

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 50/TT/2020

Coram:

Shri P. K. Pujari, Chairperson
Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri P. K. Singh, Member

Date of order: 21.11.2021

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 2004-09 and 2009-14 periods, truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Combined Asset-I** under System Strengthening Scheme for Eastern Region (Formerly part of Tala Supplementary Scheme) and **Asset-II:** Conversion of 50 MVAR Line Reactor into Switchable Line Reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line under ERSS XV, now tariff is being claimed under "System Strengthening Scheme for Eastern Region (Formerly part of Tala Supplementary Scheme)" as per Central Electricity Regulatory Commission's order dated 12.9.2018 in Petition No. 259/TT/2018 in the Eastern Region.

And in the matter of:

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

.....Petitioner

Vs.

1. Bihar State Power (Holding) Company Limited,
(Formerly Bihar State Electricity Board -BSEB),
Vidyut Bhavan, Bailey Road,
Patna - 800001.
2. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,



Block DJ, Sector-II, Salt Lake City,
Calcutta - 700091.

3. Grid Corporation Of Orissa Limited,
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 Ved Prakash Rastogi, PGCIL

For Respondents: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, for revision of transmission tariff of 2004-09 and 2009-14 tariff period and truing of 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 for determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for the period from 1.4.2019 to 31.3.2024 in respect of the following transmission assets



under System Strengthening Scheme for Eastern Region (Formerly part of Tala Supplementary Scheme):

Combined Asset-I consisting of

Asset-A: 315 MVA, 400/220 kV, ICT at Siliguri;

Asset-B: 400 kV D/C Biharshariff-Muzaffarpur line, Biharsharif 400 kV extension and Muzaffarpur 400 kV extension;

Asset-C: 315 MVA, 400/220 kV, ICT-I at Subhashgram Sub-station (New);
and

Asset-D: LILO of one circuit of 400 kV D/C Farakka- Jeerat line at Shubhashgram and establishment of 400/200 kV Sub-Station at Subhashgram including 1x315 MVA ICT-II; and

Asset-II: Conversion of 50 MVAR Fixed Line Reactor into Switchable Line Reactor at Subhashgram end of Sagardighi-Subhasgram 400 kV S/C Line Reactor.

2. The 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 regulations 2014 and tariff regulation'19 as per para 9.0 & 10 above for respective block.

Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long term customers / DIC as the case may be, as and when the same is materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The petitioner may be allow to recover the deferred tax liability materialised directly without making any application before the commission as provided in the regulation.

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 recover FERV on the foreign loans deployed as provided under clause 68 of the Tariff Regulations,2019*

8) *Allow the petitioner to claimed initial spares project as whole.*

9) *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.*

10) *Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*

11) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is withdrawn from negative list at any time 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.”

Background

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

a. The Investment Approval (IA) for Combined Asset-I was accorded by Board of Directors of the Petitioner Company *vide* Memorandum dated 25.2.2003 at an estimated cost of ₹24791 lakh including IDC of ₹2364 lakh. Subsequently, the Revised Cost Estimate (RCE) in respect of Combined Asset-I was approved by the Board of Directors of the Petitioner Company *vide* its letter dated 9.7.2007 at an estimated cost of ₹33618 lakh, which included IDC of ₹1837 lakh.

b. IA for implementation of Asset-II under “Eastern Region Strengthening Scheme – XV (ERSS-XV) in Eastern Region” was accorded by the Board of Directors of the Petitioner in 327th meeting held on 2.4.2016 at an estimated cost



of ₹45111 lakh including an IDC of ₹2673 lakh based on October 2015 price level (communicated vide Memorandum Ref: C/CP/ERSS-XV dated 5.4.2016).

c. The transmission tariff in respect of Asset-A (part of Combined Asset-I) from 1.10.2006 to 31.3.2009 and for Asset-B (part of Combined Asset-I) from 1.11.2006 to 31.3.2009 was determined *vide* order dated 6.5.2008 in Petition No. 97/2007. Transmission tariff due to Additional Capital Expenditure (ACE) with respect to Asset-A and Asset-B was revised *vide* order dated 19.8.2009 in Petition No. 68/2009 and *vide* order dated 26.4.2010 in Petition No. 325/2009.

d. Transmission tariff in respect of Asset-C (part of Combined Asset-I) from 1.4.2007 to 31.3.2009 and for Asset-D (part of Combined Asset-I) for the period from 1.3.2007 to 31.3.2009 was determined *vide* order dated 1.5.2008 in Petition No. 160/2007 and was revised due to ACE *vide* order dated 26.4.2010 in Petition No. 325/2009.

e. While determining tariff of Assets-A, B, C and D for 2009-14 period *vide* order dated 16.5.2011 in Petition No. 276/2010, they were combined with notional date of commercial operation as 1.4.2007 and nomenclature of the combined asset in the present petition is Combined Asset-I.

f. Transmission tariff in respect of Combined Asset-I for 2009-14 period was trued up and tariff for 2014-19 period was determined *vide* order dated 22.12.2015 in Petition No. 485/TT/2014.

g. The Petitioner is claiming tariff of Asset-II in the instant petition in compliance of the Commission's order dated 31.12.2018 in Petition No. 259/TT/2018. The relevant paragraph of the said order is as follows:

"7.Asset III is conversion of 50 MVAR Fixed Line Reactor at Subhasagram end of Sagardighi-Subhasagram 400 kV S/C line to Switchable Line Reactor. The tariff for the existing 50 MVAR Fixed Line Reactor has already been granted and the petitioner should claim the cost of the conversion of the said line reactor in the respective tariff petition. Therefore, we are not inclined to grant tariff for Asset III at this stage."

h. The scope of work covered under "Eastern Region Strengthening Scheme – XV (ERSS-XV)" in Eastern Region is as follows:

Transmission Lines:



- i) Farakka – Baharampur 400 kV D/C (Twin HTLS) line – 80 km
- ii) Removal of the existing LILO of Farakka–Jeerat S/c line at Baharampur–3 km
- iii) LILO of Farakka – Jeerat 400 kV S/c line at Sagardighi– 15 km
- iv) LILO of Sagardighi – Subhasgram 400 kV S/c line at Jeerat–1.03 km

Sub-station:

- i) Extension at 400/220 kV Farakka Sub-station of NTPC -2 numbers 400 kV line bays for Farakka – Baharampur 400 kV D/C (HTLS) line.
- ii) Extension at 400/220 kV Sagardighi Sub-station of West Bengal -2 numbers 400 kV line bays for LILO of Farakka – Jeerat 400 kV S/C line (formed after removal of the existing LILO of Farakka – Jeerat S/C line at Baharampur) at Sagardighi.
- iii) Extension at 400/200 kV Jeerat Sub-station of West Bengal -2 numbers 400 kV GIS line bays for LILO of Sagardighi – Subhasgram 400 kV S/C line at Jeerat.
- iv) Extension at 400 kV Baharampur Sub-station of the Petitioner -2 numbers 400 kV line bays for termination of Farakka – Baharampur 400 kV D/C (HTLS) line and -125MVAR bus reactor at 400 kV at Baharampur Sub-station.
- v) Extension at 400 kV Subhasgram Sub-station of the Petitioner -Conversion of 50 MVAR fixed line reactor at Subhasgram end of Sagaradighi- Subhasgram 400 kV S/C line to switchable line reactor.

(*2 numbers of 400 kV line bays released after removal of existing LILO of Farakka Jeerat 400 kV SCc line at Baharampur are proposed to be utilized for connection of one existing bus reactor which is presently connected to one end of the bus due to space constraint & one new bus reactor mentioned above)

- i. The Petitioner has sought revision of transmission tariff of Combined Asset-1 allowed for 2004-09 tariff period 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 Appellate Tribunal for Electricity (APTEL) judgment dated 22.1.2007 in Appeal No. 81/2005 and batch matters and 13.6.2007 in Appeal No. 139/2006 and batch cases. The Petitioner has sought consequential revision of tariff allowed for 2009-14 tariff period, truing up



of tariff of 2014-19 tariff period and determination of tariff for 2019-24 period for transmission project.

j. APTEL vide judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters pertaining to generating stations of NTPC had considered four (4) issues. The issues considered by APTEL and its decisions/ directions are as follows:

| Sl. No. | Issue | APTEL's decisions/ directions |
|---------|---|--|
| 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 the APTEL dated 14.11.2016 in Appeal No. 94 of 2005 and Appeal No. 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. 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 |

k. APTEL vide 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 decisions of APTEL are as follows:

| Sl. No. | Issue | APTEL's decisions/ directions |
|---------|---|--|
| I | Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004 | The 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 Appeals No.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 the Appeal would not be pressed for implementation during the pendency of the Appeals, the stay was vacated by the Hon'ble Supreme Court.

m. Based on APTEL's judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2007 and batch cases, the Petitioner had sought re-determination of transmission tariff of its transmission assets for 2001-04 and 2004-09 tariff periods in 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 the Civil Appeals by the Hon'ble Supreme Court.



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

o. Consequent to the Hon'ble Supreme Court's order dated 10.4.2018 in NTPC matter, Petition No. 121/2007 was listed for hearing before the Commission 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 truing up of the petitions for 2014-19 tariff period in respect of concerned transmission assets.

p. Accordingly, the Petitioner has sought revision of transmission tariff approved for 2004-09 tariff periods on account of change in IoL and IWC to the extent of revision in IoL and in Maintenance Spares in terms of the APTEL's judgements dated 22.1.2007 and 13.6.2007.

q. The instant petition was heard on 3.3.2021 and subsequently on 31.3.2021 and in view of APTEL's judgments dated 22.1.2007 in Appeal No. 81/2005 and batch matters and dated 13.6.2007 in Appeal No. 139/2006 and batch cases and the order of Hon'ble Supreme Court dated 10.4.2018, tariff is being revised. Period- wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions at certain places, if any, are being applied which are indicated.

r. The details of the dates of commercial operation (COD) of the transmission assets are as follows:



| Asset's Nomenclature in the instant order | | Asset's Nomenclature in the earlier Order | Asset Details | COD | Effective COD |
|--|---------|---|--|-----------|-------------------------------------|
| Combined Asset-I (comprising of Asset-A to Asset-D) | Asset-A | Asset-I | 315 MVA, 400/220 kV, ICT at Siliguri; | 1.10.2006 | Combined Asset-I 1.4.2007 |
| | Asset-B | Asset-II | 400 kV D/C Biharshariff-Muzaffarpur line, Biharshariff 400 kV extension and Muzaffarpur 400 kV extension | 1.11.2006 | |
| | Asset-C | Asset-III | 315 MVA, 400/220 kV, ICT-I at Subhashgram Sub-station (New) | 1.4.2007 | |
| | Asset-D | Asset-IV | LILO of one circuit of 400 kV D/C Farakka-Jeerat line at Shubhashgram and establishment of 400/200 kV Sub-Station at Subhashgram including 1 x 315 MVA, ICT-II | 1.3.2007 | |
| Asset-II | | | | 8.3.2018 | |

s. The capital cost of ₹866.38 lakh and ₹17432.95 lakh for Asset-A and Asset-B respectively as on COD has been approved by the Commission *vide* its order dated 6.5.2008 in Petition No. 97/2007. Further, capital cost of ₹1036.90 lakh and ₹9657.71 lakh for Asset-C and Asset-D respectively as on COD has been approved by the Commission *vide* its order dated 1.5.2008 in Petition No. 160/2007. The tariff from COD was worked out based on the admitted capital cost as stated above. Accordingly, the transmission tariff is being revised for 2004-09 and 2009-14 periods in terms of APTEL's judgement dated 22.1.2007 and 13.6.2007.

