 | 7.87 | 8.15 |
| O&M Expenses | 70.77 | 73.60 | 76.58 | 79.58 | 82.82 |
| Total | 244.08 | 242.68 | 234.05 | 237.31 | 240.82 |

(₹ in lakh)

| Asset-II | | | | | |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Depreciation | 73.36 | 73.36 | 64.00 | 64.00 | 64.00 |
| IoL | 10.06 | 3.13 | 0.00 | 0.00 | 0.00 |



| | | | | | |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Return on Equity | 183.38 | 183.38 | 183.38 | 183.38 | 183.38 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IWC | 11.13 | 11.35 | 11.49 | 11.86 | 12.26 |
| O&M Expenses | 97.78 | 101.69 | 105.86 | 109.93 | 114.48 |
| Total | 375.71 | 372.91 | 364.73 | 369.17 | 374.12 |

18. The Petitioner has claimed the following revised transmission charges for the transmission assets for 2004-09 tariff period in the instant petition:

(₹ in lakh)

| Asset-I | | | | | |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Depreciation | 47.29 | 47.29 | 37.57 | 37.57 | 37.57 |
| IoL | 8.04 | 6.55 | 5.06 | 3.57 | 2.09 |
| Return on Equity | 112.28 | 112.28 | 112.28 | 112.28 | 112.28 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IWC | 7.45 | 7.66 | 7.71 | 7.95 | 8.20 |
| O&M Expenses | 70.77 | 73.60 | 76.58 | 79.58 | 82.82 |
| Total | 245.83 | 247.38 | 239.20 | 240.95 | 242.95 |

(₹ in lakh)

| Asset-II | | | | | |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Depreciation | 73.36 | 73.36 | 64.00 | 64.00 | 64.00 |
| IoL | 12.70 | 10.35 | 8.00 | 5.65 | 3.30 |
| Return on Equity | 183.38 | 183.38 | 183.38 | 183.38 | 183.38 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IWC | 11.20 | 11.50 | 11.66 | 11.99 | 12.35 |
| O&M Expenses | 97.78 | 101.69 | 105.86 | 109.93 | 114.48 |
| Total | 378.42 | 380.28 | 372.90 | 374.95 | 377.52 |

19. We have considered the submissions of the Petitioner. The transmission tariff is allowed for the transmission assets on the basis of the following:

- a) The admitted capital cost of ₹1742.00 lakh for Asset-I and ₹2788.85 lakh for Asset-II as on 31.3.2009 has been approved by the Commission *vide* its order dated 17.1.2006 in Petition No. 118/2004.
- b) Weighted Average Rate of Interest on actual loan, Weighted Average Rate of Depreciation, Rate of IWC and O & M Expenses as per order dated 17.1.2006 in Petition No. 118/2004.



20. In view of the above, the revised transmission charges allowed for the transmission assets for 2004-09 tariff period are as follows:

(₹ in lakh)

| Asset-I | | | | | |
|------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Depreciation | 47.29 | 47.29 | 37.57 | 37.57 | 37.57 |
| IoL | 8.04 | 6.55 | 5.06 | 3.57 | 2.08 |
| Return on Equity | 112.28 | 112.28 | 112.28 | 112.28 | 112.28 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IWC | 7.44 | 7.65 | 7.70 | 7.94 | 8.19 |
| O&M Expenses | 70.77 | 73.60 | 76.58 | 79.58 | 82.82 |
| Total | 245.82 | 247.37 | 239.20 | 240.94 | 242.94 |

(₹ in lakh)

| Asset-II | | | | | |
|------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| Depreciation | 73.36 | 73.36 | 64.00 | 64.00 | 64.00 |
| IoL | 12.70 | 10.35 | 8.00 | 5.65 | 3.30 |
| Return on Equity | 183.38 | 183.38 | 183.38 | 183.38 | 183.38 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IWC | 11.18 | 11.47 | 11.63 | 11.96 | 12.32 |
| O&M Expenses | 97.78 | 101.69 | 105.86 | 109.93 | 114.48 |
| Total | 378.40 | 380.25 | 372.87 | 374.92 | 377.48 |

21. AFC allowed for 2004-09 tariff period vide order dated 17.1.2006 in Petition No. 118/2004, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)

| Asset-I | | | | | |
|------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| AFC approved vide order dated 17.1.2006 in Petition No. 118/2004 | 244.08 | 242.68 | 234.05 | 237.31 | 240.82 |
| AFC claimed by the Petitioner in the instant petition | 245.83 | 247.38 | 239.20 | 240.95 | 242.95 |
| AFC allowed in the instant order | 245.82 | 247.37 | 239.20 | 240.94 | 242.94 |

(₹ in lakh)

| Asset-II | | | | | |
|------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| AFC approved vide order dated 17.1.2006 in Petition No. 118/2004 | 375.71 | 372.91 | 364.73 | 369.17 | 374.12 |
| AFC claimed by the Petitioner | 378.42 | 380.28 | 372.90 | 374.95 | 377.52 |



| | | | | | |
|----------------------------------|--------|--------|--------|--------|--------|
| in the instant petition | | | | | |
| AFC allowed in the instant order | 378.40 | 380.25 | 372.87 | 374.92 | 377.48 |