4. The Respondents are distribution licensees, transmission 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 also 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 reply in the matter.

Re: Interest on Loan (“IoL”)

6. APTEL while dealing with the issue of computation of IoL, in judgement dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters 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 judgement dated 14.11.2006 in Appeal No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgement 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 from 1.4.1998 to 31.3.2001. In view of the judgement of APTEL, interest allowed for 2004-09 period is revised on the basis of the normative debt repayment methodology.

Re: Additional Capital Expenditure (“ACE”)

7. APTEL vide its judgement dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters held that ACE after COD should also be considered for computation of maintenance spares. In view of the judgement of APTEL, 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 judgement dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters 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. Accordingly, the outstanding



loan allowed in respect of the transmission assets for 2004-09 period is revised in the instant order.

9. In view of the above directions of APTEL, the outstanding loan allowed in respect of the transmission assets for 2004-09 tariff period is revised in the instant order.

10. The revision of transmission tariff allowed for 2004-09 tariff period 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 of 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 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 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.

11. Hearing in this matter was held on 3.3.2021 and order was reserved. Subsequently on 31.3.2021, the matter was again listed along with Petition No. 323/TT/2020 through video conference and order was reserved.

12. The Commission vide RoP for hearing dated 31.3.2021 directed the Petitioner to de-capitalise the 50 MVAR Line Reactor from the Transmission System associated



with Farakka-I & II STPS in Petition No. 323/TT/2020 and re-capitalise it in the present petition and accordingly submit revised tariff forms. The Petitioner has submitted the same *vide* affidavit dated 19.4.2021.

13. This order is issued considering the submissions made by the Petitioner *vide* affidavits dated 13.12.2019, 4.9.2020 and 19.4.2021.

14. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition.

REVISION OF TRANSMISSION CHARGES ALLOWED FOR 2004-09 AND 2009-14 TARIFF PERIODS

2004-09 Period

15. The Commission *vide* order dated 6.5.2008 in Petition No. 97/2007 approved the transmission charges for Asset-A and Asset-B which was revised on account of ACE *vide* order dated 19.8.2009 in Petition No. 68/2009 and *vide* order dated 26.4.2010 in Petition No. 325/2009. The Commission approved the transmission charges for Asset-C and Asset-D *vide* order dated 1.5.2008 in Petition No. 160/2007 which was further revised on account of ACE for Asset-C and Asset-D *vide* order dated 26.4.2010 in Petition No. 325/2009. The transmission charges allowed in respect of the transmission assets are as follows:

Asset-A

| Particulars | (₹ in lakh) | | |
|------------------------------|-----------------------------|---------------|---------------|
| | 2006-07 (Pro-rata 6 months) | 2007-08 | 2008-09 |
| Depreciation | 16.18 | 34.59 | 35.87 |
| Interest on Loan | 23.28 | 48.82 | 48.63 |
| Return on Equity | 18.87 | 40.35 | 41.84 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 2.26 | 4.73 | 4.90 |
| O&M Expenses | 30.42 | 63.26 | 65.80 |
| Total | 91.01 | 191.76 | 197.03 |



Asset-B

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 5 months) | 2007-08 | 2008-09 |
|------------------------------|-----------------------------|----------------|----------------|
| Depreciation | 196.78 | 486.43 | 498.12 |
| Interest on Loan | 382.66 | 927.68 | 921.35 |
| Return on Equity | 305.83 | 755.15 | 773.26 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 25.00 | 61.41 | 63.14 |
| O&M Expenses | 78.03 | 194.50 | 202.52 |
| Total | 988.30 | 2425.16 | 2458.40 |

Asset-C

(₹ in lakh)

| Particulars | 2007-08 | 2008-09 |
|------------------------------|---------------|---------------|
| Depreciation | 37.33 | 38.22 |
| Interest on Loan | 51.18 | 49.24 |
| Return on Equity | 43.53 | 44.57 |
| Advance against Depreciation | 0.00 | 26.28 |
| Interest on Working Capital | 6.03 | 6.73 |
| O&M Expenses | 63.26 | 65.80 |
| Total | 201.33 | 230.85 |

Asset-D

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 1 month) | 2007-08 | 2008-09 |
|------------------------------|----------------------------|----------------|----------------|
| Depreciation | 23.29 | 291.55 | 306.96 |
| Interest on Loan | 44.66 | 552.02 | 566.67 |
| Return on Equity | 34.09 | 426.36 | 449.73 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 3.21 | 39.63 | 41.46 |
| O&M Expenses | 22.86 | 285.13 | 296.67 |
| Total | 128.11 | 1594.69 | 1661.50 |

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

Asset-A

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 6 months) | 2007-08 | 2008-09 |
|------------------------------|-----------------------------|---------|---------|
| Depreciation | 16.18 | 34.59 | 35.87 |
| Interest on Loan | 23.59 | 51.31 | 53.25 |
| Return on Equity | 18.87 | 40.35 | 41.84 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |



| Particulars | 2006-07 (Pro-rata 6 months) | 2007-08 | 2008-09 |
|-----------------------------|-----------------------------|---------------|---------------|
| Interest on Working Capital | 2.28 | 4.90 | 5.15 |
| O&M Expenses | 30.42 | 63.26 | 65.80 |
| Total | 91.34 | 194.42 | 201.91 |

Asset-B

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 5 months) | 2007-08 | 2008-09 |
|------------------------------|-----------------------------|----------------|----------------|
| Depreciation | 196.78 | 486.43 | 498.12 |
| Interest on Loan | 385.81 | 966.22 | 981.44 |
| Return on Equity | 305.83 | 755.15 | 773.26 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 25.10 | 63.38 | 66.04 |
| O&M Expenses | 78.03 | 194.50 | 202.52 |
| Total | 991.55 | 2465.68 | 2521.39 |

Asset-C

(₹ in lakh)

| Particulars | 2007-08 | 2008-09 |
|------------------------------|---------------|---------------|
| Depreciation | 37.33 | 38.22 |
| Interest on Loan | 52.56 | 51.86 |
| Return on Equity | 43.53 | 44.57 |
| Advance against Depreciation | 0.00 | 0.00 |
| Interest on Working Capital | 6.06 | 6.27 |
| O&M Expenses | 63.26 | 65.80 |
| Total | 202.74 | 206.72 |

Asset-D

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 1 month) | 2007-08 | 2008-09 |
|------------------------------|----------------------------|----------------|----------------|
| Depreciation | 23.29 | 291.55 | 306.96 |
| Interest on Loan | 44.74 | 564.47 | 600.82 |
| Return on Equity | 34.09 | 426.36 | 449.73 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 3.22 | 40.93 | 43.81 |
| O&M Expenses | 22.86 | 285.13 | 296.67 |
| Total | 128.20 | 1608.43 | 1697.99 |

17. We have considered the Petitioner's claim. Tariff is allowed in respect of the transmission assets on the basis of the following:

- a) The admitted capital cost of ₹866.38 lakh and ₹17432.95 lakh for Asset-A and Asset-B respectively as on COD has been approved by the Commission vide order dated 6.5.2008 in Petition No. 97/2007. The capital cost of ₹1036.90



lakh and ₹9657.71 lakh with respect to Asset-C and Asset-D respectively as on COD has been approved by the Commission vide order dated 1.5.2008 in Petition No. 160/2007.

b) Weighted Average Rate of Interest (WAROI) on actual loan adopted as per order dated 6.5.2008 in Petition No. 97/2007, order dated 19.8.2009 in Petition No. 68/2009, order dated 1.5.2008 in Petition No. 160/2007 and order dated 26.4.2010 in Petition No. 325/2009.

c) With respect to calculation of IoL, during the year 2006-07 moratorium period was availed by the Petitioner for Asset-A and Asset-B and no actual repayment of loan was made. Earlier, the Commission vide order dated 6.5.2008 in Petition No. 97/2007, vide order dated 19.8.2009 in Petition No. 68/2009 and vide order dated 26.4.2010 in Petition No. 325/2009 had considered depreciation provided during the year 2006-07 as loan repayment. Therefore, depreciation provided during the year 2006-07 has been considered as loan repayment for Asset-A and Asset-B in accordance with Regulation 56(i)(f) of the 2004 Tariff Regulations. The relevant extract of the Regulation 56(i)(f) of the 2004 Tariff Regulations is as follows:

“56 (i) Interest on Loan Capital

(f) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly;”

d) Similarly, the Petitioner has availed moratorium period and no actual repayment of loan was made during the year 2006-07 for Asset-D and during the year 2007-08 for Asset-C. Earlier, the Commission vide order dated 1.5.2008 in Petition No. 160/2007 and vide order dated 26.4.2010 in Petition No. 325/2009 had considered depreciation provided during the year 2006-07 for Asset-D and during 2007-08 for Asset-C. Therefore, depreciation provided during the year 2006-07 has been considered as loan repayment for Asset-D and depreciation provided during 2007-08 has been considered as loan repayment for Asset-C in accordance with Regulation 56(i)(f) of the 2004 Tariff Regulations.



e) Weighted Average Rate of Depreciation (WAROD), Rate of Interest for Working Capital and O&M Expenses has been considered as per order dated 6.5.2008 in Petition No. 97/2007, order dated 19.8.2009 in Petition No. 68/2009, order dated 1.5.2008 in Petition No. 160/2007 and order dated 26.4.2010 in Petition No. 325/2009.

f) Actual ACE of ₹64.55 lakh for Asset-A, ₹245.91 lakh for Asset-B in 2006-07 had been approved by the Commission vide order dated 6.5.2008 in Petition No. 97/2007. Actual ACE of ₹59.97 lakh for Asset-A, ₹761.24 lakh for Asset-B in 2007-08 had been approved by the Commission vide order dated 19.8.2009 in Petition No. 68/2009. Actual ACE of ₹171.80 lakh for Asset-C in 2006-07 had been approved by the Commission vide order dated 1.5.2008 in Petition No. 160/2007. Actual ACE of ₹651.26 lakh for Asset-D in 2007-08, ACE of ₹10.74 lakh for Asset-A, ₹101.35 lakh for Asset-B, ₹49.81 lakh for Asset-C and ₹461.51 lakh for Asset-D in 2008-09 had been approved by the Commission vide order dated 26.4.2010 in Petition No. 325/2009.