2009-14 Tariff Period

22. The Commission vide order dated 13.1.2011 in Petition No. 169/2010 approved the tariff for the transmission assets for 2009-14 tariff period which was trued-up vide order dated 26.11.2015 in Petition No. 224/TT/2014. The trued-up tariff approved vide order dated 26.11.2015 is as follows:

(₹ in lakh)

| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation | 238.81 | 238.81 | 88.59 | 88.59 | 88.59 |
| IoL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 394.35 | 408.81 | 409.21 | 409.21 | 414.14 |
| IWC | 20.24 | 20.94 | 18.25 | 18.70 | 19.28 |
| O&M Expenses | 140.87 | 148.88 | 157.46 | 166.51 | 176.00 |
| Total | 794.27 | 817.45 | 673.51 | 683.01 | 698.01 |

23. The Petitioner has claimed the following revised transmission charges for the transmission assets for 2009-14 tariff period in the instant petition:

(₹ in lakh)

| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation | 238.81 | 238.81 | 88.59 | 88.59 | 88.59 |
| IoL | 1.74 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 394.35 | 408.81 | 409.21 | 409.21 | 414.14 |
| IWC | 20.28 | 20.94 | 18.25 | 18.70 | 19.28 |
| O&M Expenses | 140.87 | 148.88 | 157.46 | 166.51 | 176.00 |
| Total | 796.04 | 817.44 | 673.51 | 683.01 | 698.01 |

24. We have considered the submissions of the Petitioner. The revised transmission tariff is allowed for the transmission assets on the basis of the following:

- a) Admitted capital cost of ₹4530.85 lakh as on 1.4.2009;
- b) Weighted Average Rate of Interest on actual loan and Weighted Average Rate of Depreciation considered from order dated 26.11.2015 in Petition No. 224/TT/2014.



25. In view of the above, the revised transmission charges allowed for the transmission assets for 2009-14 tariff period is as follows:

(₹ in lakh)

| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation | 238.81 | 238.81 | 88.59 | 88.59 | 88.59 |
| IoL | 1.73 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 394.35 | 408.81 | 409.21 | 409.21 | 414.14 |
| IWC | 20.28 | 20.94 | 18.25 | 18.70 | 19.28 |
| O&M Expenses | 140.87 | 148.88 | 157.46 | 166.51 | 176.00 |
| Total | 796.05 | 817.44 | 673.51 | 683.01 | 698.01 |

26. AFC allowed for 2009-14 tariff period vide order dated 26.11.2015 in Petition No. 224/TT/2014, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)

| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------------------------------------------------------------------|---------|---------|---------|---------|---------|
| AFC allowed vide order dated 26.11.2015 in Petition No. 224/TT/2014 | 794.27 | 817.45 | 673.51 | 683.01 | 698.01 |
| AFC claimed by the Petitioner in the instant petition | 796.04 | 817.44 | 673.51 | 683.01 | 698.01 |
| AFC allowed in the instant order | 796.05 | 817.44 | 673.51 | 683.01 | 698.01 |

Truing up of Annual Fixed Charges of 2014-19 Tariff Period

27. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period is as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation | 88.59 | 88.59 | 88.59 | 88.59 | 88.59 |
| IoL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 414.45 | 416.36 | 416.14 | 416.14 | 417.26 |
| IWC | 20.49 | 20.83 | 21.13 | 21.44 | 21.80 |
| O&M Expenses | 161.24 | 166.61 | 172.19 | 177.83 | 183.82 |
| Total | 684.77 | 692.39 | 698.05 | 704.00 | 711.47 |

28. The details of the trued-up IWC claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period are as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------|--------------|--------------|--------------|--------------|--------------|
| O&M Expenses | 13.44 | 13.88 | 14.35 | 14.82 | 15.32 |
| Maintenance Spares | 24.19 | 24.99 | 25.83 | 26.67 | 27.57 |
| Receivables | 114.13 | 115.40 | 116.34 | 117.33 | 118.58 |
| Total Working Capital | 151.76 | 154.27 | 156.52 | 158.82 | 161.47 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| IWC | 20.49 | 20.83 | 21.13 | 21.44 | 21.80 |

Capital Cost

29. The Commission vide order 26.11.2015 in Petition No. 224/TT/2014 allowed capital cost as on 1.4.2014 of ₹4530.85 lakh and capital cost as on 1.4.2019 of ₹4387.67 lakh. No ACE in respect of the transmission assets is claimed for 2014-19 tariff period. The capital cost of the transmission assets has been calculated in accordance with Regulations 9(3) and 9(6) of the 2014 Tariff Regulations and the same is as follows:

(₹ in lakh)

| Admitted Capital Cost as on 1.4.2014 | ACE during 2014-19 period | Admitted Capital Cost as on 1.4.2019 |
|--------------------------------------|---------------------------|--------------------------------------|
| 4530.85 | 0.00 | 4530.85 |

Decapitalisation

30. The Commission through technical validation letter dated 17.7.2020 directed the Petitioner to confirm whether all the assets are currently in use and also to confirm whether there is any decapitalization. In response, the Petitioner has submitted that there was modification of 132 kV AIS bays into GIS bays at Siliguri Sub-station under ERSS-XII project and the modification done on 30.11.2016.

31. The Petitioner has not claimed decapitalisation while claiming tariff for 2014-19 and 2019-24 tariff period in the instant petition. However, the Petitioner has submitted Form-10B vide affidavit dated 30.7.2020.



32. During the hearing on 18.5.2021, the representative of the Petitioner submitted that the details of de-capitalisation have been submitted vide affidavit dated 30.7.2020 and that the same was not submitted in the original petition. He further submitted that the de-capitalization of 132 kV AIS bays was done during 2016-17 period for ₹71.60 lakh. The Commission in RoP for hearing dated 18.5.2021 noted that the Petitioner has not factored the de-capitalization amount in the tariff calculation submitted in the original petition and the same has to be taken into consideration for tariff determination. The decapitalisation details submitted by the Petitioner as per Form-10 B are as follows:

(₹ in lakh)

| Year of decapitalisation | Work/ Equipment proposed to be replaced | Year of capitalisation of Asset/ Equipment to be decapitalised | Original book value of the asset to be decapitalised | Cumulative depreciation corresponding to decapitalisation date | Net book value |
|--------------------------|-----------------------------------------|----------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------|----------------|
| 2016-17 | SS 132 kV bay equipment | 1.12.1998 | 71.60 | 54.39 | 17.21 |
| 2016-17 | SS 132 kV bay equipment | 1.12.1998 | 71.60 | 54.39 | 17.21 |

33. Accordingly, decapitalisation has been considered in the instant petition to determine tariff for 2014-19 tariff period and the same is as follows:

(₹ in lakh)

| Admitted Capital Cost as on 31.3.2014 | De-capitalisation in 2016-17 | Admitted Capital Cost as on 31.3.2019 |
|---------------------------------------|------------------------------|---------------------------------------|
| 4530.85 | 143.20 | 4387.65 |

34. The admitted capital cost of ₹4530.85 lakh for the transmission assets as on 31.3.2014 has been considered for working out the true up of tariff for 2014-19 tariff period.

Additional Capital Expenditure (ACE)

35. The Petitioner has not claimed any ACE in 2014-19 tariff period.



36. Accordingly, the capital cost considered for 2014-19 tariff period is as follows:

| Capital cost allowed as on 1.4.2014 | Net ACE 2014-2019 | | | | | Capital Cost as on 31.3.2019 |
|-------------------------------------|-------------------|---------|----------|---------|---------|------------------------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | (₹ in lakh) |
| 4530.85 | 0.00 | 0.00 | (143.20) | 0.00 | 0.00 | 4387.65 |

Debt-Equity Ratio

37. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations that provides that the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. The de-capitalisation in the instant case is carried out in the debt-equity ratio as on the date of capitalisation as per the details submitted by the Petitioner in Form-10B. Accordingly, the details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 for the transmission assets is as follows:

| Particulars | Capital Cost as on 1.4.2014 (₹ in lakh) | (%) | Decapitalisation during 2016-17 (₹ in lakh) | (%) | Total Capital Cost as on 31.3.2019 (₹ in lakh) | (%) |
|--------------|-----------------------------------------|---------------|---------------------------------------------|---------------|------------------------------------------------|---------------|
| Debt | 2419.02 | 53.39 | 76.45 | 53.39 | 2342.57 | 53.39 |
| Equity | 2111.83 | 46.61 | 66.75 | 46.61 | 2045.08 | 46.61 |
| Total | 4530.85 | 100.00 | 143.20 | 100.00 | 4387.65 | 100.00 |

Depreciation

38. The transmission assets have already completed 12 years of life before 1.4.2014. Accordingly, depreciation has been calculated based on the remaining depreciable value to be recovered over the balance useful life. The depreciation allowed during the 2014-19 tariff period is as follows:

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------------------|---------|---------|---------|---------|---------|
| Depreciation | | | | | |
| Opening Gross Block | 4530.85 | 4530.85 | 4530.85 | 4387.65 | 4387.65 |
| ACE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| De-capitalization | 0.00 | 0.00 | 143.20 | 0.00 | 0.00 |
| Closing Gross Block | 4530.85 | 4530.85 | 4387.65 | 4387.65 | 4387.65 |



| | | | | | |
|----------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Average Gross Block | 4530.85 | 4530.85 | 4459.25 | 4387.65 | 4387.65 |
| WAROD (%) | 1.96 | 1.96 | 1.90 | 2.00 | 2.00 |
| Balance useful life of the asset (Year) | 19 | 18 | 17 | 16 | 15 |
| Elapsed Life of the asset (Year) | 15 | 16 | 17 | 18 | 19 |
| Depreciable Value | 4077.77 | 4077.77 | 4013.33 | 3948.89 | 3948.89 |
| Depreciation during the year | 88.59 | 88.59 | 84.80 | 87.57 | 87.57 |
| Cumulative depreciation at the end of the year | 2483.14 | 2571.73 | 2547.75 | 2635.32 | 2722.89 |
| Remaining Depreciable Value at the end of the year | 1594.62 | 1506.03 | 1356.79 | 1313.56 | 1225.99 |