18. In view of above, the revised transmission charges allowed for Asset-A, Asset-B, Asset-C and Asset-D for 2004-09 tariff period are as follows:

Asset-A

| Particulars | (₹ in lakh) | | |
|------------------------------|-----------------------------|---------------|---------------|
| | 2006-07 (Pro-rata 6 months) | 2007-08 | 2008-09 |
| Depreciation | 16.18 | 34.59 | 35.87 |
| Interest on Loan | 23.28 | 50.06 | 52.01 |
| Return on Equity | 18.87 | 40.35 | 41.84 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 2.28 | 4.86 | 5.10 |
| O&M Expenses | 30.42 | 63.26 | 65.80 |
| Total | 91.02 | 193.12 | 200.62 |



Asset-B

| Particulars | (₹ in lakh) | | |
|------------------------------|-----------------------------|----------------|----------------|
| | 2006-07 (Pro-rata 5 months) | 2007-08 | 2008-09 |
| Depreciation | 196.78 | 486.43 | 498.12 |
| Interest on Loan | 382.66 | 944.74 | 966.55 |
| Return on Equity | 305.83 | 755.15 | 773.26 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 25.05 | 62.37 | 65.11 |
| O&M Expenses | 78.03 | 194.50 | 202.52 |
| Total | 988.35 | 2443.19 | 2505.57 |

Asset-C

| Particulars | (₹ in lakh) | |
|------------------------------|---------------|---------------|
| | 2007-08 | 2008-09 |
| Depreciation | 37.33 | 38.22 |
| Interest on Loan | 51.58 | 49.26 |
| Return on Equity | 43.53 | 44.57 |
| Advance against Depreciation | 0.00 | 26.28 |
| Interest on Working Capital | 6.03 | 6.76 |
| O&M Expenses | 63.26 | 65.80 |
| Total | 201.32 | 230.90 |

Asset-D

| Particulars | (₹ in lakh) | | |
|------------------------------|----------------------------|----------------|----------------|
| | 2006-07 (Pro-rata 1 month) | 2007-08 | 2008-09 |
| Depreciation | 23.29 | 291.55 | 306.96 |
| Interest on Loan | 44.66 | 562.86 | 598.96 |
| Return on Equity | 34.09 | 426.36 | 449.73 |
| Advance against Depreciation | 0.00 | 0.00 | 0.00 |
| Interest on Working Capital | 3.22 | 40.34 | 43.19 |
| O&M Expenses | 22.86 | 285.13 | 296.67 |
| Total | 128.12 | 1606.25 | 1695.50 |

19. Annual Fixed Charges (AFC) allowed earlier for 2004-09 period *vide* order dated 6.5.2008 in Petition No. 97/2007, *vide* order dated 19.8.2009 in Petition No. 68/2009, *vide* order dated 1.5.2008 in Petition No. 160/2007 and *vide* order dated 26.4.2010 in Petition No. 325/2009, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:



Asset-A

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 6 months) | 2007-08 | 2008-09 |
|--|-----------------------------|---------|---------|
| AFC approved <i>vide</i> order dated 6.5.2008 in Petition No. 97/2007, revised due to ACE <i>vide</i> order dated 19.8.2009 in Petition No. 68/2009 and <i>vide</i> order dated 26.4.2010 in Petition No. 325/2009 | 91.01 | 191.76 | 197.03 |
| AFC claimed by the Petitioner in the instant petition | 91.34 | 194.42 | 201.91 |
| AFC allowed in the instant order | 91.02 | 193.12 | 200.62 |

Asset-B

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 5 months) | 2007-08 | 2008-09 |
|---|-----------------------------|---------|---------|
| AFC approved <i>vide</i> order dated 6.5.2008 in Petition No. 97/2007, revised due to ACE <i>vide</i> order dated 19.8.2009 in Petition No. 68/2009 and <i>vide</i> order dated 26.4.2010 in Petition No. 325/2009. | 988.30 | 2425.16 | 2458.40 |
| AFC claimed by the Petitioner in the instant petition | 991.55 | 2465.68 | 2521.39 |
| AFC allowed in the instant order | 988.35 | 2443.19 | 2505.57 |

Asset-C

(₹ in lakh)

| Particulars | 2007-08 | 2008-09 |
|---|---------|---------|
| AFC approved <i>vide</i> order dated 1.5.2008 in Petition No. 160/2007 and revised due to ACE <i>vide</i> order dated 26.4.2010 in Petition No. 325/2009. | 201.33 | 230.85 |
| AFC claimed by the Petitioner in the instant petition | 202.74 | 206.72 |
| AFC allowed in the instant order | 201.32 | 230.90 |

Asset-D

(₹ in lakh)

| Particulars | 2006-07 (Pro-rata 1 month) | 2007-08 | 2008-09 |
|---|----------------------------|---------|---------|
| AFC approved <i>vide</i> order dated 1.5.2008 in Petition No. 160/2007 and revised due to ACE <i>vide</i> order dated 26.4.2010 in Petition No. 325/2009. | 128.11 | 1594.69 | 1661.50 |
| AFC claimed by the Petitioner in the instant petition | 128.20 | 1608.43 | 1697.99 |
| AFC allowed in the instant order | 128.12 | 1606.25 | 1695.50 |



2009-14 Period

20. The Commission *vide* order dated 16.5.2011 in Petition No. 276/2010 approved the tariff in respect of Combined Asset-I for 2009-14 period and subsequently *vide* order dated 22.12.2015 in Petition No. 485/TT/2014 trued up the tariff allowed for 2009-14 period and the same is as follows:

| (₹ in lakh) | | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Depreciation | 1657.21 | 1667.45 | 1668.30 | 1668.82 | 1670.17 |
| Interest on Loan | 1524.15 | 1412.46 | 1286.14 | 1158.31 | 1031.06 |
| Return on Equity | 1775.94 | 1853.81 | 1856.52 | 1857.10 | 1880.98 |
| Interest on Working Capital | 145.91 | 147.85 | 147.87 | 147.95 | 148.70 |
| O&M Expenses | 851.39 | 900.15 | 951.68 | 1006.05 | 1063.51 |
| Total | 5954.60 | 5981.73 | 5910.51 | 5838.23 | 5794.41 |

21. The Petitioner has claimed the following revised transmission charges in respect of Combined Asset-I for 2009-14 period in the instant petition:

| (₹ in lakh) | | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Depreciation | 1657.21 | 1667.45 | 1668.30 | 1668.82 | 1670.17 |
| Interest on Loan | 1646.81 | 1535.68 | 1409.75 | 1282.28 | 1155.44 |
| Return on Equity | 1775.94 | 1853.81 | 1856.52 | 1857.10 | 1880.98 |
| Interest on Working Capital | 148.47 | 150.42 | 150.45 | 150.54 | 151.29 |
| O&M Expenses | 851.39 | 900.15 | 951.68 | 1006.05 | 1063.51 |
| Total | 6079.81 | 6107.51 | 6036.70 | 5964.79 | 5921.39 |

22. We have considered the Petitioner's claim. The tariff is allowed in respect of the Combined Asset-I on the basis of following:

- a) Admitted capital cost of ₹31572.08 lakh as on 1.4.2009.
- b) WAROI on actual loan derived/ adopted *vide* order dated 22.12.2015 in Petition No. 485/TT/2014.
- c) WAROD as per order dated 22.12.2015 in Petition No. 485/TT/2014.
- d) Actual ACE of ₹509.92 lakh for 2009-14 tariff period approved by the Commission *vide* order dated 22.12.2015 in Petition No. 485/TT/2014.



23. In view of above, the revised transmission charges allowed in respect of Combined Asset-I for 2009-14 tariff period are as follows.

| (₹ in lakh) | | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Depreciation | 1657.21 | 1667.45 | 1668.30 | 1668.82 | 1670.17 |
| Interest on Loan | 1626.02 | 1514.80 | 1388.80 | 1261.27 | 1134.36 |
| Return on Equity | 1775.94 | 1853.81 | 1856.52 | 1857.10 | 1880.98 |
| Interest on Working Capital | 148.03 | 149.99 | 150.01 | 150.10 | 150.85 |
| O&M Expenses | 851.39 | 900.15 | 951.68 | 1006.05 | 1063.51 |
| Total | 6058.59 | 6086.19 | 6015.32 | 5943.34 | 5899.87 |

24. AFC allowed earlier for 2009-14 period *vide* order dated 16.5.2011 in Petition No. 276/2010 and subsequently *vide* order dated 22.12.2015 in Petition No. 485/TT/2014, the 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 <i>vide</i> order dated 22.12.2015 in Petition No. 485/TT/2014 | 5954.60 | 5981.73 | 5910.51 | 5838.23 | 5794.41 |
| AFC claimed by the Petitioner in the instant petition | 6079.81 | 6107.51 | 6036.70 | 5964.79 | 5921.39 |
| AFC allowed in the instant order | 6058.59 | 6086.19 | 6015.32 | 5943.34 | 5899.87 |

TRUING UP OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

25. The Petitioner initially claimed separate tariff in respect of Combined Asset-I and Asset-II i.e. Conversion of 50 MVAR Line Reactor into Switchable Line Reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line (excluding the reactor cost).

26. In the course of hearing the matter on 31.3.2021, the Commission observed that 50 MVAR Line Reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line is sought to be converted into a Switchable Line Reactor. It was shifted from Transmission System associated with Farakka-I & II



STPS in the Eastern Region covered in Petition No. 323/TT/2020. Accordingly, the Commission vide RoP of the hearing dated 31.3.2021, directed the Petitioner to de-capitalise 50 MVAR Line Reactor from Transmission System associated with Farakka-I & II STPS covered in Petition No. 323/TT/2020 and re-capitalise the same in the present petition along with revised tariff forms in both the Petitions.

27. In response, the Petitioner has submitted that re-capitalisation of 50 MVAR line reactor under System Strengthening Scheme for Eastern Region (Formerly part of Tala Supplementary Scheme) and conversion cost of the said line reactor into switchable line reactor is claimed as ACE in Combined Asset-I from the year 2017-18 onwards. Accordingly, as per revised cost of Combined Asset-I, revised tariff forms for 2014-19 and 2019-24 tariff periods and Form 10-B have been submitted. The Petitioner has prayed to allow the re-capitalization of line reactor in the subject project and to allow conversion of line reactor into switchable line reactor as ACE of Combined Asset-I along with one 400 kV switchable line reactor bay. Accordingly, the Petitioner has claimed tariff of 2014-19 period in respect of Combined Asset-I including re-capitalisation of switchable line reactor as ACE for the year 2017-18.