39. The details of depreciation approved vide order dated 26.11.2015 in Petition No. 224/TT/2014, depreciation claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

| Particulars | (₹ in lakh) | | | | |
|------------------------------------------------------------------|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 26.11.2015 in Petition No. 224/TT/2014 | 88.59 | 88.59 | 88.59 | 88.59 | 88.59 |
| Claimed by the Petitioner in the instant petition | 88.59 | 88.59 | 88.59 | 88.59 | 88.59 |
| Allowed after true-up in this order | 88.59 | 88.59 | 84.80 | 87.57 | 87.57 |

Interest on Loan (IoL)

40. The Petitioner has not claimed IoL during 2014-19 tariff period.

Return on Equity (RoE)

41. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed following effective tax rates for 2014-19 tariff period:

| Year | Claimed effective tax rate (in %) | Grossed up RoE [(Base Rate)/(1-t)] (in %) |
|---------|-----------------------------------|-------------------------------------------|
| 2014-15 | 21.018 | 19.625 |
| 2015-16 | 21.382 | 19.715 |
| 2016-17 | 21.338 | 19.705 |



| | | |
|---------|--------|--------|
| 2017-18 | 21.337 | 19.705 |
| 2018-19 | 21.549 | 19.758 |

42. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table below:

| Year | Notified MAT rates (in %) (inclusive of surcharge & cess) | Effective tax (in %) |
|---------|-----------------------------------------------------------|----------------------|
| 2014-15 | 20.961 | 20.961 |
| 2015-16 | 21.342 | 21.342 |
| 2016-17 | 21.342 | 21.342 |
| 2017-18 | 21.342 | 21.342 |
| 2018-19 | 21.549 | 21.549 |

43. The MAT rates as considered vide order dated 27.4.2020 in Petition No. 274/TT/2019 is considered for the purpose of grossing up of rate of RoE for truing up of tariff of 2014-19 period in terms of the provisions of the 2014 Tariff Regulations is as follows:

| Year | Notified MAT rates (in %) (inclusive of surcharge & cess) | Base rate of RoE (in %) | Grossed up RoE [(Base Rate)/(1-t)] (in %) |
|---------|-----------------------------------------------------------|-------------------------|-------------------------------------------|
| 2014-15 | 20.961 | 15.50 | 19.610 |
| 2015-16 | 21.342 | 15.50 | 19.705 |
| 2016-17 | 21.342 | 15.50 | 19.705 |
| 2017-18 | 21.342 | 15.50 | 19.705 |
| 2018-19 | 21.549 | 15.50 | 19.758 |

44. The Petitioner has claimed RoE for the 2014-19 period after grossing up RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the 2014 Tariff Regulation. RoE is trued up on the basis of the MAT rate applicable in the respective years and is allowed for the transmission assets as follows:

| Particulars | (₹ in lakh) | | | | |
|----------------------|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Opening Equity | 2111.83 | 2111.83 | 2111.83 | 2045.08 | 2045.08 |
| Additions due to ACE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| De-capitalisation | 0.00 | 0.00 | 66.75 | 0.00 | 0.00 |
| Closing Equity | 2111.83 | 2111.83 | 2045.08 | 2045.08 | 2045.08 |
| Average Equity | 2111.83 | 2111.83 | 2078.46 | 2045.08 | 2045.08 |



| | | | | | |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|
| RoE (Base Rate) (%) | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 |
| MAT Rate for respective year (%) | 20.961 | 21.342 | 21.342 | 21.342 | 21.549 |
| Rate of RoE (%) | 19.610 | 19.705 | 19.705 | 19.705 | 19.758 |
| RoE | 414.13 | 416.14 | 409.56 | 402.98 | 404.07 |

45. The details of RoE approved vide order dated 26.11.2015 in Petition No. 224/TT/2014, RoE claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

| (₹ in lakh) | | | | | |
|------------------------------------------------------------------|---------|---------|---------|---------|---------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 26.11.2015 in Petition No. 224/TT/2014 | 414.14 | 414.14 | 414.14 | 414.14 | 414.14 |
| Claimed by the Petitioner in the instant petition | 414.45 | 416.36 | 416.14 | 416.14 | 417.26 |
| Allowed after true-up in this order | 414.13 | 416.14 | 409.56 | 402.98 | 404.07 |

Operation & Maintenance Expenses (O&M Expenses)

46. The total O&M Expenses claimed by the Petitioner for the transmission assets are as follows:

| (₹ in lakh) | | | | | |
|----------------------------------------------------------|---------|---------|---------|---------|---------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 4 Numbers 132 kV Sub-station Bays | | | | | |
| 64.00 km S/C (Single Conductor) | | | | | |
| 91.50 km D/C (Single Conductor) | | | | | |
| Claimed by the Petitioner in the instant petition | 161.24 | 166.61 | 172.19 | 177.83 | 183.82 |

47. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission assets are as follows:

| Element | Norms for 2014-15 | Norms for 2015-16 | Norms for 2016-17 | Norms for 2017-18 | Norms for 2018-19 |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| D/C (Single Conductor) | ₹0.303 lakh/km | ₹0.313 lakh/km | ₹0.324 lakh/km | ₹0.334 lakh/km | ₹0.346 lakh/km |
| 132 kV Sub-station | ₹30.15 lakh/ bay | ₹31.15 lakh/ bay | ₹32.18 lakh/ bay | ₹33.25 lakh/ bay | ₹34.36 lakh/ bay |
| S/C (Single Conductor) | ₹0.202 lakh/km | ₹0.209 lakh/km | ₹0.216 lakh/km | ₹0.223 lakh/km | ₹0.230 lakh/km |



48. The Petitioner has de-capitalised two 132 kV AIS bays in 2016-17 and due to the decapitalisation, the O&M Expenses for the de-capitalised bays have been allowed only till the year of de-capitalisation i.e. 2016-17. The O&M Expenses for these two bays from the date of de-capitalisation shall be dealt in the petition where the Petitioner claims the tariff for conversion of AIS bays into GIS bays. The O&M Expenses allowed under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

| (₹ in lakh) | | | | | |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| 4 Numbers 132 kV sub-station Bays | 120.60 | 124.60 | 96.54 | 66.50 | 68.72 |
| 64.00 km S/C (Single Conductor) | 12.93 | 13.38 | 13.82 | 14.27 | 14.72 |
| 91.50 km D/C (Single Conductor) | 27.72 | 28.64 | 29.65 | 30.56 | 31.66 |
| Total | 161.25 | 166.62 | 140.01 | 111.33 | 115.10 |

49. The details of O&M Expenses approved vide order dated 26.11.2015 in Petition No. 224/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

| (₹ in lakh) | | | | | |
|------------------------------------------------------------------|---------|---------|---------|---------|---------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 26.11.2015 in Petition No. 224/TT/2014 | 161.25 | 166.62 | 172.19 | 177.83 | 183.82 |
| Claimed by the Petitioner in the instant petition | 161.24 | 166.61 | 172.19 | 177.83 | 183.82 |
| Allowed after true-up in this order | 161.25 | 166.62 | 140.01 | 111.33 | 115.10 |

Interest on Working Capital (IWC)

50. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and trued up IWC allowed for the transmission assets for 2014-19 tariff period are as follows:

| (₹ in lakh) | | | | | |
|-----------------------------|---------|---------|---------|---------|---------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O&M Expenses (O&M Expenses) | 13.44 | 13.88 | 11.67 | 9.28 | 9.59 |



| | | | | | |
|-----------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| for 1 month) | | | | | |
| Maintenance Spares (15% of O&M Expenses) | 24.19 | 24.99 | 21.00 | 16.70 | 17.26 |
| Receivables (Equivalent to 2 months of annual fixed cost) | 114.08 | 115.36 | 108.91 | 103.22 | 104.07 |
| Total Working Capital | 151.70 | 154.24 | 141.58 | 129.20 | 130.93 |
| Rate of Interest (%) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| IWC | 20.48 | 20.82 | 19.11 | 17.44 | 17.67 |

51. The details of IWC approved vide order dated 26.11.2015 in Petition No. 224/TT/2014, IWC claimed by the Petitioner in the instant petition and trued-up in the instant order are shown as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------------------------------------|---------|---------|---------|---------|---------|
| Approved vide order dated 26.11.2015 in Petition No. 224/TT/2014 | 20.48 | 20.78 | 21.08 | 21.40 | 21.73 |
| Claimed by the Petitioner in the instant petition | 20.49 | 20.83 | 21.13 | 21.44 | 21.80 |
| Allowed after true-up in this order | 20.48 | 20.82 | 19.11 | 17.44 | 17.67 |

Approved Annual Fixed Charges for 2014-19 Tariff Period

52. The trued-up AFC approved for the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation | 88.59 | 88.59 | 84.80 | 87.57 | 87.57 |
| Interest on Loan | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 414.13 | 416.14 | 409.56 | 402.98 | 404.07 |
| IWC | 20.48 | 20.82 | 19.11 | 17.44 | 17.67 |
| O&M Expenses | 161.25 | 166.62 | 140.01 | 111.33 | 115.10 |
| Total | 684.45 | 692.16 | 653.48 | 619.33 | 624.41 |

53. Accordingly, the annual transmission charges approved vide order dated 26.11.2015 in Petition No. 224/TT/2014, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------------------------------------|---------|---------|---------|---------|---------|
| Approved vide order dated 26.11.2015 in Petition No. 224/TT/2014 | 684.46 | 690.12 | 696.00 | 701.96 | 708.27 |
| Claimed by the Petitioner in the instant petition | 684.77 | 692.39 | 698.05 | 704.00 | 711.47 |
| Allowed after true-up in this order | 684.45 | 692.16 | 653.48 | 619.33 | 624.41 |