28. The details of transmission charges claimed by the Petitioner in respect of the Combined Asset-I are as follows:

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Depreciation | 1671.52 | 1671.52 | 1671.52 | 1678.18 | 1686.26 |
| Interest on Loan | 1028.81 | 901.44 | 775.43 | 649.73 | 535.87 |
| Return on Equity | 1882.53 | 1891.65 | 1891.65 | 1902.93 | 1920.84 |
| O&M Expenses | 976.89 | 1009.40 | 1042.89 | 1081.85 | 1181.95 |
| Interest on Working Capital | 159.45 | 158.53 | 157.48 | 160.58 | 160.66 |
| Total | 5719.20 | 5632.54 | 5538.97 | 5473.27 | 5485.58 |



29. The details of IWC claimed by the Petitioner in respect of the Combined Asset-I are as follows:

| Particular | (₹ in lakh) | | | | |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| O&M Expenses | 81.41 | 84.12 | 86.91 | 95.33 | 98.50 |
| Maintenance Spares | 146.53 | 151.41 | 156.43 | 171.60 | 177.29 |
| Receivables | 953.20 | 938.76 | 923.16 | 922.57 | 914.26 |
| Total Working Capital | 1181.14 | 1174.29 | 1166.50 | 1189.50 | 1190.05 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 159.45 | 158.53 | 157.48 | 160.58 | 160.66 |

Conversion of 50 MVAR Line reactor into Switchable line reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line

30. The Petitioner initially claimed conversion of 50 MVAR line reactor into switchable line reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line as Asset-II with COD as 8.3.2018. In support of COD of Asset-II, the Petitioner has submitted CEA energisation certificate dated 5.3.2018 under Regulation 43 of CEA (Measures Relating to Safety and Electric Supply) Regulations, 2010; self-declaration COD certificate dated 22.3.2018; RLDC charging certificates dated 13.4.2018; and CMD certificates as required under the Grid Code.

31. As has been discussed above, in compliance of the Commission's direction with reference to RoP for the hearing dated 31.3.2021, the Petitioner has claimed tariff for 2014-19 period in respect of the Combined Asset-I which includes re-capitalisation of the capital cost of switchable line reactor and its conversion cost as ACE for the year 2017-18.

32. The Petitioner has claimed the following re-capitalisation details in respect of switchable line reactor:



(₹ in lakh)

| Details as per Form-10 B | | | | | |
|---------------------------|---|---|---|----------------|---|
| Year of de-capitalisation | Year of capitalisation of asset/ equipment being de-capitalised | Original book value of the asset being de-capitalised | Cumulative depreciation corresponding to de-capitalisation date | Net Book Value | Date of re-capitalisation claimed in the instant petition |
| 2017-18 (6.3.2018) | 1.12.1994 | 193.63 | 174.27 | 19.36 | 8.3.2018 |

33. The Petitioner in the instant petition has claimed date of re-capitalisation as 8.3.2018 in respect of switchable line reactor.

34. We have considered the submissions of the Petitioner and observe that Petitioner in its submission dated 19.4.2021 in Petition No. 323/TT/2020 has de-capitalised the cost of 50 MVAR line reactor from the Transmission System associated with Farakka-I & II STPS with effect from 6.3.2018 and the same has been shifted and commissioned as switchable line reactor in the subject transmission project with effect from 8.3.2018.

35. The Commission while de-capitalising the switchable line reactor vide order dated 18.10.2021 in Petition No. 323/TT/2020 held as under:

“36. During the hearing dated 31.3.2021, the Commission had observed that the 50 MVAR Line Reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line, which is sought to be converted into a Switchable Line Reactor and covered in Petition No. 50/TT/2020, was shifted from the transmission system covered under the instant Petition. Accordingly, vide RoP dated 31.3.2021, the Petitioner was directed to de-capitalise the said 50 MVAR Line Reactor from the transmission system covered under the instant petition and re-capitalise in Petition No. 50/TT/2020 and file the revised tariff forms in the aforementioned petitions.

37. In response, the Petitioner vide affidavit dated 19.4.2021 has submitted the details of de-capitalization of the said 50 MVAR Line Reactor (in Form-10B) along with the revised tariff forms. The de-capitalization details submitted are as follows:

.....

39. We have considered the submissions of the Petitioner. The Petitioner in the instant petition has de-capitalized the cost of shifted 50 MVAR Line Reactor. We have allowed de-capitalization date of the said 50 MVAR Line Reactor as 6.3.2018. The details of de-capitalization considered in the instant order are as follows:



| <i>COD of the de-capitalized equipment</i> | <i>Date of de-capitalisation considered in the instant order</i> | <i>Original Book Value of the equipment being de-capitalised</i> | <i>Cumulative depreciation corresponding to de-capitalisation date</i> | <i>Net book value</i> |
|---|---|---|---|------------------------------|
| 1.12.1994 | 6.3.2018 | 193.63 | 174.27 | 19.36 |

36. The Petitioner in the instant petition has prayed to allow the re-capitalisation of switchable line reactor and its conversion cost in the subject transmission project as ACE during the year 2017-18 of Combined Asset-I. However, we note that the elements under Combined Asset-I were commissioned during the tariff period 2004-09 whereas the shifted switchable line reactor was commissioned on 1.12.1994 and was allowed tariff w.e.f. 1.12.1994. On perusal of Form-10B, we notice that depreciation in respect of switchable line reactor has already been fully recovered as on the date of re-capitalisation. Taking into consideration the fact that remaining useful life of the transmission assets is not the same, we are of the view that tariff in respect of the switchable line reactor should be allowed as a separate stream.

37. Taking into consideration RLDC certificate, CEA energisation certificate, self-declaration of COD certificate, RLDC charging certificate and CMD certificate, COD of conversion of 50 MVAR line reactor into switchable line reactor at Subhashgram end of 400 kV S/C Sagardighi-Subhasgram Transmission Line is approved as 8.3.2018. Accordingly, re-capitalisation of switchable line reactor is allowed in the instant petition with effect from 8.3.2018 as a separate Asset i.e. Asset-I(a) (cost of reactor only). As prayed by the Petitioner, we have approved the conversion cost of the switchable line reactor as ACE of Combined Asset-I.



Capital Cost

38. The capital cost of the transmission project for 2014-19 tariff period has been calculated in accordance with Regulation 9(3) and Regulation 9(6) of 2014 Tariff Regulations.

39. The capital cost admitted *vide* order dated 22.12.2015 in Petition No. 485/TT/2014 for Combined Asset-I is as follows:

(₹ in lakh)

| Admitted <i>vide</i> order dated 22.12.2015 in Petition No. 485/TT/2014 | | | ACE admitted during 2014-19 period | Admitted Capital Cost as on 31.3.2019 |
|--|------------------|---|--|--|
| Particulars | Approved Cost | Admitted Capital Cost as on 31.3.2014 | | |
| Combined Asset-I | 33618.00 | 32082.00 | 2014-19 - | 32082.00 |

40. The Petitioner has claimed the following capital cost in respect of Combined Asset-I:

(₹ in lakh)

| Particulars | Apportioned Approved Cost | Capital Cost on 31.3.2014 | ACE | | Total Estimated Cost as on 31.3.2019 |
|---------------------|------------------------------|------------------------------|---------|---------|---|
| | | | 2017-18 | 2018-19 | |
| Combined Asset-I | 33618.00 | 32082.00 | 252.40* | 53.48** | 32387.88 |

*Includes the cost of switchable line reactor and conversion cost.

**conversion cost

41. As observed above, capital cost allowed under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)

| Particulars | Admitted Capital Cost as on 1.4.2014 |
|-------------|--------------------------------------|
| Asset-I | 32082.00 |



(₹ in lakh)

| Particulars | Original COD | Date of re-capitalisation claimed in the instant petition | Original book value of the asset being re-capitalised | Corresponding cumulative depreciation as on date of de-capitalisation |
|-------------|--------------|---|---|---|
| Asset-I(a) | 1.12.1994 | 8.3.2018 | 193.63 | 174.27 |

Additional Capital Expenditure (“ACE”)

42. The Petitioner has claimed the following ACE during 2014-19 tariff period in respect of Combined Asset-I:

(₹ in lakh)

| ACE | |
|----------|---------|
| 2017-18 | 2018-19 |
| 252.40** | 53.48 |

**Includes the cost of switchable line reactor and conversion cost.

43. We have considered the submissions of the Petitioner. As observed above, re-capitalisation of switchable line reactor is allowed in the instant petition with effect from 8.3.2018 as a separate asset i.e. Asset-I(a). Accordingly, capital cost of switchable line reactor of ₹193.63 lakh has been deducted from ACE claimed during the year 2017-18 and remaining ACE of ₹58.77 lakh (₹252.40 lakh - ₹193.63 lakh) has been allowed as part of Combined Asset-I. ACE allowed in respect of the Combined Asset-I from 1.4.2014 to 31.3.2019 is as follows:

(₹ in lakh)

| ACE | |
|---------|---------|
| 2017-18 | 2018-19 |
| 58.77 | 53.48 |

Capital cost considered for 2014-19 tariff period

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

(₹ in lakh)

| Particulars | Admitted Capital Cost as on 1.4.2014 | ACE | | Total capital cost claimed as on 31.3.2019 |
|------------------|--------------------------------------|---------|---------|--|
| | | 2017-18 | 2018-19 | |
| Combined Asset-I | 32082.00 | 58.77 | 53.48 | 32194.25 |



(₹ in lakh)

| Particulars | Capital Cost as on 8.3.2018 | ACE | Total Capital Cost as on 31.3.2019 |
|-------------|-----------------------------|---------|------------------------------------|
| | | 2018-19 | |
| Asset-I(a) | 193.63 | 0.00 | 193.63 |

Debt-Equity ratio

45. Debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. Accordingly, debt-equity ratio of 70.08:29.92 for the period ending on 31.3.2014, considered for the purpose of determination of tariff of 2014-19 period has been considered for the purpose of truing up of tariff of Combined Asset-I for 2014-19 tariff period. The re-capitalisation of Asset-I(a) in the instant petition is carried out in the same debt-equity ratio as considered in Petition No. 323/TT/2020. The details of debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of Combined Asset-I and Asset-I(a) are as follows:

Debt-Equity for Capital Cost as on 1.4.2014 for Combined Asset-I:

| Particulars | Capital Cost as on 1.4.2014 (₹ in lakh) (A) | (in %) |
|--------------|--|---------------|
| Debt | 22482.64 | 70.08 |
| Equity | 9599.36 | 29.92 |
| Total | 32082.00 | 100.00 |

Debt-Equity for Capital Cost as on 8.3.2018 for Asset-I(a):

| Particulars | Capital Cost as on the date of re-capitalisation (₹ in lakh) | (in %) |
|--------------|---|---------------|
| Debt | 96.82 | 50.00 |
| Equity | 96.82 | 50.00 |
| Total | 193.63 | 100.00 |



Debt-Equity for ACE during 2014-19 for Combined Asset-I:

| ACE (₹ in lakh) (B) | (in %) | ACE (₹ in lakh) (C) | (in %) |
|------------------------|---------------|------------------------|---------------|
| 2017-18 | | 2018-19 | |
| 41.14 | 70.00 | 37.44 | 70.00 |
| 17.63 | 30.00 | 16.04 | 30.00 |
| 58.77 | 100.00 | 53.48 | 100.00 |

Debt-Equity for Capital Cost as on 31.3.2019 for Combined Asset-I:

| Particulars | Total Capital Cost as on 31.3.2019 (₹ in lakh) (D=A+B+C) | (in %) |
|--------------|---|---------------|
| Debt | 22561.22 | 70.08 |
| Equity | 9633.03 | 29.92 |
| Total | 32194.25 | 100.00 |

Debt-Equity for Capital Cost as on 31.3.2019 for Asset-I(a):

| Particulars | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|---|---------------|
| Debt | 96.82 | 50.00 |
| Equity | 96.82 | 50.00 |
| Total | 193.63 | 100.00 |

Depreciation

46. The Gross Block during 2014-19 tariff period has been depreciated at WAROD. WAROD at Annexure-1 has been worked out after taking into account the depreciation rates of asset as prescribed in the 2014 Tariff Regulations and depreciation allowed is as follows:

| Particulars | (₹ in lakh) | | | | |
|--|-------------|----------|----------|----------|----------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Opening Gross Block | 32082.00 | 32082.00 | 32082.00 | 32082.00 | 32140.77 |
| ACE | 0.00 | 0.00 | 0.00 | 58.77 | 53.48 |
| Closing Gross Block | 32082.00 | 32082.00 | 32082.00 | 32140.77 | 32194.25 |
| Average Gross Block | 32082.00 | 32082.00 | 32082.00 | 32111.39 | 32167.51 |
| Freehold Land | 227.43 | 227.43 | 227.43 | 227.43 | 227.43 |
| Weighted Average Rate of Depreciation (WAROD) (in %) | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| Balance useful life of the asset (Year) | 25 | 24 | 23 | 22 | 21 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|----------------|----------------|----------------|----------------|
| Lapsed Life of the asset (Year) | 7 | 8 | 9 | 10 | 11 |
| Depreciable Value | 28669.11 | 28669.11 | 28669.11 | 28695.56 | 28746.07 |
| Depreciation during the year | 1671.51 | 1671.51 | 1671.51 | 1673.06 | 1676.03 |
| Cumulative Depreciation at the end of the year | 11995.03 | 13666.54 | 15338.06 | 17011.12 | 18687.15 |
| Remaining Depreciable Value at the end of the year | 16674.08 | 15002.57 | 13331.06 | 11684.44 | 10058.92 |

47. The details of depreciation approved in respect of Combined Asset-I *vide* order dated 22.12.2015 in Petition No. 485/TT/2014, depreciation claimed by the Petitioner in the instant petition and as trued up in the instant order are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Approved <i>vide</i> order dated 22.12.2015 in Petition No. 485/TT/2014 | 1671.51 | 1671.51 | 1671.51 | 1671.51 | 1671.51 |
| Claimed by the Petitioner in the instant petition | 1671.52 | 1671.52 | 1671.52 | 1678.18 | 1686.26 |
| Allowed after true-up in this order | 1671.51 | 1671.51 | 1671.51 | 1673.06 | 1676.03 |

48. Depreciation in respect of Asset-I(a) has been fully recovered. Therefore, no depreciation is required to be allowed in the present order.

Interest on Loan (“IoL”)

49. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed in respect of the Combined Asset-I is as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Gross Normative Loan | 22482.64 | 22482.64 | 22482.64 | 22482.64 | 22523.78 |
| Cumulative Repayments up to | 9023.37 | 10694.88 | 12366.39 | 14037.91 | 15710.97 |

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| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|---------------|---------------|---------------|---------------|
| Previous Year | | | | | |
| Net Loan-Opening | 13459.27 | 11787.76 | 10116.25 | 8444.74 | 6812.81 |
| Additions | 0.00 | 0.00 | 0.00 | 41.14 | 37.44 |
| Repayment during the year | 1671.51 | 1671.51 | 1671.51 | 1673.06 | 1676.03 |
| Net Loan-Closing | 11787.76 | 10116.25 | 8444.74 | 6812.81 | 5174.22 |
| Average Loan | 12623.52 | 10952.00 | 9280.49 | 7628.77 | 5993.52 |
| Weighted Average Rate of Interest on Loan (in %) | 7.9822 | 8.0361 | 8.1233 | 8.2333 | 8.5759 |
| Interest on Loan | 1007.63 | 880.12 | 753.88 | 628.10 | 514.00 |

50. The details of IoL approved in respect of Combined Asset-I vide order dated 22.12.2015 in Petition No. 485/TT/2014, IoL claimed by the Petitioner in the instant petition and as trued up in the instant order is as follows:

| Particulars | (₹ in lakh) | | | | |
|---|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Approved vide order dated 22.12.2015 in Petition No. 485/TT/2014. | 903.88 | 775.64 | 648.26 | 522.91 | 400.12 |
| Claimed by the Petitioner in the instant petition. | 1028.81 | 901.44 | 775.43 | 649.73 | 535.97 |
| Allowed after true-up in this order | 1007.63 | 880.12 | 753.88 | 628.10 | 514.00 |

51. IoL in respect of Asset-I(a) has already been fully repaid by the Petitioner and as such no IoL has been allowed for the same.

Return on Equity ("RoE")

52. The Petitioner has claimed RoE in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at 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 | 19.624 |
| 2015-16 | 21.382 | 19.716 |
| 2016-17 | 21.338 | 19.705 |
| 2017-18 | 21.337 | 19.704 |
| 2018-19 | 21.549 | 19.758 |



53. We have considered the submissions of the Petitioner. 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 as follows:

| 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 |

54. MAT rates considered in order dated 27.4.2020 for the purpose of grossing up of rate of RoE for truing up of the tariff of 2014-19 period, in terms of the provisions of the 2014 Tariff Regulations, is considered in the instant case, which 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 |

55. The Petitioner has claimed RoE for 2014-19 period after grossing up RoE of 15.50% with Effective Tax rates (based on MAT rates) of each year as per Regulation 25(3) of the 2014 Tariff Regulations. Trued up RoE is allowed on the basis of MAT rate applicable in the respective years for Combined Asset-I is as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Opening Equity | 9599.36 | 9599.36 | 9599.36 | 9599.36 | 9616.99 |
| Additions | 0.00 | 0.00 | 0.00 | 17.63 | 16.04 |
| Closing Equity | 9599.36 | 9599.36 | 9599.36 | 9616.99 | 9633.03 |
| Average Equity | 9599.36 | 9599.36 | 9599.36 | 9608.17 | 9625.01 |
| Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| MAT Rate for respective year (in %) | 20.961 | 21.342 | 21.342 | 21.342 | 21.549 |
| Rate of Return on Equity (in %) | 19.610 | 19.705 | 19.705 | 19.705 | 19.758 |
| Return on Equity | 1882.43 | 1891.55 | 1891.55 | 1893.29 | 1901.71 |

56. The details of RoE approved in respect of Combined Asset-I vide order dated 22.12.2015 in Petition No. 485/TT/2014, RoE claimed by the Petitioner in the instant petition and as trued 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 22.12.2015 in Petition No. 485/TT/2014 | 1882.48 | 1882.48 | 1882.48 | 1882.48 | 1882.48 |
| Claimed by the Petitioner in the instant petition | 1882.53 | 1891.65 | 1891.65 | 1902.93 | 1920.84 |
| Allowed after true-up in this order | 1882.43 | 1891.55 | 1891.55 | 1893.29 | 1901.71 |

57. RoE allowed in respect of Asset-I(a) is as follows:

(₹ in lakh)

| Particulars | 2017-18 (Pro-rata 24 days) | 2018-19 |
|-------------------------------------|----------------------------|--------------|
| Opening Equity | 96.82 | 96.82 |
| Additions | - | - |
| Closing Equity | 96.82 | 96.82 |
| Average Equity | 96.82 | 96.82 |
| Return on Equity (Base Rate) (in %) | 15.500% | 15.500% |
| MAT Rate for respective year (in %) | 21.342% | 21.549% |
| Rate of Return on Equity (in %) | 19.705% | 19.758% |
| Return on Equity | 1.25 | 19.13 |

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

58. O&M Expenses claimed by the Petitioner are as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------------|----------------|----------------|----------------|----------------|
| 10 Numbers 400 kV Sub-station Bays (Biharshariff, Muzaffarpur, Siliguri, Farakka-Jeeerat and Subashgram) | | | | | |
| 7 Numbers 220 kV Sub-station Bays (Siliguri, Lakshmikantpur, Jeeerat and Subashgram) | | | | | |
| 196.213 km D/C (Twin/Triple Conductor) (Biharshariff-Muzaffarpur and Faraka Jeeerat @ Subashgram Ckt I) | | | | | |
| Claimed by the Petitioner in the instant petition | 976.89 | 1009.40 | 1042.89 | 1081.85 | 1181.95 |

59. 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:

| Particulars | Norms for 2014-15 | Norms for 2015-16 | Norms for 2016-17 | Norms for 2017-18 | Norms for 2018-19 |
|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| D/C (Twin/Triple Conductor) | ₹0.707 lakh/km | ₹0.731 lakh/km | ₹0.755 lakh/km | ₹0.780 lakh/km | ₹0.806 lakh/km |
| 400 kV Sub-station | ₹60.30 lakh/ bay | ₹ 62.30 lakh/ bay | ₹64.37 lakh/ bay | ₹66.51 lakh/ bay | ₹68.71 lakh/ bay |
| 220 kV Sub-station | ₹42.21 lakh/ bay | ₹43.61 lakh/ bay | ₹45.06 lakh/ bay | ₹46.55 lakh/ bay | ₹48.10 lakh/ bay |

60. We have considered the submissions of the Petitioner. O&M Expenses allowed under Regulation 29(3) of the 2014 Tariff Regulations for Combined Asset-I are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------------|----------------|----------------|----------------|----------------|
| 9 Numbers 400 kV Sub-station Bays | 542.70 | 560.70 | 579.33 | 598.59 | 618.39 |
| 7 Numbers 220 kV Sub-station Bays | 295.47 | 305.27 | 315.42 | 325.85 | 336.70 |
| 196.213 km D/C (Twin/Triple Conductor) | 138.72 | 143.43 | 148.14 | 153.05 | 158.15 |
| Total | 976.89 | 1009.40 | 1042.89 | 1077.49 | 1113.24 |

61. We have considered the submissions of the Petitioner. O&M Expenses allowed under Regulation 29(3) of the 2014 Tariff Regulations for Asset-I(a) are as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 (Pro-rata 24 days) | 2018-19 |
|----------------------------------|---------|---------|---------|-------------------------------|--------------|
| 1 Number 400 kV Sub-station Bays | - | - | - | 4.37 | 68.71 |
| Total | - | - | - | 4.37 | 68.71 |

62. The details of O&M Expenses approved in respect of Combined Asset-I *vide* order dated 22.12.2015 in Petition No. 485/TT/2014, O&M Expenses claimed by the Petitioner in the instant petition for Combined Asset-I and Asset-I (a) and as trued up in the instant order are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Approved <i>vide</i> order dated 22.12.2015 in Petition No. 485/TT/2014 | 976.89 | 1009.40 | 1042.89 | 1077.48 | 1113.24 |
| Claimed by the Petitioner in the instant petition | 976.89 | 1009.40 | 1042.89 | 1081.85 | 1181.95 |
| Allowed for Combined Asset-I | 976.89 | 1009.40 | 1042.89 | 1077.49 | 1113.24 |
| Allowed for Asset-I(a) | - | - | - | 4.37 | 68.71 |
| Allowed after true-up in this order | 976.89 | 1009.40 | 1042.89 | 1081.86 | 1181.95 |

Interest on Working Capital (“IWC”)

63. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed in respect of the Combined Asset-I and Asset-I(a) as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|----------------|----------------|----------------|----------------|----------------|
| Working Capital for O&M Expenses (O&M Expenses for one month) | 81.41 | 84.12 | 86.91 | 89.79 | 92.77 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 146.53 | 151.41 | 156.43 | 161.62 | 166.99 |
| Working Capital for Receivables (Equivalent to two months of annual fixed cost) | 949.57 | 935.10 | 919.47 | 904.67 | 893.44 |
| Total Working Capital | 1177.51 | 1170.63 | 1162.81 | 1156.08 | 1153.20 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 158.96 | 158.04 | 156.98 | 156.07 | 155.68 |

64. IWC allowed for Asset-I(a) is as follows:



(₹ in lakh)

| Particulars | 2017-18 (Pro-rata 24 days) | 2018-19 |
|--|-------------------------------|--------------|
| Working Capital for O&M Expenses (O&M Expenses for one month) | 5.54 | 5.73 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 9.98 | 10.31 |
| Working Capital for Receivables (Equivalent to two months of annual fixed cost) | 14.95 | 15.35 |
| Total Working Capital | 30.47 | 31.38 |
| Rate of Interest (in %) | 13.50 | 13.50 |
| Interest on Working Capital | 0.27 | 4.24 |

65. The details of IWC approved *vide* order dated 22.12.2015 in Petition No. 485/TT/2014, IWC claimed by the Petitioner in the instant petition and as trued up in the instant order is as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Approved <i>vide</i> order dated 22.12.2015 in Petition No. 485/TT/2014 | 156.57 | 155.42 | 154.33 | 153.36 | 152.51 |
| Claimed by the Petitioner in the instant petition | 159.45 | 158.53 | 157.48 | 160.58 | 160.66 |
| Allowed after true-up in this order | 158.96 | 158.04 | 156.98 | 156.07 | 155.68 |

Approved Annual Fixed Charges for 2014-19 Tariff Period

66. The trued up Annual Fixed Charges (AFC) in respect of Combined Asset-I for 2014-19 tariff period are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Depreciation | 1671.51 | 1671.51 | 1671.51 | 1673.06 | 1676.03 |
| Interest on Loan | 1007.63 | 880.12 | 753.88 | 628.10 | 514.00 |
| Return on Equity | 1882.43 | 1891.55 | 1891.55 | 1893.29 | 1901.71 |
| O&M Expenses | 976.89 | 1009.40 | 1042.89 | 1077.49 | 1113.24 |
| Interest on Working Capital | 158.96 | 158.04 | 156.98 | 156.07 | 155.68 |
| Total | 5697.44 | 5610.62 | 5516.82 | 5428.01 | 5360.65 |

67. AFC for Asset-I(a) for 2014-19 tariff period are as follows:



(₹ in lakh)

| Particulars | 2017-2018 (Pro-rata 24 days) | 2018-19 |
|-----------------------------|---------------------------------|--------------|
| Depreciation | - | - |
| Interest on Loan | - | - |
| Return on Equity | 1.25 | 19.13 |
| O&M Expenses | 4.37 | 68.71 |
| Interest on Working Capital | 0.27 | 4.24 |
| Total | 5.90 | 92.07 |

68. Accordingly, the Annual Transmission Charges approved for Combined Asset-I vide order dated 22.12.2015 in Petition No. 485/TT/2014, as claimed by the Petitioner in the instant petition and as approved after truing up in the instant order are as follows

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---------|---------|---------|---------|---------|
| Approved for Combined Asset-I vide order dated 22.12.2015 in Petition No. 485/TT/2014 | 5591.33 | 5494.45 | 5399.48 | 5307.74 | 5219.86 |
| Claimed by the Petitioner in the instant petition | 5719.20 | 5632.54 | 5538.97 | 5473.27 | 5485.58 |
| Allowed for Combined Asset-I after true-up in this order | 5697.44 | 5610.62 | 5516.82 | 5428.01 | 5360.65 |

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

69. The Petitioner has claimed the following transmission charges for 2019-24 tariff period in respect of the Combined Asset-I :

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Depreciation | 505.32 | 507.34 | 508.23 | 508.57 | 508.72 |
| Interest on Loan | 464.14 | 424.39 | 380.93 | 324.09 | 261.38 |
| Return on Equity | 1828.25 | 1829.78 | 1830.78 | 1831.15 | 1831.28 |
| O&M Expenses | 990.25 | 1025.45 | 1061.45 | 1099.13 | 1136.76 |
| Interest on Working Capital | 85.23 | 86.37 | 87.32 | 88.12 | 88.66 |
| Total | 3873.19 | 3873.33 | 3868.71 | 3851.06 | 3826.80 |



70. The details of the IWC claimed by the Petitioner in respect of Combined Asset-I for 2019-24 period are as follows:

| Particular | (₹ in lakh) | | | | |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses | 82.52 | 85.45 | 88.45 | 91.59 | 94.73 |
| Maintenance Spares | 148.54 | 153.82 | 159.22 | 164.87 | 170.51 |
| Receivables | 476.21 | 477.53 | 476.96 | 474.79 | 470.51 |
| Total Working Capital | 707.27 | 716.80 | 724.63 | 731.25 | 735.75 |
| Rate of Interest (in %) | 12.05 | 12.05 | 12.05 | 12.05 | 12.05 |
| Interest on Working Capital | 85.23 | 86.37 | 87.32 | 88.12 | 88.66 |

Capital Cost

71. 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 tried 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.”

72. Admitted capital cost as on 31.3.2019 for Combined Asset-I as ₹32194.25 lakh and for Asset-I(a) as ₹193.63 lakh has been 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.

Additional Capital Expenditure (“ACE”)

73. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

“24. Additional Capitalisation within the original scope and upto the cut-off date

(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.

25. Additional Capitalisation within the original scope and after the cut-off date:



(1) The ACE incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;
- (b) Change in law or compliance of any existing law;
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (d) Liability for works executed prior to the cut-off date;
- (e) Force Majeure events;
- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
- (g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

74. The Petitioner has claimed ACE and de-capitalisation for 2019-24 period in respect of the transmission assets and the same is as follows:

| Particulars | Projected ACE | | | | |
|------------------|---------------|--------------|-------------|-------------|-------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Combined Asset-I | 28.00 | 41.81 | 9.27 | 3.79 | 1.00 |
| | | (15.52) | | | |
| Total | 28.00 | 26.29 | 9.27 | 3.79 | 1.00 |

(₹ in lakh)

75. The Petitioner has claimed net ACE of ₹68.35 lakh for Combined Asset-I during 2019-24 under Regulation 25(2)(c) of the 2019 Tariff Regulations. The Petitioner has further submitted that ACE claimed during 2019-24 period is on account of replacement of old & obsolete static/ electro-mechanical type protection relays for 400 kV Sagardighi bay at Subhashgram. The Petitioner has further submitted that the



differential, REF/ Direction over-current cum earth fault/ Auto reclosure/ Master trip relays installed are 25 years old Static/ Electro-mechanical type. Due to ageing, the contacts of these relays have become sluggish and may cause problem in the equipment/ system. Hence, in case of any failures, the relays are to be kept out of service to avoid mal-operation and the only option is replacement. Further these relays possess following drawbacks:

- Lack of self-diagnostics features
- No disturbance recording/event logging features.
- Not possible for remote monitoring /remote accessing.
- Lack of time synchronization facility.

76. Hence, detailed trip analysis is not possible in case of tripping. The Petitioner has submitted that the same old and obsolete static /Electro-mechanical type protection relays need to be replaced with numerical type relays which support IEC61850 communication protocol at Maithon.

77. Regarding the replacement of Control and Power cable for 400 kV Sagardighi bay at Subhashgram, the Petitioner has submitted that control cable proposed for replacement at Subhashgram is more than 25 years old (shifted from Jeerat). Due to climatic conditions, large number of cables in the cable trenches have got damaged over a period of time. At many places the outer sheath/ armour of the cables has got damaged. An unhealthy cable in addition to being a source of DC earth fault can also lead to mal-operation/ spurious signalling etc. which is not desirable in a healthy power system. Cable is also required during retrofitting of isolators & CT to be carried out under ACE for 2019-24 period. It has, therefore, proposed to replace inter-pole power and control cable for retrofitting of equipment and damaged cables in cable trenches at Subhashgram.



78. We have considered the submission of the Petitioner. ACE claimed by the Petitioner for Combined Asset-I and Asset-I(a) is on account of expenditure towards replacement of associated equipment of 50 MVAR, 400 kV Line Reactor at Subhsagram Sub-station i.e. reactor protection panel, circuit breaker panel with A/R and without A/R, line protection panel & control power cable. Considering the submissions of the Petitioner, these have been allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. Accordingly, the capital cost considered for 2019-24 tariff period is as follows:

(₹ in lakh)

| Particulars | Total Capital Cost as on 1.4.2019 | Projected ACE | | | | | Projected De-Capitalisation | Total Capital Cost as on 31.3.2024 |
|------------------|-----------------------------------|---------------|---------|---------|---------|---------|-----------------------------|------------------------------------|
| | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2020-21 | |
| | A | B | | | | | C | D=A+B-C |
| Combined Asset-I | 32194.25 | 28.00 | | | | 1.00 | 15.52 | 32262.60 |
| Asset-I(a) | 193.63 | - | | | | - | - | 193.63 |

Adjustments of Equity

79. COD of the Asset-I(a) is 1.12.1994. Debt-equity ratio as on COD was 50:50. The useful life of Asset-I(a) is 25 years. Thus, Asset-I(a) completes its useful life on 30.11.2019. Regulation 18(3) of the 2019 Tariff Regulations provides as follows:

“18. Debt-Equity Ratio:

(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;



80. Thus, as per first proviso to Regulation 18(3) of the 2019 Tariff Regulations provides that in case of a transmission system including communication system which has completed its useful life on or after 1.4.2019, and if the actual equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, then the equity shall be restricted to 30% of the total equity deployed. Debt-equity ratio in respect of Asset-I(a) as on 31.3.2019 is 50:50 i.e. equity deployed is more than 30%. Therefore, as per the first proviso to Regulation 18(3) of the 2019 Tariff Regulations, equity with effect from 1.12.2019 onwards has been restricted to 30%. The loan has already been repaid prior to 1.4.2019. Accordingly, the capital cost for 2019-24 tariff period is allowed as follows:

| (₹ in lakh) | |
|---|--------|
| Particulars | Amount |
| Closing equity as on 31.3.2019 | 96.82 |
| Closing equity as on 30.11.2019**(a) | 96.82 |
| Equity in excess of 30% (b) | 38.73 |
| Equity admissible as on 1.4.2020*** (a)-(b) | 58.09 |

**Represents 50% of Gross Block of ₹96.82 lakh

***Represents 30% of Gross Block of ₹96.82 lakh

Debt-Equity ratio

81. 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.”

82. Debt-equity considered in respect of Combined Asset-I and Asset-I(a) for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Debt-Equity for Capital Cost as on 1.4.2019 for Combined Asset-I

| Particulars | Capital Cost as on 1.4.2019 (₹ in lakh) (A) | (in %) |
|--------------|--|---------------|
| Debt | 22561.22 | 70.08 |
| Equity | 9633.03 | 29.92 |
| Total | 32194.25 | 100.00 |



Debt-Equity for ACE and De-capitalisation during 2019-24 for Combined Asset-I

| Particulars | ACE (₹ in lakh) (B) | (in %) | ACE (₹ in lakh) (C) | (in %) | De-capitalisation (₹ in lakh) (D) | (in %) |
|--------------|------------------------|---------------|------------------------|---------------|--------------------------------------|---------------|
| | 2019-20 | | 2020-21 | | 2020-21 | |
| Debt | 19.60 | 70.00 | 29.27 | 70.00 | 10.88 | 70.00 |
| Equity | 8.40 | 30.00 | 12.54 | 30.00 | 4.64 | 30.00 |
| Total | 28.00 | 100.00 | 41.81 | 100.00 | 15.52 | 100.00 |

| Particulars | ACE (₹ in lakh) (E) | (in %) | ACE (₹ in lakh) (F) | (in %) |
|--------------|------------------------|---------------|------------------------|---------------|
| | 2021-22 | | 2022-23 | |
| Debt | 6.49 | 70.00 | 2.65 | 70.00 |
| Equity | 2.78 | 30.00 | 1.14 | 30.00 |
| Total | 9.27 | 100.00 | 3.79 | 100.00 |

| Particulars | ACE (₹ in lakh) (G) | (in %) |
|--------------|------------------------|---------------|
| | 2023-24 | |
| Debt | 0.70 | 70.00 |
| Equity | 0.30 | 30.00 |
| Total | 1.00 | 100.00 |

Debt-Equity for Capital Cost as on 31.3.2024 for Combined Asset-I

| Particulars | Total Capital Cost as on 31.3.2019 (₹ in lakh) (H=A+B+C-D+E+F+G) | (in %) |
|--------------|---|---------------|
| Debt | 22609.05 | 70.08 |
| Equity | 9653.55 | 29.92 |
| Total | 32262.60 | 100.00 |

Debt-Equity for Capital Cost as on 1.4.2019 for Asset-I(a)

| Particulars | Capital Cost as on 1.4.2019 (₹ in lakh) | (in %) |
|--------------|--|---------------|
| Debt | 96.82 | 50.00 |
| Equity | 96.82 | 50.00 |
| Total | 193.63 | 100.00 |

Debt-Equity for Capital Cost as on 31.3.2024 for Asset-I(a)

| Particulars | Capital Cost as on 31.3.2024 (₹ in lakh) | (in %) |
|--------------|---|--------|
| Debt | 96.82 | |
| Equity | 96.82** | |
| Total | 193.63 | |



**Equity to be serviced as on 31.3.2024 is ₹58.09 lakh (₹96.82 lakh - ₹38.73 lakh i.e. Equity in excess of 30% reduced as discussed in Para. 76 above)

Depreciation

83. 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 thereof 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."

84. 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 asset has completed 12 years of life as on 31.3.2019 and the remaining depreciable value as on 31.3.2019 has been spread across the balance useful life of 20 years in



accordance with Regulation 33(5) of the 2019 Tariff Regulations. Depreciation allowed in respect of Combined Asset-I for 2019-24 period is as follows:

| Particulars | (₹ in lakh) | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Gross Block | 32194.25 | 32222.25 | 32248.54 | 32257.81 | 32261.60 |
| ACE | 28.00 | 41.81 | 9.27 | 3.79 | 1.00 |
| De-capitalisation | 0.00 | 15.52 | 0.00 | 0.00 | 0.00 |
| Closing Gross Block | 32222.25 | 32248.54 | 32257.81 | 32261.60 | 32262.60 |
| Average Gross Block | 32208.25 | 32235.40 | 32253.18 | 32259.71 | 32262.10 |
| Freehold Land | 227.43 | 227.43 | 227.43 | 227.43 | 227.43 |
| Weighted average rate of Depreciation (WAROD) (in %) | 1.56 | 1.57 | 1.57 | 1.57 | 1.58 |
| Balance useful life at the beginning of the year (Year) | 20 | 19 | 18 | 17 | 16 |
| Lapsed life of the asset (Year) | 12 | 13 | 14 | 15 | 16 |
| Depreciable Value | 28782.74 | 28807.17 | 28823.17 | 28829.05 | 28831.20 |
| Depreciation during the year | 504.78 | 506.07 | 507.73 | 508.08 | 508.21 |
| Cumulative Depreciation at the end of the year | 19191.93 | 19684.02 | 20191.75 | 20699.83 | 21208.04 |
| Remaining Depreciable Value at the end of the year | 9590.81 | 9123.15 | 8631.42 | 8129.22 | 7623.16 |

85. Depreciation in respect of Asset-I(a) has already been fully recovered prior to 1.4.2019, therefore no depreciation is required to be allowed for the same.

Interest on Loan (“IoL”)

86. Regulation 32 of the 2019 Tariff Regulations provides as follows:

“32. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall



be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(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.

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

87. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of Combined Asset-I is as follows:

| (₹ in lakh) | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Gross Normative Loan | 22561.22 | 22580.82 | 22599.21 | 22605.70 | 22608.35 |
| Cumulative Repayments up to Previous Year | 17387.00 | 17891.78 | 18386.97 | 18894.70 | 19402.77 |
| Net Loan-Opening | 5174.22 | 4689.04 | 4212.24 | 3711.00 | 3205.58 |
| Additions | 19.60 | 29.27 | 6.49 | 2.65 | 0.70 |
| De-capitalisation | 0.00 | 10.88 | 0.00 | 0.00 | 0.00 |
| Repayment during the year | 504.78 | 506.07 | 507.73 | 508.08 | 508.21 |
| Adjustment of Cumulative Repayment pertaining to de-capitalised asset | 0.00 | 10.88 | 0.00 | 0.00 | 0.00 |
| Net Loan-Closing | 4689.04 | 4212.24 | 3711.00 | 3205.58 | 2698.07 |
| Average Loan | 4931.63 | 4450.64 | 3961.62 | 3458.29 | 2951.82 |
| Weighted Average Rate of Interest on Loan (in %) | 8.9580 | 9.0306 | 9.0492 | 8.7455 | 8.1713 |
| Interest on Loan | 441.77 | 401.92 | 358.49 | 302.44 | 241.20 |



88. Debt in respect of Asset-I(a) has already been fully repaid by the Petitioner, therefore, no IoL has been allowed.

Return on Equity (“RoE”)

89. Regulation 30 and Regulation 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.”



90. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, MAT rate applicable in the year 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 in respect of the Combined Asset-I for 2019-24 tariff period is as follows:

| (₹ in lakh) | | | | | |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Equity | 9633.03 | 9641.43 | 9649.33 | 9652.11 | 9653.25 |
| Additions | 8.40 | 12.54 | 2.78 | 1.14 | 0.30 |
| De-capitalisation | 0.00 | 4.64 | 0.00 | 0.00 | 0.00 |
| Closing Equity | 9641.43 | 9649.33 | 9652.11 | 9653.25 | 9653.55 |
| Average Equity | 9637.23 | 9645.38 | 9650.72 | 9652.68 | 9653.40 |
| Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| MAT Rate for respective year (in %) | 17.472 | 17.472 | 17.472 | 17.472 | 17.472 |
| Rate of Return on Equity (in %) | 18.782 | 18.782 | 18.782 | 18.782 | 18.782 |
| Return on Equity | 1810.07 | 1811.60 | 1812.60 | 1812.97 | 1813.10 |

91. RoE allowed for Asset-I(a) for 2019-24 tariff period is as follows:

| (₹ in lakh) | | | | | | |
|-------------------------------------|-----------------------------------|-----------------------------------|--------------|--------------|--------------|--------------|
| Particulars | 1.4.2019 to 30.11.2019 (244 days) | 1.12.2019 to 31.3.2020 (122 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Opening Equity | 96.82 | 58.09** | 58.09 | 58.09 | 58.09 | 58.09 |
| Additions | - | - | - | - | - | - |
| De-capitalisation | - | - | - | - | - | - |
| Closing Equity | 96.82 | 58.09 | 58.09 | 58.09 | 58.09 | 58.09 |
| Average Equity | 96.82 | 58.09 | 58.09 | 58.09 | 58.09 | 58.09 |
| Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| MAT Rate for respective year (in %) | 17.472 | 17.472 | 17.472 | 17.472 | 17.472 | 17.472 |
| Rate of Return on Equity (in %) | 18.782 | 18.782 | 18.782 | 18.782 | 18.782 | 18.782 |
| Return on Equity | 12.12 | 3.64 | 10.91 | 10.91 | 10.91 | 10.91 |



***Equity in excess of 30% removed*

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

92. O&M Expenses claimed by the Petitioner for various elements included in transmission project for 2019-24 tariff period are as follows:

| (₹ in lakh) | | | | | |
|--|---------------|----------------|----------------|----------------|----------------|
| Details | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| 10 Numbrs 400 kV Sub-station Bays | 321.50 | 332.80 | 344.50 | 356.60 | 369.10 |
| 7 Numbers 220 kV Sub-station Bays | 157.57 | 163.10 | 168.84 | 174.72 | 180.88 |
| 3 Numbers 400 kV Sub-station ICT | 338.31 | 350.60 | 362.88 | 376.11 | 388.40 |
| 196.213 km D/C (Twin/Triple Conductor) | 172.87 | 178.95 | 185.23 | 191.70 | 198.38 |
| Total | 990.25 | 1025.45 | 1061.45 | 1099.13 | 1136.76 |

93. The norms specified under Regulations 35(3)(a) and 35(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 |



| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|----------------|----------------|----------------|----------------|----------------|
| 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 (Rs Lakh) (1500 MW) | 2,252 | 2,331 | 2,413 | 2,498 | 2,586 |
| ±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW) | 2,468 | 2,555 | 2,645 | 2,738 | 2,834 |
| ±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW) | 1,696 | 1,756 | 1,817 | 1,881 | 1,947 |
| ±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW) | 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.”

94. O&M Expenses in respect of Combined Asset-I and Asset-I (a) have been worked out as per the norms specified in the 2019 Tariff Regulations and the same are as follows:

| | (₹ in lakh) | | | | |
|--|-------------|---------|---------|---------|---------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses | | | | | |
| 10 Numbers of 400 kV Sub-station bays (Including 1 No. of Bay for Asset-I(a)) | | | | | |
| Norms (₹ lakh/Bay) | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| Total | 321.50 | 332.80 | 344.50 | 356.60 | 369.10 |
| 7 Numbers of 220 kV Sub-station bays | | | | | |
| Norms (₹ lakh/Bay) | 22.51 | 23.30 | 24.12 | 24.96 | 25.84 |
| Total | 157.57 | 163.10 | 168.84 | 174.72 | 180.88 |
| 196.213 km D/C (Twin/Triple Conductor) | | | | | |
| Norms (₹ lakh/km) | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |
| Total | 172.86 | 178.95 | 185.23 | 191.70 | 198.37 |
| 3 Numbers of 400 kV Sub-station ICT | | | | | |
| Norms (₹ lakh/MVA) | 0.358 | 0.371 | 0.384 | 0.398 | 0.411 |



| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---------------|----------------|----------------|----------------|----------------|
| O&M Expenses | | | | | |
| Total | 338.31 | 350.60 | 362.88 | 376.11 | 388.40 |
| Total O&M Expenses allowed (₹ in lakh) | 990.24 | 1025.44 | 1061.45 | 1099.13 | 1136.75 |

Interest on Working Capital (“IWC”)

95. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specify as follows:

“34. Interest on Working Capital

(1) *The working capital shall cover:*

.....

(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;”

96. 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%.



97. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The 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, ROI for 2020-21 has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points), whereas ROI for 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon in respect of Combined Asset-I are as follows:

| (₹ in lakh) | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Working Capital for O&M Expenses (O&M Expenses for one month) | 79.84 | 82.68 | 85.58 | 88.62 | 91.65 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 143.71 | 148.82 | 154.05 | 159.52 | 164.98 |
| Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 466.96 | 467.30 | 466.02 | 463.77 | 459.53 |
| Total Working Capital | 690.51 | 698.81 | 705.65 | 711.92 | 716.16 |
| Rate of Interest (in %) | 12.05 | 11.25 | 10.50 | 10.50 | 10.50 |
| Interest on Working Capital | 83.21 | 78.62 | 74.09 | 74.75 | 75.20 |

98. The components of the working capital and interest allowed thereon for Asset-I(a) are as follows:

| (₹ in lakh) | | | | | | |
|--|-----------------------------------|-----------------------------------|--------------|--------------|--------------|--------------|
| Particulars | 1.4.2019 to 30.11.2019 (244 days) | 1.12.2019 to 31.3.2020 (122 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Working Capital for O&M Expenses (O&M Expenses for one month) | 2.68 | 2.68 | 2.77 | 2.87 | 2.97 | 3.08 |
| Working Capital for Maintenance Spares (15% of O&M Expenses) | 4.82 | 4.82 | 4.99 | 5.17 | 5.35 | 5.54 |
| Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 6.39 | 5.49 | 5.63 | 5.77 | 5.93 | 6.07 |
| Total Working Capital | 13.90 | 12.99 | 13.40 | 13.81 | 14.25 | 14.68 |
| Rate of Interest (in %) | 12.05% | 12.05% | 11.25% | 10.50% | 10.50% | 10.50% |
| Interest on Working Capital | 1.12 | 0.52 | 1.51 | 1.45 | 1.50 | 1.54 |



Annual Fixed Charges of 2019-24 Tariff Period

99. The transmission charges allowed in respect of Combined Asset-I for 2019-24 tariff period are as follows:

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | 504.78 | 506.07 | 507.73 | 508.08 | 508.21 |
| Interest on Loan | 441.77 | 401.92 | 358.49 | 302.44 | 241.20 |
| Return on Equity | 1810.07 | 1811.60 | 1812.60 | 1812.97 | 1813.10 |
| O&M Expenses | 958.09 | 992.16 | 1027.00 | 1063.47 | 1099.84 |
| Interest on Working Capital | 83.21 | 78.62 | 74.09 | 74.75 | 75.20 |
| Total | 3797.92 | 3790.36 | 3779.91 | 3761.71 | 3737.55 |

100. The transmission charges allowed for Asset-I(a) for 2019-24 tariff period are as follows:

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | - | - | - | - | - |
| Interest on Loan | - | - | - | - | - |
| Return on Equity | 15.76 | 10.91 | 10.91 | 10.91 | 10.91 |
| O&M Expenses | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| Interest on Working Capital | 1.64 | 1.51 | 1.45 | 1.50 | 1.54 |
| Total | 49.55 | 45.70 | 46.81 | 48.07 | 49.36 |

Filing Fee and Publication Expenses

101. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The Petitioner is 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

102. 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 Regulations 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

Goods and Services Tax

103. 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.

104. 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

105. 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 consequential IWC.

106. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.



Capital Spares

107. 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

108. During the tariff periods 2004-09 and 2009-14 (upto 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 is governed by Central Electricity Regulatory Commission(Sharing of Transmission Charges and Losses) Regulations, 2010 and with effect from 1.11.2020, sharing is governed by Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (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 Sharing Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

109. To summarise:

- a. The revised AFC allowed for the transmission assets for 2004-09 tariff periods as per the APTEL's judgements are as follows:



(₹ in lakh)

| Particulars | 2006-07 | 2007-08 | 2008-09 |
|-------------|---------|---------|---------|
| Asset-A | 91.02 | 193.12 | 200.62 |
| Asset-B | 988.35 | 2443.19 | 2505.57 |
| Asset-C | - | 201.32 | 230.90 |
| Asset-D | 128.12 | 1606.25 | 1695.50 |

b. The consequential revision of AFC allowed in respect of the Combined Asset-I and Asset-I(a) for 2009-14 tariff period are as follows:

(₹ in lakh)

| Particulars | 2009-10 | 2010-11 | 2012-13 | 2013-14 | 2014-15 |
|------------------|---------|---------|---------|---------|---------|
| Combined Asset-I | 6058.59 | 6086.19 | 6015.32 | 5943.34 | 5899.87 |

c. The total trued-up AFC allowed for 2014-19 tariff period are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------|---------|---------|---------|---------|---------|
| Combined Asset-I | 5697.44 | 5610.62 | 5516.82 | 5428.01 | 5360.65 |
| Asset-I(a) | - | - | - | 5.90 | 92.07 |

d. AFC approved for 2019-24 tariff period are as follows:

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------|---------|---------|---------|---------|---------|
| Combined Asset-I | 3797.92 | 3790.36 | 3779.91 | 3761.71 | 3737.55 |
| Asset-I(a) | 49.55 | 45.70 | 46.81 | 48.07 | 49.36 |

110. The Annexure-1 to this order shall form part of the order.

111. This order disposes of Petition No. 50/TT/2020 in terms of the above findings and discussions.

sd/-

**P. K. Singh
(Member)**

sd/-

**Arun Goyal
(Member)**

sd/-

**I. S. Jha
(Member)**

sd/-

**P. K. Pujari
(Chairperson)**



Annexure-1

Asset-I

| 2014-19 Capital Expenditure | Admitted Capital Cost as on COD (₹ in lakh) | ACE (₹ in lakh) | | Allowed | Admitted Capital Cost as on 31.3.2019 (₹ in lakh) | Rate of Depreciation as per Regulations | Annual Depreciation as per Regulations (₹ in lakh) | | | | | |
|-------------------------------------|---|--------------------|--------------|-----------------|---|--|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | 2017-18 | 2018-19 | | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Land - Freehold | 227.43 | 0.00 | 0.00 | 227.43 | 227.43 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Building Civil Works & Colony | 620.32 | 0.00 | 0.00 | 620.32 | 620.32 | 3.34% | 20.72 | 20.72 | 20.72 | 20.72 | 20.72 | 20.72 |
| Transmission Line | 22974.58 | 0.00 | 0.00 | 22974.58 | 22974.58 | 5.28% | 1213.06 | 1213.06 | 1213.06 | 1213.06 | 1213.06 | 1213.06 |
| Sub Station | 8104.88 | 58.77 | 53.48 | 8217.13 | 8217.13 | 5.28% | 427.94 | 427.94 | 427.94 | 429.49 | 429.49 | 432.45 |
| PLCC | 154.79 | 0.00 | 0.00 | 154.79 | 154.79 | 6.33% | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 |
| Total | 32082.00 | 58.77 | 53.48 | 32194.25 | 32194.25 | Total | 1671.51 | 1671.51 | 1671.51 | 1673.06 | 1673.06 | 1676.03 |
| | | | | | Average Gross Block (₹ in lakh) | | 32082.00 | 32082.00 | 32082.00 | 32082.00 | 32082.00 | 32361.14 |
| | | | | | Weighted Average Rate of Depreciation | | 5.21% | 5.21% | 5.21% | 5.21% | 5.21% | 5.21% |