Determination of Annual Fixed Charges for 2019-24 Tariff Period

54. The Petitioner has claimed the following transmission charges for 2019-24 tariff period:

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation | 88.59 | 88.59 | 88.59 | 88.59 | 88.59 |
| Interest on Loan | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 417.26 | 417.26 | 417.26 | 417.26 | 417.26 |
| IWC | 12.63 | 12.83 | 13.02 | 13.21 | 13.37 |
| O&M Expenses | 115.29 | 119.33 | 123.52 | 127.86 | 132.30 |
| Total | 633.77 | 638.01 | 642.39 | 646.92 | 651.53 |

55. The details of IWC claimed by the Petitioner for 2019-24 period are as follows:

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-----------------------|--------------|--------------|--------------|--------------|--------------|
| O&M Expenses | 9.61 | 9.94 | 10.29 | 10.66 | 11.03 |
| Maintenance Spares | 17.29 | 17.90 | 18.53 | 19.18 | 19.85 |
| Receivables | 77.92 | 78.66 | 79.20 | 79.76 | 80.11 |
| Total Working Capital | 104.82 | 106.50 | 108.02 | 109.60 | 110.99 |
| Rate of Interest (%) | 12.05 | 12.05 | 12.05 | 12.05 | 12.05 |
| IWC | 12.63 | 12.83 | 13.02 | 13.21 | 13.37 |

Capital Cost

56. Regulation 19 of the 2019 Tariff Regulations provides as follows:

“19 Capital Cost: (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for 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) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
- (e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the



Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(4) The capital cost in case of existing or new hydro generating station shall also include:

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*

(5) The following shall be excluded from the capital cost of the existing and new projects:

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

- (c) In case of hydro generating stations, 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 transparent process;*
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
- (e) 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."*

57. The Petitioner has claimed capital cost of ₹4530.87 lakh as on 31.3.2019 for the transmission assets. The admitted capital cost as on 31.3.2019 is considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

58. The Petitioner has not projected any ACE during 2019-24 tariff period for the transmission assets. Accordingly, the capital cost considered for 2019-24 tariff period is as follows:



(₹ in lakh)

| Total Capital Cost as on 1.4.2019 | ACE for 2019-24 period | Total Capital Cost as on 31.3.2024 |
|-----------------------------------|------------------------|------------------------------------|
| 4387.65 | 0.00 | 4387.65 |

Debt-Equity Ratio

59. Regulation 18 of the 2019 Tariff Regulations provides as follows:

“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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.

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

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.



(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 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.”

60. The debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

| Particulars | Capital Cost as on 1.4.2019 (₹ in lakh) | (%) | Total Capital Cost as on 31.3.2024 (₹ in lakh) | (%) |
|--------------|-----------------------------------------------|---------------|------------------------------------------------------|---------------|
| Debt | 2342.57 | 53.39 | 2342.57 | 53.39 |
| Equity | 2045.08 | 46.61 | 2045.08 | 46.61 |
| Total | 4387.65 | 100.00 | 4387.65 | 100.00 |

Depreciation

61. Regulations 33(1), 33(2) and 33(5) of the 2019 Tariff Regulations provide as follows:

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element there of including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.”

“(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 a 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-I** 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.”

62. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The transmission assets have already completed more than 12 years before 1.4.2019. The depreciation allowed for the transmission assets for 2019-24 period is as follows:

| (₹ in lakh) | | | | | |
|-------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Gross Block | 4387.65 | 4387.65 | 4387.65 | 4387.65 | 4387.65 |
| Addition during the year 2019-24 due to projected ACE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 4387.65 | 4387.65 | 4387.65 | 4387.65 | 4387.65 |
| Average Gross Block | 4387.65 | 4387.65 | 4387.65 | 4387.65 | 4387.65 |
| WAROD (%) | 1.99 | 1.99 | 1.99 | 1.99 | 1.99 |
| Depreciable Value | 3948.89 | 3948.89 | 3948.89 | 3948.89 | 3948.89 |
| Cumulative Depreciation at the beginning (Year) | 2722.89 | 2810.46 | 2898.03 | 2985.61 | 3073.18 |
| Balance useful life of the Asset (Year) | 14 | 13 | 12 | 11 | 10 |
| Elapsed life (Year) | 20 | 21 | 22 | 23 | 24 |
| Depreciation | 87.57 | 87.57 | 87.57 | 87.57 | 87.57 |
| Remaining Depreciable Value at the end of the year | 1138.42 | 1050.85 | 963.28 | 875.71 | 788.14 |

Interest on Loan (IoL)

63. The Petitioner has not claimed IoL during 2019-24 tariff period.

Return on Equity (RoE)

64. Regulations 30 and 31 of the 2019 Tariff Regulations provide as follows:

“**30. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage



type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.”

“31. Tax on Return on Equity:*(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.*

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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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.

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;

(d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis."

65. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the transmission assets for 2019-24 tariff period is as follows:

| Particulars | (₹ in lakh) | | | | |
|------------------------------|-------------|---------|---------|---------|---------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Equity | 2045.08 | 2045.08 | 2045.08 | 2045.08 | 2045.08 |
| Additions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 2045.08 | 2045.08 | 2045.08 | 2045.08 | 2045.08 |
| Average Equity | 2045.08 | 2045.08 | 2045.08 | 2045.08 | 2045.08 |
| RoE (Base Rate) (%) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| MAT Rate for respective year | 17.472 | 17.472 | 17.472 | 17.472 | 17.472 |



| | | | | | |
|-----------------|---------------|---------------|---------------|---------------|---------------|
| (%) | | | | | |
| Rate of RoE (%) | 18.782 | 18.782 | 18.782 | 18.782 | 18.782 |
| RoE | 384.11 | 384.11 | 384.11 | 384.11 | 384.11 |

Operation & Maintenance Expenses (O&M Expenses)

66. The O&M Expenses claimed by the Petitioner for the transmission assets for 2019-24 tariff period are as follows:

| (₹ in lakh) | | | | | |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| 4 Numbers 132 kV sub-station Bays | 64.32 | 66.56 | 68.92 | 71.32 | 73.84 |
| 64.00 km S/C (Single Conductor) | 16.13 | 16.64 | 17.28 | 17.86 | 18.50 |
| 91.50 km D/C (Single Conductor) | 34.50 | 35.78 | 36.97 | 38.34 | 39.62 |
| 2% of PLCC (₹ 17.50 lakh) | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 |
| Total | 115.29 | 119.33 | 123.52 | 127.86 | 132.30 |

67. Regulations 35(3)(a) and 33(4) of the 2019 Tariff Regulations provide as follows:

“35 Operation and Maintenance Expenses (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Norms for sub-station Bays (₹ Lakh per bay) | | | | | |
| 765 kV | 45.01 | 46.60 | 48.23 | 49.93 | 51.68 |
| 400 kV | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| 220 kV | 22.51 | 23.30 | 24.12 | 24.96 | 25.84 |
| 132 kV and below | 16.08 | 16.64 | 17.23 | 17.83 | 18.46 |
| Norms for Transformers (₹ Lakh per MVA) | | | | | |
| 765 kV | 0.491 | 0.508 | 0.526 | 0.545 | 0.564 |
| 400 kV | 0.358 | 0.371 | 0.384 | 0.398 | 0.411 |
| 220 kV | 0.245 | 0.254 | 0.263 | 0.272 | 0.282 |
| 132 kV and below | 0.245 | 0.254 | 0.263 | 0.272 | 0.282 |
| Norms for AC and HVDC lines (₹ Lakh per km) | | | | | |
| Single Circuit (Bundled Conductor with six or more sub-conductors) | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |
| Single Circuit (Bundled conductor with four sub-conductors) | 0.755 | 0.781 | 0.809 | 0.837 | 0.867 |



| | | | | | |
|--------------------------------------------------------------------------------|-------|-------|-------|-------|-------|
| Single Circuit (Twin & Triple Conductor) | 0.503 | 0.521 | 0.539 | 0.558 | 0.578 |
| Single Circuit (Single Conductor) | 0.252 | 0.260 | 0.270 | 0.279 | 0.289 |
| Double Circuit (Bundled conductor with four or more sub- conductors) | 1.322 | 1.368 | 1.416 | 1.466 | 1.517 |
| Double Circuit (Twin & Triple Conductor) | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |
| Double Circuit (Single Conductor) | 0.377 | 0.391 | 0.404 | 0.419 | 0.433 |
| Multi Circuit (Bundled Conductor with four or more sub-conductor) | 2.319 | 2.401 | 2.485 | 2.572 | 2.662 |
| Multi Circuit (Twin & Triple Conductor) | 1.544 | 1.598 | 1.654 | 1.713 | 1.773 |
| Norms for HVDC stations | | | | | |
| HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB) | 834 | 864 | 894 | 925 | 958 |
| Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW) | 1,666 | 1,725 | 1,785 | 1,848 | 1,913 |
| 500 kV Rihand-Dadri HVDC bipole scheme | 2,252 | 2,331 | 2,413 | 2,498 | 2,586 |
| ±500 kV Talcher- Kolar HVDC bipole scheme | 2,468 | 2,555 | 2,645 | 2,738 | 2,834 |
| ±500 kV Bhiwadi-Balia HVDC bipole scheme | 1,696 | 1,756 | 1,817 | 1,881 | 1,947 |
| ±800 kV, Bishwanath- Agra HVDC bipole | 2,563 | 2,653 | 2,746 | 2,842 | 2,942 |

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;

Provided further that:

i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;

ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;

iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme



(2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);

iv. the O&M expenses of ± 800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme;

v. the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and

vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three year

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.

(c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:

Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification."

"(4) Communication system: *The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up."*

68. We have considered the submission of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even



though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

69. The O&M expenses allowed for the transmission assets is as follows:

| (₹ in lakh) | | | | | |
|-------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses | | | | | |
| 22 Numbers of 132 kV sub-station bays | | | | | |
| Norms (₹ lakh/Bay) | 16.08 | 16.64 | 17.23 | 17.83 | 18.46 |
| Total | 32.16 | 33.28 | 34.46 | 35.66 | 36.92 |
| 64.00 km S/C (Single Conductor) | | | | | |
| Norms (₹ lakh/km) | 0.252 | 0.26 | 0.27 | 0.279 | 0.289 |
| Total | 16.13 | 16.64 | 17.28 | 17.86 | 18.50 |
| 91.50 km D/C (Single Conductor) | | | | | |
| Norms (₹ lakh/km) | 0.377 | 0.391 | 0.404 | 0.419 | 0.433 |
| Total | 34.50 | 35.78 | 36.97 | 38.34 | 39.62 |
| Total O&M Expenses allowed (₹ in lakh) | 82.78 | 85.70 | 88.71 | 91.85 | 95.04 |

* O&M for 2 Nos of AIS bays have not been considered in the instant petition and the same will be dealt in the petition where conversion of AIS bays into GIS bays is done.

Interest on Working Capital (IWC)

70. Regulations 34(1)(c), 34(3), 34(4) and Regulation 3(7) of the 2019 Tariff

Regulations specify as follows:

"34. Interest on Working Capital

(1)...

(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:

- i. Receivables equivalent to 45 days of fixed cost;*
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
- iii. Operation and maintenance expenses, including security expenses for one month"*

"(3)Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the



transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.”

“(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”

“3.Definitions ...

(7) ‘Bank Rate’ means the one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”

71. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. Rate of Interest (RoI) considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, whereas RoI for 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.50% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

| | (₹ in lakh) | | | | |
|--------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses (O&M Expenses for 1 month) | 6.90 | 7.14 | 7.39 | 7.65 | 7.92 |
| Maintenance Spares (15% of O&M Expenses) | 12.42 | 12.85 | 13.31 | 13.78 | 14.26 |
| Receivables (Equivalent to 45 days of annual transmission charges) | 69.49 | 69.97 | 70.27 | 70.67 | 70.88 |
| Total Working Capital | 88.80 | 89.96 | 90.96 | 92.10 | 93.05 |
| Rate of Interest (%) | 12.05 | 11.25 | 10.50 | 10.50 | 10.50 |
| Interest on Working Capital | 10.70 | 10.12 | 9.55 | 9.67 | 9.77 |



Annual Fixed Charges of 2019-24 Tariff Period

72. The transmission charges allowed for the transmission assets for 2019-24 tariff period are as follows:

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | 87.57 | 87.57 | 87.57 | 87.57 | 87.57 |
| Interest on Loan | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Return on Equity | 384.11 | 384.11 | 384.11 | 384.11 | 384.11 |
| Interest on Working Capital | 10.70 | 10.12 | 9.55 | 9.67 | 9.77 |
| O&M Expenses | 82.78 | 85.70 | 88.71 | 91.85 | 95.04 |
| Total | 565.16 | 567.50 | 569.94 | 573.20 | 576.48 |

Filing Fee and the Publication Expenses

73. The Petitioner has sought reimbursement of fee paid by it for filing the Petition and publication expenses. 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 Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

74. The Petitioner has sought reimbursement of licence fees in accordance with Regulation 70(4) of the 2019 Tariff Regulations. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner shall also be entitled for recovery of RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

Goods and Services Tax

75. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged



and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government / Statutory authorities, the same may be allowed to be recovered from the beneficiaries

76. We have considered the submissions of the Petitioner. Since GST is not levied on transmission service at present, we are of the view that the Petitioner's prayer is premature.

Security Expenses

77. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

78. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed the Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore,



security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

Capital Spares

79. The Petitioner has sought reimbursement of capital spares at the end of tariff period. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

Sharing of Transmission Charges

80. During the tariff periods 2001-04, 2004-09 and 2009-14 (up to 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the Tariff Regulations for the respective tariff periods. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations. With effect from 1.11.2020, sharing is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

81. To summarise:

- a) The revised AFC allowed for the transmission assets of 2001-04 and 2004-09 tariff periods are:

(₹ in lakh)

| Asset | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Asset-I | 327.93 | 277.70 | 282.18 | 245.82 | 247.37 | 239.20 | 240.94 | 242.94 |
| Asset-II | 566.21 | 488.83 | 498.58 | 378.40 | 380.25 | 372.87 | 374.92 | 377.48 |



b) The consequential revision of AFC allowed for the transmission assets of 2009-14 tariff period are:

(₹ in lakh)

| 2009-10 | 2010-11 | 2012-13 | 2013-14 | 2014-15 |
|---------|---------|---------|---------|---------|
| 796.05 | 817.44 | 673.51 | 683.01 | 698.01 |

c) The trued-up AFC allowed for the transmission assets of 2014-19 tariff period are:

(₹ in lakh)

| 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------|---------|---------|---------|---------|
| 684.45 | 692.16 | 653.48 | 619.33 | 624.41 |

d) AFC allowed for the transmission assets of 2019-24 tariff period in this order are:

(₹ in lakh)

| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---------|---------|---------|---------|---------|
| 565.16 | 567.50 | 569.94 | 573.20 | 576.48 |

82. This order disposes of Petition No. 487/TT/2019 in terms of the above discussions and findings.

sd/-
(Pravas Kumar Singh)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson

