# CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

#### **Petition No.172/TT/2019**

Coram:

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

Date of Order: 13.02.2021

#### In the matter of

Approval under Regulation 86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission tariff from COD to 31.3.2019 for **Asset-1**:765kV D/C Bhuj Pool Substation-Banaskantha TL along with associated Bays & 2x330 MVAR Switchable Line Reactors at both ends along with bays, **Asset-2**: 765kV Bhuj Pool Substation (New) along with 2 Nos. 1500MVA, 765/400 kV ICTs, 1 No. 765kV Bus Reactor, 2 Nos. 500MVA 400/200kV ICTs and 1 No. 400kV Bus Reactor alongwith associated bays under "Green Energy Corridors-Inter State Transmission Scheme (ISTS) Part-C".

#### And in the matter of

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

.... Petitioner

#### **Versus**

- Madhya Pradesh Power Management Company Ltd. (MPPMCL) Shakti Bhawan, Rampur, Jabalpur - 482 008
- 2. Madhya Pradesh Power Transmission Company Ltd. Shakti Bhawan, Rampur, Jabalpur 482 008
- 3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd. 3/54, Press Complex, Agra-Bombay Road, Indore-452 008
- 4. Maharashtra State Electricity Distribution Company Ltd. Hongkong Bank Building, 3rd Floor, M.G. Road, Fort, Mumbai-400 001.



- Maharashtra State Electricity Transmission Company Ltd. Prakashganga, 6<sup>th</sup> Floor, Plot No. C-19, E-Block, Bandra Kurla Complex, Bandra (East), Mumbai-400 051.
- Gujarat Urja Vikas Nigam Ltd.
   Sardar Patel Vidyut Bhawan, Race Course Road,
   Vadodara 390 007
- Gujarat Energy Transmission Corporation Limited Sardar Patel Vidyut Bhawan, Race Course Road, Vadodara - 390 007
- Electricity Department, Government of Goa, Vidyut Bhawan, Panaji, Near Mandvi Hotel, Goa - 403 001
- Electricity Department,
   Administration of Daman & Diu,
   Daman 396 210
- Electricity Department,
   Administration of Dadra Nagar Haveli
   U.T., Silvassa 396 230
- 11. Chhattisgarh State Electricity Board P.O.Sunder Nagar, Dangania, Raipur Chhattisgarh-492 013
- Chhattisgarh State Power Transmission Company Ltd. Office of The Executive Director (C&P) State Load Despatch Building, Dangania, Raipur – 492 013
- 13. Chhattisgarh State Power Distribution Company Ltd.P.O. Sunder Nagar, Dangania,Raipur-492 013 ...Respondents

#### Parties present:

For Petitioner: Shri S. S. Raju, PGCIL

Shri Zafrul Hasan, PGCIL Shri A. K. Verma, PGCIL Shri B. Dash, PGCIL ShriV. P. Rastogi, PGCIL

For Respondent: None

#### **ORDER**

The present petition has been filed by the Petitioner, Power Grid Corporation of India Ltd. ("PGCIL") for determination of Transmission tariff from COD to 31.3.2019 for the following assets under "Green Energy Corridors-Inter State Transmission Scheme (ISTS) Part-C" (hereinafter also referred to as "the Transmission Project") for 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations"):

**Asset-1**:765kV D/C Bhuj Pool Substation-Banaskantha TL along with associated Bays & 2x330 MVAR Switchable Line Reactors at both ends along with bays; and

**Asset-2**: 765kV Bhuj Pool Substation (New) along with 2 Nos. 1500MVA, 765/400 kV ICTs, 1 No. 765kV Bus Reactor, 2 Nos. 500MVA 400/200kV ICTs and 1 No. 400kV Bus Reactor alongwith associated bays.

- 2. The Petitioner has made the following prayers:
  - "1) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.
  - 2) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition,
  - 3) Tariff may be allowed on the estimated completion cost.
  - 4) 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 under clause: 25 of the Tariff Regulations, 2014.
  - 5) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition;

- 6) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation: 52 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- 7) Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.
- 8) Allow the Petitioner to bill Tariff from actual DOCO.
- 9) Allow the Petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes 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 the Commission deems fit and appropriate under the circumstances of the case and in the interest of justice."

#### **Background**

- 3. The Investment Approval (IA) for implementation of assets under "Green Energy Corridors-Inter State Transmission Scheme (ISTS) Part-C" was accorded by Board of Directors of the Petitioner in its 317<sup>th</sup> meeting held on 2.7.2015 at an estimated cost of ₹ 224737 lakh including IDC of ₹ 12320 lakh based on February, 2015 price level (communicated vide Memorandum No. C/CP/GEC:ISTS Part C, dated 6.7.2015).
- 4. The Transmission Project was discussed and agreed in the 36<sup>th</sup> meeting of Standing Committee on Power System Planning in Western Region held on 29.8.2013. The Transmission Project was later discussed and agreed for implementation in the 24<sup>th</sup> WRPC meeting held on 9.10.2013. The Petitioner has been entrusted with the implementation of the Transmission Project "Green Energy Corridors-Inter State Transmission Scheme (ISTS) Part-C".
- 5. The scope of the Transmission Project is as follows:

#### **Transmission Line**

(i) Bhuj Pool - Banaskanta 765 kV D/c line – 309 km

#### **Substation**

# a) 765/400/220kV Bhuj Pool Substation (New)

# 765kV

| (i) Line Bays                              | : 2 nos. |
|--|----------|
| (ii) Transformer bays                      | : 2 nos. |
| (iii) 1500MVA, 765/400kV transformer       | : 2 nos. |
| (iv) 330 MVAR Switchable Line reactor bays | : 2 nos. |
| (v) Bus reactor bay                        | : 1 no.  |
| (vi) 330 MVAR Bus reactor                  | : 1 no.  |
| (vii) 330 MVAR Switchable Line reactors    | : 2 nos. |

# 400kV

| (i)   | Transformer bays              | : 4 nos. |
|-------|-------------------------------|----------|
| (ii)  | 500MVA, 400/220kV transformer | : 2 nos. |
| (iii) | Bus reactor bay               | : 1 no.  |
| (iv)  | 125MVAR Bus reactor           | : 1 no.  |

# 220kV

(i) Transformer bays : 2 nos.(ii) TBC Bay : 1 no.(iii) Bus Coupler Bay : 1 no.

# b) 765/400/220kV Banaskantha (New) Substation Extn.

# 765kV

(iv) Line Bays : 2 nos.

(v) 330 MVAR Switchable Line reactors : 2 nos.(vi) 330 MVAR Switchable Line reactor bays : 2 nos.

# **Reactive Compensation**

# a) Line Reactors

| SI. no. | Transmission Line                     |   |   |  |  |  |
|---------|---------------------------------------|---|---|--|--|--|
|         | From end (each ckt) To end (each ckt) |   |   |  |  |  |
| 1       | Bhuj Pool - Banaskantha 765<br>kV D/C | 1x330<br>( <b>switchable</b> )<br>(each ckt.) | 1x330<br>( <b>switchable</b> )<br>(each ckt.) |  |  |  |

#### b) Bus Reactors

| SI. no. | Bus                                | Reactor (MVAR)                           |
|---------|------------------------------------|--|
| 1       | 765/400/220 kV Bhuj Pool (Gujarat) | 1X330 MVAr (765kV)<br>1x125 MVAr (400kV) |
|         |                                    |  |

6. The Petitioner had filed the instant petition claiming anticipated COD for the instant assets. However, vide affidavit dated 10.2.2020, the Petitioner has claimed the actual COD for the instant assets and the same is summarized as under:-

| Description of Assets as filed in the original petition   | COD as per petition        | Revised description of Assets as per actual commissioning <i>vide</i> affidavit dated 10.2.2020                  | COD claimed<br>vide affidavit<br>dated<br>10.2.2020 |
|---|----------------------------|--|---|
| Asset-1: 765 kV D/C Bhuj<br>Pool Substation -<br>Banaskantha TL along with<br>associated Bays & 2x330<br>MVAR Switchable Line<br>Reactors at both ends along<br>with bays | 15.1.2019<br>(Anticipated) | associated bays at Bhuj  | 20.3.2019<br>(Actual)<br>24.3.2019<br>(Actual)      |
| Asset-2: 765 kV Bhuj Pool<br>Substation (New) along with<br>2 Nos. 1500 MVA, 765/400<br>kV ICTs, 1 No. 765 kV, 330  |                            | Pooling Station  Asset-3: 1 no. 400 kV, 125  MVAR Bus Reactor along with associated bays at Bhuj Pooling Station | 30.3.2019<br>(Actual)                               |
| MVAR Bus Reactor, 2 Nos. 500 MVA 400/200kV ICTs and 1 No. 400 kV,125 MVAR Bus Reactor along with associated bays  |                            | Asset-4: 2 nos. 500MVA,<br>400/220 kV ICTs along with<br>associated bays at Bhuj<br>Pooling Station              | 31.3.2019<br>(Actual)                               |

- 7. The Petitioner has submitted that the entire scope of the project is covered under the instant petition.
- 8. The details of the Annual Transmission Charges claimed by the Petitioner are as under:

(₹ in lakh)

| Particulars                 | Asset-1                            | Asset-2                           | Asset-3                           | Asset-4                          |
|-----------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
|                             | 2018-19<br>(Pro-rata)<br>(12 Days) | 2018-19<br>(Pro-rata)<br>(8 Days) | 2018-19<br>(Pro-rata)<br>(2 Days) | 2018-19<br>(Pro-rata)<br>(1 Day) |
| Depreciation                | 285.29                             | 9.81                              | 0.38                              | 0.77                             |
| Interest on Loan            | 143.43                             | 5.05                              | 0.20                              | 0.45                             |
| Return on Equity            | 322.22                             | 11.01                             | 0.42                              | 0.87                             |
| Interest on Working Capital | 17.85                              | 0.72                              | 0.04                              | 0.08                             |
| O&M Expenses                | 45.38                              | 3.62                              | 0.38                              | 0.64                             |

| Total | 814.17 | 30.21      | 1.42 | 2.81 |
|-------|--------|------------|------|------|
|       | •      | <b>~~.</b> |      |      |

9. The details of the Interest on Working Capital (IWC) claimed by the Petitioner are as under:

(₹ in lakh)

| Particulars                 | Asset-1    | Asset-2    | Asset-3    | Asset-4               |
|-----------------------------|------------|------------|------------|-----------------------|
|                             | 2018-19    | 2018-19    | 2018-19    | 2018-19               |
|                             | (Pro-rata) | (Pro-rata) | (Pro-rata) | (Pro-rata)            |
|                             | (12 Days)  | (8 Days)   | (2 Days)   | `(1 Day) <sup>´</sup> |
| Maintenance Spares          | 206.97     | 24.74      | 10.31      | 35.04                 |
| O&M Expenses                | 114.98     | 13.74      | 5.73       | 19.47                 |
| Receivables                 | 4,127.28   | 229.66     | 43.07      | 170.66                |
| Total                       | 4,449.23   | 268.14     | 59.11      | 225.17                |
| Rate of Interest (%)        | 12.20      | 12.20      | 12.20      | 12.20                 |
| Interest on working Capital | 17.85      | 0.72       | 0.04       | 0.08                  |

- 10. The Petitioner has served a copy of the petition upon the Respondents and notice of this petition has also been published in 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 notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Madhya Pradesh Power Management Company Ltd. ("MPPMCL"), Respondent No.1 has filed its reply vide affidavit dated 9.7.2019. The Petitioner has filed its rejoinder to the reply filed by MPPMCL vide affidavit dated 22.6.2020.
- 11. The hearing in this matter was held on 29.6.2020 through video conference and the Commission reserved the order in the Petition.
- 12. This order is issued considering the submissions made by the Petitioner in the petition dated 15.1.2019, submissions of the Petitioner vide affidavits dated 10.2.2020, 14.5.2020, 22.6.2020, 16.7.2020 and reply of MPPMCL filed vide affidavit dated 9.7.2019.

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

# **Date of Commercial Operation (COD)**

14. The Petitioner has claimed the actual COD for the instant assets, as per the following details:

| Name of Asset  | Claimed<br>COD        |
|--|-----------------------|
| Asset-1: 765kV D/C Bhuj Pool Substation-Banaskantha T/L along with associated Bays at both ends, 2x330 MVAR Switchable Line Reactors along with associated bays at both ends, 1 no. 1500 MVA, 765/400 kV ICT-2 and 1 no. 765 kV, 330 MVAR Bus Reactor along with associated bays at Bhuj Pooling Station | 20.3.2019<br>(Actual) |
| Asset-2: 1 no. 1500 MVA, 765/400 kV ICT-1 along with associated bays at Bhuj Pooling Station   | 24.3.2019<br>(Actual) |
| Asset-3: 1 no. 400 kV, 125 MVAR Bus Reactor along with associated bays at Bhuj Pooling Station   | 30.3.2019<br>(Actual) |
| <b>Asset-4</b> : 2 nos. 500MVA, 400/220 kV ICTs along with associated bays at Bhuj Pooling Station   | 31.3.2019<br>(Actual) |

- 15. In support of COD of the instant assets, the Petitioner has submitted documents as under:
  - a) Asset-1: CEA certificate dated 28.12.2018 under Regulation 43 of the CEA (Measures relating to Safety and Electric Supply) Regulations, 2010; WRLDC Certificate dated 9.4.2019; self-declaration of COD letter dated 14.5.2018; and CMD Certificate certifying that the Asset is ready and capable to its full capacity with effect from 17.3.2019 meeting relevant Grid standard and the Grid Code.
  - b) Asset-2: CEA certificate dated 28.12.2018 under Regulation 43 of the CEA (Measures relating to Safety and Electric Supply) Regulations, 2010; WRLDC Certificate dated 8.4.2019; self-declaration of COD letter dated 11.4.2018; and CMD Certificate certifying that the Asset is ready and capable to its full capacity with effect from 21.3.2019 meeting relevant Grid standard and the Grid Code.
  - c) Asset-3: CEA certificate dated 24.12.2018 under Regulation 43 of the CEA (Measures relating to Safety and Electric Supply) Regulations, 2010;

WRLDC Certificate dated 8.4.2019; self-declaration of COD letter dated 21.5.2018; and CMD Certificate certifying that the Asset is ready and capable to its full capacity with effect from 28.3.2019 meeting relevant Grid standard and the Grid Code.

- d) **Asset-4**: CEA certificate dated 1.1.2019 under Regulation 43 of the CEA (Measures relating to Safety and Electric Supply) Regulations, 2010; WRLDC Certificate dated 8.4.2019; and CMD certificate certifying that the Asset is ready and capable to its full capacity with effect from 27.3.2019 meeting relevant Grid standard and Grid code.
- 16. Taking into consideration the CEA Energisation Certificates under Regulation 43 of the CEA (Measures relating to Safety and Electric Supply) Regulations, 2010; RLDCs Charging Certificates; self-declaration of COD certificate; and CMD Certificate, the COD for Asset-1, Asset-2, Asset-3 and Asset-4 is approved as 20.3.2019, 24.3.2019, 30.3.2019 and 31.3.2019 respectively.

#### **Capital Cost**

- 17. Clauses (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provide as follows:
  - "(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects"
  - (2) The Capital Cost of a new project shall include the following:
  - (a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
  - (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
  - (c) Increase in cost in contract packages as approved by the Commission;
  - (d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
  - (e) Capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
  - (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
  - (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and



- (h) Adjustment of any revenue earned by the transmission licensee by using the assets before COD."
- 18. The Petitioner vide affidavit dated 14.5.2020, in response to ROP of hearing dated 13.2.2020, has claimed capital cost and submitted Auditor's Certificates dated 18.8.2019, 18.8.2019, 18.8.2019 and 13.2.2020 for Asset-1, Asset-2, Asset-3 and Asset-4, respectively. The details of apportioned approved cost, capital cost as on COD and estimated additional capital expenditure incurred or projected to be incurred during 2018-19, 2019-20 and 2020-21 along with estimated completion cost as claimed by the Petitioner are as under:

(₹ in lakh)

| Asset   | Apportioned        | Expenditure | Actual/ I | Actual/ Projected Exp. for FY |         |                    |  |
|---------|--------------------|-------------|-----------|-------------------------------|---------|--------------------|--|
|         | Approved Cost (FR) | up to COD   | 2018-19   | 2019-20                       | 2020-21 | Completion<br>Cost |  |
| Asset-1 | 206174.40          | 164560.94   | 2800.43   | 10158.26                      | 1154.33 | 178673.96          |  |
| Asset-2 | 9586.76            | 8537.50     | 49.12     | 554.43                        | 0.00    | 9141.05            |  |
| Asset-3 | 1973.22            | 1296.85     | 23.56     | 282.72                        | 0.00    | 1603.13            |  |
| Asset-4 | 7003.00            | 5410.99     | 0.00      | 201.91                        | 0.00    | 5612.90            |  |

### Cost Over-run

- 19. The Petitioner has submitted that the estimated completion cost of the instant assets is within the apportioned approved cost as per FR and has prayed to allow full cost and tariff as claimed in the instant petition. The Petitioner has submitted that reasons for item-wise cost variation between approved cost (FR) and actual cost as on COD/ estimated completed cost are explained in detail in Form-5.
- 20. Respondent, MPPMCL vide affidavit dated 9.7.2019 has submitted the following in respect of cost variation:-
  - A. An increase of ₹22334 lakh has been mentioned in cost variation due to tree and crop, forest, tower footing and corridor compensation.
  - (i) It has been mentioned that in FR, as per preliminary assessment, 15.08 ha of land was considered, whereas during execution of transmission line, around 96.722 ha was encountered. The Petitioner is also CTU and

engaged in such works in routine. It is very strange to note that the area has increased manifold. The statement of the Petitioner itself shows a rise of 640% as compared with the preliminary assessment. This clearly indicates that the Petitioner has made preliminary assessment without taking into consideration the ground position and the estimate was framed on wayward assumptions. Therefore, this increase is the responsibility of the Petitioner and should not be capitalized to avoid undue burden to the end consumers.

#### B. Decrease in IDC.

(ii) Time and again, it has been mentioned that the Petitioner has found a new way out to get higher IDC. The Petitioner is well aware of prevailing interest rates of market while framing the estimate, yet the Petitioner has made it a habit to adopt interest rate of 10% in estimation for FR. As the actual market rates are much lower than the presumed rate, the Petitioner always claims that there is a decrease in IDC. The Petitioner be asked to provide basis for adopting the interest rate in FR and be directed to stop this tendency immediately forever.

#### C. Decrease in IEDC.

- (iii) It is mentioned that during FR estimation, IEDC and contingency were considered @5% and @3% respectively. However, the actual amount of IEDC has been claimed in the subject petition. If previous petitions filed by the Petitioner are gone through carefully, the Commission will find that in a large number of cases, the contingency was considered @3% of the project cost for FR estimation while the actual expenses came out to be either NIL or around 0.25%. The Petitioner may be directed to refrain from such over estimation first and claim for the decrease from FR estimation later.
- 21. The Commission vide RoP of the hearing dated 13.2.2020 directed the Petitioner to submit asset-wise reason for cost variation. In response, the Petitioner vide affidavit dated 14.5.2020 submitted the following asset-wise reason for cost variation:

#### Asset-1:

(i) Transmission line material (decrease of ₹ 332.75 crore): The line

length, type of various towers and foundations in the DPR were estimated on the basis of walk-over/ preliminary survey. However, during execution, the line length has decreased from 309 kms (envisaged in FR) to 289.70 kms (as per actual). This has resulted in decrease in the quantity of tower-steel to the extent of 8373 MT. Further, there has also been corresponding decrease in the quantity of other transmission line material like conductor, earth-wire, insulators, concreting and reinforcement etc. The cost has also decreased due to lower awarded cost received in competitive bidding.

- (ii) **IDC** (decrease of ₹ 61.12 crore): During estimation for FR, IDC was considered based on the interest rate of 10.5%. The actual IDC accrued up to anticipated COD has been considered in the petition based on actual/anticipated infusion of funds.
- (iii) **FERV (increase of ₹30.55 crore)**: FERV factor was not considered in FR. There is increase of ₹ 30.55 lakh due to FERV as the project includes foreign funding.
- (iv) **IEDC and contingency (decrease of ₹69.73 crore)**: During FR estimation, IEDC and contingency were considered @5% and @3% of project cost respectively. The actual amount of IEDC has been claimed in the petition.
- (v) Crop/ Tree Compensation (increase of ₹176.34 crore): In the FR, there was a provision of ₹80.62 crore under the subject head. However, based on actual/ anticipated payments, an amount of ₹256.96 crore is likely to be incurred under the subject head. In the FR, as per preliminary assessment, 15.08 ha was considered, whereas during execution of transmission line, around 96.72 ha was encountered. Further, compensation towards tower footing and corridor has been paid/ likely to be paid in line with MoP Guidelines dated 15.10.2015 as per assessment of Government Revenue Authorities.
- (vi) Land (decrease of ₹ 37.35 crore): During FR estimation, ₹ 56.10 crore was considered towards land cost for the establishment of 765 kV Bhuj Pooling Station. However, the actual cost of the land for substation is ₹18.75 crore as the Petitioner could get the Government land at comparatively lower cost resulting into considerable saving under the subject head.

- (vii) Site preparation (increase of ₹ 1.99 crore): The cost of site preparation has increased as per actual site conditions.
- (viii) Civil works (increase of ₹ 4 crore): The FR estimation under the subject head was done as per normative data. However, during detailed engineering, actual requirement has increased resulting in higher actual/anticipated cost.
- (ix) Substation Equipment (Increase of ₹ 19.62 crore): The quantity of switchgear equipment has changed from 213 to 198 (5 no. circuit breakers) resulting in decrease in the cost of switchgear equipment and associated structure for switchyard. There is also cost variation in substation equipment due to lower/ higher cost received in competitive bidding. For procurement, open competitive bidding route is followed by providing equal opportunity to all eligible firms, lowest possible market prices for required product/ services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions. Further, regarding variation in cost of individual item in S/S packages, the packages under subject scope of works comprise of a large no. of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.

#### Asset-2:

- (i) **IDC (decrease of ₹0.79 crore)**: During estimation for FR, IDC was considered based on the interest rate of 10.5%. The actual IDC accrued up to anticipated COD has been considered in the petition based on actual/anticipated infusion of funds.
- (ii) **FERV (increase of ₹1.66 crore)**: The FERV factor was not considered in FR. There is increase of ₹1.66 crore due to FERV as the project includes foreign funding.

- (iii) **IEDC and contingency (decrease of ₹2.79 crore)**: During FR estimation, IEDC and contingency were considered @5% and @3% of project hard cost respectively. The actual amount of IEDC has been claimed in the subject petition.
- (iv) Civil works (increase of ₹0.95 crore): The FR estimation under the subject head was done as per normative data. However, during detailed engineering, actual requirement has increased resulting in higher actual/anticipated cost.
- Substation Equipment (decrease of ₹3.48 crore): There is cost (v) variation in substation equipment due to lower/ higher cost received in competitive bidding. For example, the cost of transformer was envisaged as ₹ 62.29 crore. However, the cost of transformers received in competitive bidding was ₹55.26 crore. The total approximate cost of bus bars/ conductors/ insulators was envisaged as ₹1.65 crore. However, the actual cost of the same received in competitive bidding was ₹6.45 crore. For procurement, open competitive bidding route is followed by providing equal opportunity to all eligible firms, lowest possible market prices for required products/ services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions. Further, regarding variation in cost of individual item in S/S packages, it is submitted that the packages under subject scope of works comprise of a large no. of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.

#### Asset-3:

(i) **IDC** (decrease of ₹0.41 crore): During estimation for FR, IDC was considered based on the interest rate of 10.5%. The actual IDC accrued up to anticipated COD has been considered in the petition based on actual/anticipated infusion of funds.

- (ii) **FERV (increase of ₹0.28 crore)**: The FERV factor was not considered in FR. There is increase of ₹ 0.28 crore due to FERV as the project includes foreign funding.
- (iii) **IEDC** and contingency (decrease of ₹0.79 crore): During FR estimation, IEDC and contingency were considered @5% and @3% of project hard cost respectively. The actual amount of IEDC has been claimed in the petition.
- (iv) Civil works (increase of ₹0.24 crore): The FR estimation under the subject head was done as per normative data. However, during detailed engineering, actual requirement has increased resulting in higher actual/anticipated cost.
- Substation Equipment (decrease of ₹3.02 crore): There is cost (v) variation in the cost of substation equipment due to lower/ higher cost received in competitive bidding. The total approximate cost of switchgear equipment was envisaged as ₹4.67 crore. However, the actual cost of the same received in competitive bidding was ₹2.57 crore. There is also minor variation in the cost of other substation equipment because of the same reason. For procurement, open competitive bidding route is followed by providing equal opportunity to all eligible firms, lowest possible market prices for required products/ services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions. Further, regarding variation in cost of individual item in S/S packages, it is submitted that the packages under subject scope of works comprise of a large no. of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.

#### Asset-4:

(i) **IDC** (increase of ₹2.20 crore): During estimation for FR, IDC was

considered based on the interest rate of 10.5%. The actual IDC accrued up to anticipated COD has been considered in the petition based on actual/anticipated infusion of funds.

- (ii) **FERV** (decrease of ₹1.30 crore): The FERV factor was not considered in FR. There is decrease of ₹ 1.30 crore due to FERV as the project includes foreign funding.
- (iii) **IEDC** and contingency (decrease of ₹2.91crore): During FR estimation, IEDC and contingency were considered @5% and @3% of project hard cost respectively. The actual amount of IEDC has been claimed in the petition.
- (iv) Civil works (decrease of ₹ 11.84 crore): The FR estimation under the subject head was done as per normative data. However, during detailed engineering, actual requirement has increased resulting in higher actual/anticipated cost.
- (v) Substation Equipment (decrease of ₹3.02 crore): There is cost variation in the cost of substation equipment due to lower/ higher cost received in competitive bidding. For example, the cost of transformers was envisaged as ₹ 62.29 crore. However, the cost of transformers received in competitive bidding was ₹ 55.26 crores. Also, the total approximate cost of switchgear equipment was envisaged as ₹ 7.38 crore. However, the actual cost of the same received in competitive bidding was ₹ 2.00 crore. There is also minor variation in the cost of other substation equipment's because of the same reason. For procurement, open competitive bidding route is followed by providing equal opportunity to all eligible firms, lowest possible market prices for required products/ services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions. Further, regarding variation in cost of individual item in S/S packages, it is submitted that the packages under subject scope of works comprise of a large no. of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items

under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.

22. We have considered the submissions of the Petitioner and Respondents and noted that against the total apportioned approved cost as per FR in respect of instant assets, the estimated completion cost including additional capital expenditure is within the apportioned approved cost. Therefore, there is no cost over-run.

# Time over-run

23. As per the Investment Approval dated 2.7.2015, the scheduled commissioning date of the instant assets under the Transmission Project was 36 months. Accordingly, the scheduled commercial operation date of the instant assets comes to 2.7.2018 against which they were put under commercial operation as per the following details:

| Assets | Scheduled Date of Completion | COD       | Delay    |
|--------|------------------------------|-----------|----------|
|        | (SCOD)                       | (Actual)  |          |
| 1      |                              | 20.3.2019 | 261 days |
| 2      | 2.7.2018                     | 24.3.2019 | 265 days |
| 3      | 2.7.2010                     | 30.3.2019 | 271 days |
| 4      |                              | 31.3.2019 | 272 days |

- 24. The Petitioner has submitted that the assets covered in the instant petition are delayed mainly due to ROW problems encountered at more than 135 locations, mainly in Kutch-Bhuj and Banaskantha districts which passes through Bhuj, Patan, Banaskantha, Himatnagar, Sabarkantha and Aravali districts of Gujarat. The Petitioner has submitted the following details to substantiate its claims:
  - a) The subject project was conceived to strengthen the transmission system beyond Bhuj Pooling Station. Though, the Petitioner started the construction of said line in earnest way, since beginning, but it had to face RoW issues at many locations in Kutch-Bhuj and Banaskantha districts. The

tower foundation and subsequent activities were hindered by villagers at many tower locations. While executing the activities at aforesaid locations, some of the local people/ sarpanch claimed their ownership on even government lands and demanded for payment of compensation either in the name of individuals or in the name of concerned gram panchayats for the same. The tower foundation and erection work were obstructed by landowners and construction of line could not be taken up due to compensation demand beyond the applicable provisions. The Petitioner also had to file cases under Section 16 for 8 of above-mentioned locations and construction work was interrupted till the issuance of concerned orders. The Petitioner tried to resolve the RoW issues amicably through persuasion. However, for most of the cases, it had to take up the matter with top State Government officials, administration and police authorities for resolving the same. Construction of the said line wasalso being monitored at PMO, Government of India level through PRAGATI (Pro-Active Governance and Timely Implementation).

- b) The Petitioner has submitted the detailed documentary evidence along with the detailed chronology of the events in support of the same.
- 25. MPPMCL has submitted the following in respect of time over-run:
  - a. The Petitioner has submitted that severe RoW problems were encountered at more than 135 locations mainly in Kutch Bhuj and Banaskantha districts. However, the Petitioner has submitted the detailed chronology only for some of the RoW issues which put the submission of the Petitioner under suspicion.
  - b. On going through the detailed chronology of events, it is observed that the Petitioner has requested the revenue/ police authorities for resolving issues for different locations at different times and not simultaneously. The requests started on 6.4.2016 and continued up to 29.11.2018 for different locations and at different times. So, it cannot be ascertained on the basis of chronology that the delay was caused due to late resolving of RoW issues. Had the Petitioner requested authorities of all the locations at the same time or the within the period of one month, the RoW issues could have been settled much earlier and delay might not have occurred at all.

- c. It is also observed that the revenue/ police authorities responded to the request of the Petitioner at their earliest. For example, a series of letters granting permission at different locations was given by Collector, Kutch Bhuj on 23.11.2016 referring to the letter of the Petitioner dated 15.7.2016. The balance issues were also been resolved and informed by Collector, Kutch Bhuj on 27.4.2017.
- d. Thus, the Petitioner has failed to prove that reasons of RoW issues were totally beyond the control of the petitioner and, therefore, the delay in commissioning should not be condoned.
- 26. In response, the Petitioner vide rejoinder has submitted the following:-
  - (i) In letter dated 23.9.2016 submitted in the main petition, 62 tower locations have been listed where there were RoW issues and co-operation of concerned authorities was sought. Further, 49 more locations have been listed where construction work was hindered due to RoW issues. Vide letter dated 21.6.2017, request was made to expedite the assessment of crop compensation in 81 cases as the Petitioner could not start the stringing/erection process at these locations.
  - (ii) Regarding the matter of requesting the revenue/ police authorities for resolving the RoW issues at all the locations at the same time, it is submitted that RoW issues do not rise at all the locations at the same time. The Petitioner made best efforts to resolve the issues when and where they originated.
- 27. The Commission vide RoP (Record of Proceedings) of hearing dated 13.2.2020, directed the Petitioner to submit details of reasons for time over-run, correspondence exchanged and chronology of the time over-run along with documents in the prescribed format. In response, the Petitioner vide affidavit dated 14.5.2020 has submitted the details as under:-

| Asset-1                              | Schedule   |           | Actual    |            | Bassans              |
|--------------------------------------|------------|-----------|-----------|------------|----------------------|
| Activity                             | From       | То        | From      | То         | Reasons              |
| LOA                                  | 17.8.2015  | 16.2.2016 | 23.7.2015 | 26.9.2016  | Sovere BoW           |
| Supply of structure & equipment etc. | 15.12.2015 | 30.4.2018 | 1.11.2015 | 30.11.2018 | Severe RoW<br>issues |

| Civil Work                | 16.2.2015 | 31.5.2018 | 15.1.2016 | 30.9.2018  |
|---------------------------|-----------|-----------|-----------|------------|
| Erection                  | 16.2.2015 | 31.5.2018 | 27.1.2016 | 30.11.2018 |
| Stringing                 | 15.7.2016 | 31.5.2018 | 30.6.2016 | 31.12.2018 |
| Testing and commissioning | 1.6.2018  | 1.7.2018  | 1.1.2019  | 20.3.2019  |

| Asset-2                              | Sche       | Schedule Actual Ro |            | Actual     |                          |
|--------------------------------------|------------|--------------------|------------|------------|--------------------------|
| Activity                             | From       | То                 | From       | То         | Reasons                  |
| Land Acquisition                     | 17.7.2015  | 31.12.2015         | 17.72015   | 18.10.2016 |                          |
| LOA                                  | 17.8.2015  | 16.2.2016          | 23.7.2015  | 27.12.2016 | Severe RoW               |
| Supply of structure & equipment etc. | 15.12.2015 | 30.3.2018          | 1.11.2016  | 28.2.2018  | issues in the associated |
| Civil Work                           | 16.2.2015  | 31.5.2018          | 5.11.2016  | 31.12.2018 | Transmission             |
| Erection                             | 16.2.2015  | 31.5.2018          | 15.11.2016 | 31.12.2018 | Line                     |
| Testing and commissioning            | 1.6.2018   | 1.7.2018           | 1.1.2019   | 24.3.2019  | Lille                    |

| Asset-3                              | Sche       | dule       | Actual     |            | Reasons                  |  |
|--------------------------------------|------------|------------|------------|------------|--------------------------|--|
| Activity                             | From       | То         | From       | То         | riodoonio                |  |
| Land Acquisition                     | 17.7.2015  | 31.12.2015 | 17.7.2015  | 18.10.2016 |                          |  |
| LOA                                  | 17.8.2015  | 16.2.2016  | 23.7.2015  | 27.12.2016 | Cayora Dall              |  |
| Supply of structure & equipment etc. | 15.12.2015 | 30.3.2018  | 1.11.2016  | 28.2.2018  | Severe RoW issues in the |  |
| Civil Work                           | 16.2.2015  | 31.5.2018  | 5.11.2016  | 31.12.2018 | associated Transmission  |  |
| Erection                             | 16.2.2015  | 31.5.2018  | 15.11.2016 | 31.12.2018 | Line                     |  |
| Testing and                          | 1.6.2018   | 1.7.2018   | 1.1.2019   | 30.3.2019  | LINE                     |  |
| commissioning                        |            |            |            |            |                          |  |

| Asset-4             | Sch        | Schedule Actual |            | Actual     |                          |
|---------------------|------------|-----------------|------------|------------|--------------------------|
| Activity            | From       | То              | From       | То         |                          |
| Land Acquisition    | 17.7.2015  | 31.12.2015      | 17.7.2015  | 18.10.2016 |                          |
| LOA                 | 17.8.2015  | 16.2.2016       | 23.7.2015  | 27.12.2016 | Cayara DaW               |
| Supply of structure | 15.12.2015 | 30.3.2018       | 1.11.2016  | 28.2.2018  | Severe RoW issues in the |
| & equipment etc.    |            |                 |            |            | associated               |
| Civil Work          | 16.2.2015  | 31.5.2018       | 5.11.2016  | 31.12.2018 | Transmission             |
| Erection            | 16.2.2015  | 31.5.2018       | 15.11.2016 | 31.12.2018 | Line                     |
| Testing and         | 1.6.2018   | 1.7.2018        | 1.1.2019   | 31.3.2019  | LIIIC                    |
| commissioning       |            |                 |            |            |                          |

28. We have considered the submission of the Petitioner and Respondent MPPMCL and perused the documents available on records. Asset-1, Asset-2, Asset-3, and Asset-4 are put under commercial operation with effect from 20.3.2019, 24.3.2019, 30.3.2019 and 31.3.2019, respectively. Hence, Asset-1, Asset-2, Asset-3, and Asset-4 were put under commercial operation with a delay of about 261 days, 265 days, 271 days and 272 days respectively. Asset-1, Asset-2,

Asset-3, and Asset-4 were delayed due to Right of way (ROW) problems encountered at more than 135 locations, mainly in Kutch-Bhuj and Banaskantha through Bhuj, Patan, Banaskantha, districts. which passes Himatnagar, Sabarkantha and Aravali districts of Gujarat during construction of transmission line. It is observed that the Petitioner has faced ROW problems at various locations mainly-8/7, 8/4, 9/4, , 3/3, 3/4, 3/5, AP4/0, 4/1, 4/2, 4/3, 4/4, 4/5, 4/6,5/0, 2/3-2/4, 5A/6, 6/10, 7/8-8/0, 8/1-8/2, 8/4, 8/7, 8/7-9/0, 8/5, 9/11, 10/8, 11/10, 11/12, 11/0, 11/2, 11/3, 11/6, 11/9, 11/10, 11/12, 12/2, 12/5, 12/6, 12/8, 12/3, 17/2, 14/0, 17/1, 18/2, 20/0, 38A/0, 38B/0, 38B/1, 38B/1, 38B/2, 38B/3, 38/2, 38/3, 38/4, 24/14, 25/02, 31/11, 31/12, 31/2, 42/0 to 43/0 and the last such ROW problem faced by the Petitioner was on 29.11.2018. Finally, the Petitioner has been able to the charge the transmission line along with bays, ICTs and reactors from 20.3.2019 to 31.3.2019.

- 29. The Petitioner has also submitted extensive details of correspondences with various authorities along with supporting documents. Further, it is seen that the Petitioner for the first time wrote letter on 7.6.2016 to the District Collector, Kutch-Bhuj regarding assessment of payments of compensation towards damages in regard to ROW and also wrote letter on 16.6.2016 to Mamlatdar, Bhuj and Mamlatdar, Nakhtrana regarding resolving ROW issues. Again, the Petitioner on 17.6.2016 wrote letter regarding resolving ROW issues to Mamlatdar, Anjar and on 27.8.2016 and 23.9.2016, to District Collector, Kutch-Bhuj and the last such letters regarding ROW issues was exchanged on 29.11.2018.
- 30. From the submissions of the Petitioner, it is seen that ROW issues at various locations between existed between 16.6.2016 to 29.11.2018 (897 days) that affected the commissioning of the instant assets. In our view, the Petitioner made its efforts to resolve the RoW issues on its own and also through approaching the

concerned authorities and the time over-run was beyond control of the Petitioner. The Petitioner compressed the execution time and put the Asset-1, Asset-2, Asset-3, and Asset-4 under commercial operation w.e.f. from 20.3.2019, 24.3.2019, 30.3.2019 and 31.3.2019, with a time over-run of about 261 days, 265 days, 271 days and 272 days, respectively. Therefore, delay of 261 days, 265 days, 271 days and 272 days in respect of Asset-1, Asset-2, Asset-3, and Asset-4, respectively on account of ROW issue was beyond the control of the Petitioner and is condoned.

# **Interest During Construction (IDC)**

- 31. The Petitioner has claimed Interest During Construction (IDC) for the instant assets and submitted the Auditor's Certificates in support of the same. The Commission vide RoP for the hearing dated 29.6.2020 directed to furnish interest rate, conversion rate, amount of loan and drawl date details for foreign loans (KFW) for the instant assets. In response, the Petitioner vide affidavit dated 16.7.2020 has submitted the details of IDC in respect of foreign loan and its allocation to the instant assets. However, the detailed break-up of rate of interest finally considered and its repayment has not been furnished by the Petitioner in respect of foreign loan.
- 32. For the time being, the IDC has been considered based on the information submitted by the Petitioner for the individual assets separately on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff period and drawl details submitted for foreign loan KFW have been considered for the purpose of IDC calculation on cash and accrued basis. However, the Petitioner is directed to furnish the following information at the time of truing up exercise:
  - (i) Date and amount of drawl and corresponding exchange rate with respect to each date of drawl;
  - (ii) Date and amount of repayment and corresponding exchange rate with respect to each date of repayment;

- (iii) Date of interest payments & corresponding exchange rate;
- (iv) Closing exchange rate;
- (v) Exchange rate as on COD;
- (vi) Applicable rate of interest as on various dates with resets, if any;
- (vii) Copy of loan agreement.
- 33. Accordingly, IDC considered is as follows::-

(₹ in lakh)

| Assets | IDC as per Auditor's certificate | IDC<br>Admissible | Computa-<br>tional<br>difference<br>in IDC | IDC Dis-<br>charged<br>as on<br>COD | IDC Undischarged as on COD | IDC to be<br>Discharged<br>in 2019-20 |
|--------|----------------------------------|-------------------|--|-------------------------------------|----------------------------|---------------------------------------|
| Α      | В                                | O                 | D=B-C                                      | E                                   | F=C-E                      |                                       |
| 1      | 5315.32                          | 5315.32           | 0.00                                       | 4701.38                             | 613.94                     | 613.94                                |
| 2      | 337.48                           | 337.48            | 0.00                                       | 253.68                              | 83.80                      | 83.80                                 |
| 3      | 50.92                            | 50.92             | 0.00                                       | 39.42                               | 11.50                      | 11.50                                 |
| 4      | 595.32                           | 396.91            | 198.41                                     | 330.63                              | 66.28                      | 66.28                                 |

# **Incidental Expenditure During Construction (IEDC)**

34. The Petitioner has claimed IEDC of ₹ 4821.73 lakh, ₹ 251.82 lakh, ₹ 37.85 lakh and ₹ 199.22 lakh for Asset-1, Asset-2, Asset-3 and Asset-4, respectively and has submitted Auditor's certificate in support of the same. The Petitioner has also submitted that the entire IEDC has been discharged as on COD in respect of the instant assets. Hence, the IEDC claimed has been allowed.

#### **FERV**

35. Auditor vide certificate dated 18.8.2019 has stated that the capital cost up to COD includes FERV gain up to domestic borrowing cost of Rs.388.15 lakhs and FERV loss above domestic borrowing cost (from Memorandum of Accounts) of Rs.3257.79 lakhs for Asset-1. As regards Asset-2, Auditor vide certificate dated 18.8.2019 has stated that capital cost up to COD includes FERV gain up to domestic borrowing cost of Rs.13.84 lakhs and FERV loss above domestic

borrowing cost (from Memorandum of Accounts) of Rs. 169.60 lakhs. For Asset-3, Auditor vide certificate dated 18.8.2019 has stated that capital cost up to COD includes FERV gain up to domestic borrowing cost of Rs.0.20 lakhs and FERV loss above domestic borrowing cost (from Memorandum of Accounts) of Rs. 26.71 lakhs. Similarly, Auditor vide certificate dated 13.2.2020 has stated that capital cost up to COD includes FERV gain up to domestic borrowing cost of Rs.232.83 lakhs and FERV loss above domestic borrowing cost (from Memorandum of Accounts) of Rs. 102.43 lakhs in respect of Asset-4. We understand that these adjustments have been made to arrive at historical cost which is considered for grant of tariff. The Petitioner is directed to furnish detailed working of FERV adjustments duly audited by the same auditors who have issued the present certificate at the time of true up. For the time being, we are considering same FERV as certified by Auditors in respect of the four assets covered in the instant petition for working out tariff.

# **Initial Spares**

36. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

#### "13. Initial Spares

Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:

- (d) Transmission system
- (i) Transmission line 1.00%
- (ii) Transmission Sub-station (Green Field) 4.00%
- (iii) Transmission Sub-station (Brown Field) 6.00%
- (iv) Series Compensation devices and HVDC Station 4.00%
- (v) Gas Insulated Sub-station (GIS)-5.00%
- (vi) Communication system-3.5%

#### Provided that:

- (i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:
- (ii) -----

- (iii) Once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:
- (iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the breakup of head wise IDC & IEDC in its tariff application."
- 37. The Petitioner has claimed initial spares and has submitted Auditor's Certificates dated 18.8.2019, 18.8.2019, 18.8.2019 and 13.2.2020 for Asset-1, Asset-2, Asset-3 and Asset-4 respectively in support of the same. The Petitioner has also submitted details of year-wise capitalisation and initial spares discharged up to COD. The Petitioner has further submitted that the expenditure incurred towards initial spares up to COD have been considered in COD cost. The amount towards balance initial spares liabilities have been considered in additional capital expenditure of the respective year and the Petitioner has prayed to allow the entire initial spares claimed under the instant petition. The details of initial spares claimed by the Petitioner is as follows:

(₹ in lakh)

| Asset | Particulars<br>Head                   | Plant and Machinery Cost (excluding IDC and IEDC, land cost and cost of civil works) (A) (₹ in lakh) | Initial<br>Spares<br>claimed<br>(B)<br>(₹ in lakh) | Ceiling<br>Limit<br>claimed<br>(C)<br>(in %) | Initial Spares worked out by the Petitioner (in %) |
|-------|---------------------------------------|--|--|--|--|
|       | Transmission<br>Line                  | 127342.53  | 1217.15  | 1  | 0.95%  |
| 1     | Transmission Sub-station (Greenfield) | 31262.81   | 765.61   | 4  | 2.44%  |
|       | Communication<br>System (PLCC)        | 1320.69  | 45.86  | 3.5  | 3.47%  |
| 2     | Transmission Sub-station (Greenfield) | 8386.20  | 178.55   | 4  | 2.12%  |
| 3     | Transmission Sub-station (Greenfield) | 1486.30  | 52.96  | 4  | 3.56%  |
| 4     | Transmission Sub-station (Greenfield) | 4947.93  | 113.32   | 4  | 2.29%  |

38. We have considered the submissions made by the Petitioner. The initial spares claimed by the Petitioner are less than the permissible level. Thus, the initial spares claimed are being allowed. Accordingly, the initial spares allowed for the 2014-19 tariff period are as followsr:

| Asset | Element   | Plant and Machinery Cost up to the cut- off date/31.3.2019 (excluding IDC and IEDC, land cost and cost of civil works) (₹ in lakh) | Initial spares<br>claimed<br>(₹ in lakh) | Norms as per<br>the 2014<br>Tariff<br>Regulations<br>(%) | Initial<br>spares<br>allowed<br>(₹ in lakh) |
|-------|---|--|--|--|---|
|       | Transmission Line                                     | 121832.03  | 1217.15                                  | 1  | 1217.15                                     |
| 1     | Transmission Sub-station (Greenfield) (Including PLCC | 29397.34   | 811.47                                   | 4  | 811.47                                      |
| 2     | Transmission Sub-station (Greenfield)                 | 7831.77  | 178.55                                   | 4  | 178.55                                      |
| 3     | Transmission Sub-station (Greenfield)                 | 1769.02  | 52.96                                    | 4  | 52.96                                       |
| 4     | Transmission Sub-station (Greenfield)                 | 4746.02  | 113.32                                   | 4  | 113.32                                      |

# Capital cost as on COD

39. Accordingly, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is summarized as under:

(₹ in lakh)

| Asset | Capital Cost as on COD as per | Less: IDC disallowed as on COD due to |                   | Capital Cost considered |
|-------|-------------------------------|---------------------------------------|-------------------|-------------------------|
|       | Auditor's<br>Certificate      | Computa-<br>tional<br>difference      | Un-<br>discharged | as on COD               |
|       | 1                             | 2                                     | 3                 | 4=1-2-3                 |
| 1     | 164560.94                     | 0.00                                  | 613.94            | 163947.00               |
| 2     | 8537.50                       | 0.00                                  | 83.80             | 8453.70                 |
| 3     | 1296.85                       | 0.00                                  | 11.50             | 1285.35                 |
| 4     | 5410.99                       | 198.41                                | 66.28             | 5146.30                 |

# **Additional Capital Expenditure (ACE)**

- 40. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:
  - "(1) The capital expenditure in respect of the 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:
  - (i) Undischarged liabilities recognised to be payable at a future date;
  - (ii) Works deferred for execution;
  - (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
  - (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
  - (v) Change in Law or compliance of any existing law:

Provided that 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 shall be submitted along with the application for determination of tariff."

41. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines "cut-off" date as under:

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

42. The Petitioner has claimed following additional capital expenditure for instant assets for 2014-19 tariff period and submitted Auditor's Certificates in support of the same:

(₹ in lakh)

| Asset | Additional Capital Expenditure in FY |          |         |  |  |
|-------|--------------------------------------|----------|---------|--|--|
|       | 2018-19                              | 2019-20  | 2020-21 |  |  |
| 1     | 2800.43                              | 10158.26 | 1154.33 |  |  |
| 2     | 49.12                                | 554.43   | 0.00    |  |  |
| 3     | 23.56                                | 282.72   | 0.00    |  |  |
| 4     | 0.00                                 | 201.91   | 0.00    |  |  |

43. The Petitioner vide Form-7 has claimed ACE only for 2018-19 for the instant assets.

- 44. The Respondent, MPPMCL, vide reply dated 9.7.2019, has submitted that the projected additional capital expenditure is mainly on account of balance/ retention payments and the details of underlying reasons for additional capitalization for subject assets are given in Form No.7. However, in Form No.7 details have not been mentioned. Therefore, additional capital expenditure may be allowed during true up exercise when actual amount is known. In response, the Petitioner vide rejoinder dated 22.6.2020, has submitted that the additional capital expenditure incurred/ projected to be incurred is mainly on account of balance/ retention payments and hence, the same may be allowed by the Commission.
- 45. We have considered the submissions made by the Petitioner and Respondent MPPMCL. Since FY 2019-20 and 2020-2021 fall beyond the tariff period 2014-19 and is not covered under the 2014 Tariff Regulation, the projected ACE claimed beyond 2018-19 has not been taken into consideration and the same shall be dealt during the next tariff period as per the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019. The Petitioner has claimed ACE for 2018-19 under Regulation 14(1)(i) (Undischarged liabilities) and 14(1)(ii) (works deferred for execution) of the 2014 Tariff Regulations. Accordingly, the allowed Additional Capital Expenditure is summarized below which is subject to true up:

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|                              |            |         |         | ,       |         |
|------------------------------|------------|---------|---------|---------|---------|
| Particulars                  | Regulation | Asset-1 | Asset-2 | Asset-3 | Asset-4 |
|                              |            | 2018-19 | 2018-19 | 2018-19 | 2018-19 |
| ACE to the extent of Balance | 14 (1)(i)& | 2800.43 | 49.12   | 23.56   | 0.00    |
| & Retention Payment& works   | 14(1)(ii)  |         |         |         |         |
| deferred for execution       |            |         |         |         |         |

# Capital cost for the tariff period 2014-19

46. Accordingly, the capital cost considered for the tariff period 2014-19, subject to truing up, is as follows:

(₹ in lakh)

| Asset | Capital Cost<br>allowed as on<br>COD | ACE allowed in 2018-19 | Capital cost<br>allowed as on<br>31.3.2019 |
|-------|--------------------------------------|------------------------|--|
| 1     | 163947.00                            | 2800.43                | 166747.43                                  |
| 2     | 8453.70                              | 49.12                  | 8502.82                                    |
| 3     | 1285.35                              | 23.56                  | 1308.91                                    |
| 4     | 5146.30                              | 0.00                   | 5146.30                                    |

47. Based on the above, the tariff in respect of Asset-1 from COD (20.3.2019) to 31.3.2019 (period of 12 days in FY 2018-19); in respect of Asset-2 from COD (24.3.2019) to 31.3.2019 (period of 8 days in FY 2018-19); in respect of Asset-3 from COD (30.3.2019) to 31.3.2019 (period of 2 days in FY 2018-19) and in respect of Asset-4 from COD (31.3.2019) to 31.3.2019 (period of 1 day in FY 2018-19) is determined in subsequent paragraphs.

#### **Debt-Equity Ratio**

- 48. Clauses 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specify as follows:
  - "(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

#### Provided that:

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

- "(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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."
- 49. Debt Equity Ratio is considered as per Regulation 19 of the 2014 Tariff Regulations. The financial package up to COD as submitted in Form 6 has been considered to determine the debt-equity Ratio. The same has been summarised as under:-

|         | Capital Cost as o | Capital Cost as on COD |             | 31.3.2019 |  |
|---------|-------------------|------------------------|-------------|-----------|--|
|         | Amount            | (%)                    | Amount      | (%)       |  |
|         | (₹ in lakh)       |                        | (₹ in lakh) |           |  |
|         |                   | Asset-1                |             |           |  |
| Debt    | 114762.86         | 70.00                  | 116723.16   | 70.00     |  |
| Equity  | 49184.14          | 30.00                  | 50024.27    | 30.00     |  |
| Total   | 163947.00         | 100.00                 | 166747.43   | 100.00    |  |
|         |                   | Asset-2                |             |           |  |
| Debt    | 5917.59           | 70.00                  | 5951.97     | 70.00     |  |
| Equity  | 2536.11           | 30.00                  | 2550.85     | 30.00     |  |
| Total   | 8453.70           | 100.00                 | 8502.82     | 100.00    |  |
|         |                   | Asset-3                |             |           |  |
| Debt    | 899.74            | 70.00                  | 916.24      | 70.00     |  |
| Equity  | 385.61            | 30.00                  | 392.67      | 30.00     |  |
| Total   | 1285.35           | 100.00                 | 1308.91     | 100.00    |  |
| Asset-4 |                   |                        |             |           |  |
| Debt    | 3602.41           | 70.00                  | 3602.41     | 70.00     |  |
| Equity  | 1543.89           | 30.00                  | 1543.89     | 30.00     |  |
| Total   | 5146.30           | 100.00                 | 5146.30     | 100.00    |  |

# Return on Equity (ROE)

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

- (i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**:
- (ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:



- (iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- (iv) the rate of return of a new project shall be reduced by 1% 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)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers

#### "25. Tax on Return on Equity:

- (1) The base rate of return on equity as allowed by the Commission under Regulation 24 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 the 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 income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered 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:

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

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

- 51. The Petitioner has submitted that ROE has been calculated at the rate of 19.61% after grossing up ROE with MAT rate of 20.961% as per provisions of Regulations 24 and 25 of the 2014 Tariff Regulations. However, the Petitioner vide affidavit dated 14.5.2020 has submitted the Form-8 in respect of instant assets wherein ROE has been grossed up based on the MAT Rate of 21.549%.
- 52. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose

of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. Accordingly, the MAT rate of 21.549%, applicable during 2018-19 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25(3) of the 2014 Tariff Regulations.

# 53. Accordingly, ROE allowed is as follows:

(₹ in lakh)

|                                    |            |            |            | 1 111 1011111 |
|------------------------------------|------------|------------|------------|---------------|
| Particulars                        | Asset-1    | Asset-2    | Asset-3    | Asset-4       |
|                                    | 2018-19    | 2018-19    | 2018-19    | 2018-19       |
|                                    | (Pro-rata) | (Pro-rata) | (Pro-rata) | (Pro-rata)    |
|                                    | (12 Days)  | (8 Days)   | (2 Days)   | (1 Day)       |
| Opening Equity                     | 49184.14   | 2536.11    | 385.61     | 1543.89       |
| Increase in Equity due to addition | 840.13     | 14.74      | 7.07       | 0.00          |
| during the year                    | 040.13     | 14.74      | 7.07       | 0.00          |
| Closing Equity                     | 50024.07   | 2550.85    | 392.67     | 1543.89       |
| Average Equity                     | 49604.20   | 2543.48    | 389.14     | 1543.89       |
| Return on Equity (Base Rate) (%)   | 15.50      | 15.50      | 15.50      | 15.50         |
| Tax Rate applicable (%)            | 21.549     | 21.549     | 21.549     | 21.549        |
| Applicable ROE Rate (%)            | 19.758     | 19.758     | 19.758     | 19.758        |
| Return on Equity for the year      | 322.22     | 11.01      | 0.42       | 0.84          |

#### **Interest on Loan (IOL)**

- 54. Regulation 26 of the 2014 Tariff Regulations are provides as under:
  - "(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.
  - (2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.
  - (3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization 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 up to the date of decapitalisation 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."
- 55. The Petitioner has submitted that IOL has been claimed on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/adjusted over the tariff block 2014-19. We have calculated IOL on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up. IOL is allowed considering all the loans submitted in Form-9C. The Petitioner is directed to reconcile the total Gross Loan for the calculation of weighted average Rate of Interest and for the calculation of IDC, which would be reviewed at the time of truing-up.
- 56. IOL has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations that provides as under:
  - (i) Gross amount of loan, repayment of instalments and rate of interest on actual loans have been considered as per petition including additional information.
  - (ii) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year.
  - (iii) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.
  - 57. The details of IoL allowed for the instant transmission assets are as follows:-

(₹ in lakh)

| Particulars Asset-1     |                                    | Asset-2                           | Asset-3                           | Asset-4                          |
|-------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
|                         | 2018-19<br>(Pro-rata)<br>(12 Days) | 2018-19<br>(Pro-rata)<br>(8 Days) | 2018-19<br>(Pro-rata)<br>(2 Days) | 2018-19<br>(Pro-rata)<br>(1 Day) |
| Gross Normative<br>Loan | 114762.86                          | 5917.59                           | 899.74                            | 3602.41                          |
| Cumulative              | 0.00                               | 0.00                              | 0.00                              | 0.00                             |



| Particulars         | Asset-1    | Asset-2    | Asset-3    | Asset-4    |
|---------------------|------------|------------|------------|------------|
|                     | 2018-19    | 2018-19    | 2018-19    | 2018-19    |
|                     | (Pro-rata) | (Pro-rata) | (Pro-rata) | (Pro-rata) |
|                     | (12 Days)  | (8 Days)   | (2 Days)   | (1 Day)    |
| Repayment upto      |            |            |            |            |
| previous Year       |            |            |            |            |
| Net Loan-Opening    | 114762.86  | 5917.59    | 899.74     | 3602.41    |
| Addition due to ACE | 1960.30    | 34.38      | 16.49      | 0.00       |
| Repayment during    | 395 30     | 0.01       | 0.38       | 0.74       |
| the year            | 285.29     | 9.81       | 0.36       | 0.74       |
| Net Loan-Closing    | 116437.87  | 5942.16    | 915.86     | 3601.66    |
| Average Loan        | 115600.37  | 5929.87    | 907.80     | 3602.04    |
| Weighted Average    |            |            |            |            |
| Rate of Interest on | 3.77       | 3.89       | 3.98       | 4.36       |
| Loan (%)            |            |            |            |            |
| Interest on Loan    | 143.11     | 5.05       | 0.20       | 0.43       |

# **Depreciation**

58. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:

#### "27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. 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 or elements thereof.

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 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.
- (3) The salvage value of the asset shall be considered as 10% and depreciation shall 68 be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:



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

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

- 4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.
- (5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

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

- (6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets."
- 59. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The Gross Block during 2018-19 has been depreciated at weighted average rate of depreciation (WAROD) (as placed in Annexure-1). WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during the 2018-19 is as under:

(₹ in lakh)

|                            | Asset-1     | Asset-2    | Asset-3    | Asset-4    |
|----------------------------|-------------|------------|------------|------------|
| Particulars                | 2018-19     | 2018-19    | 2018-19    | 2018-19    |
| Faiticulais                | (Pro-rata)  | (Pro-rata) | (Pro-rata) | (Pro-rata) |
|                            | (12 Days)   | (8 Days)   | (2 Days)   | (1 Day)    |
| Opening Gross Block        | 163947.00   | 8453.70    | 1285.35    | 5146.30    |
| Additional Capitalisation  | 2800.43     | 49.12      | 23.56      | 0.00       |
| Closing Gross Block        | 166747.43   | 8502.82    | 1308.91    | 5146.30    |
| Average Gross Block        | 165347.22   | 8478.26    | 1297.13    | 5146.30    |
| Value of Freehold Land     | 1875.03     | 0.00       | 0.00       | 0.00       |
| included above             | 1075.05     | 0.00       | 0.00       | 0.00       |
| Aggregated Depreciable     | 147173.69   | 7630.43    | 1167.42    | 4631.67    |
| Value                      | 147 17 3.09 | 7030.43    | 1107.42    | 4031.07    |
| Remaining Aggregate        |             |            |            |            |
| Depreciable Value at the   | 147173.69   | 7630.43    | 1167.42    | 4631.67    |
| beginning of the year      |             |            |            |            |
| No. of completed years at  | 0           | 0          | 0          | 0          |
| the beginning of the year  | O O         | <u> </u>   | 0          | 0          |
| Balance useful life at the | 33          | 25         | 25         | 25         |
| beginning of the year      | 33          | 25         | 25         | 23         |

| Particulars                                    | Asset-1<br>2018-19<br>(Pro-rata)<br>(12 Days) | Asset-2<br>2018-19<br>(Pro-rata)<br>(8 Days) | Asset-3<br>2018-19<br>(Pro-rata)<br>(2 Days) | Asset-4<br>2018-19<br>(Pro-rata)<br>(1 Day) |
|--|---|--|--|---|
| Weighted Average Rate of Depreciation (WAROD)  | 5.2481%                                       | 5.2800%                                      | 5.2800%                                      | 5.2800%                                     |
| Combined Depreciation during the Year          | 285.29  | 9.81   | 0.38   | 0.74  |
| Cumulative Depreciation at the end of the year | 285.29  | 9.81   | 0.38   | 0.74  |

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

60. The Petitioner has claimed O&M expenses for instant assets as per following details:

(₹ in lakh)

| Asset | Particulars  | 2018-19 (pro-rata) |
|-------|--------------|--------------------|
| 1     | O&M Expenses | 45.38              |
| 2     |              | 3.62               |
| 3     |              | 0.38               |
| 4     | ]            | 0.64               |

- 61. The Petitioner in the instant petition has submitted that O&M expense rates for the tariff period 2014-19 had been arrived on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The Petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The Petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.
- 62. MPPMCL vide reply dated 9.7.2019 has submitted that the increase in the employee cost, if any, due to wage revision must be taken care by improvement in their productivity levels by the Petitioner company so that the beneficiaries are not unduly burdened over and above the provisions made in the 2014 Tariff Regulations. In response, the Petitioner *vide* rejoinder dated 22.6.2020 has

submitted that the wage revision of the employees of the Petitioner company is due w.e.f. 1.1.2017 and actual impact of wage hike which will be effective from future date has also not been factored in fixation of the normative O&M rates prescribed for the tariff block 2014-19. The scheme of wage revision applicable to CPSUs being binding on the Petitioner, the Petitioner reserves the right to approach the Commission for suitable revision in the norms for O&M expenditure for claiming the impact of wage hike from 1.1.2017 onwards.

- 63. We have considered the submission of Petitioner. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards the impact of wage revision, any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.
- 64. Norms for O&M expenditure for Transmission System have been specified under section 29 (4) of Tariff Regulation are as follows:

| Element   | 2018-19 |
|---|---------|
| 765 kV bay - (₹ lakh/bays)  | 96.20   |
| 400 kV bay - (₹ lakh/bays)  | 68.71   |
| 220 kV bay - (₹ lakh/ bay)  | 48.10   |
| Double Circuit (Bundle Conductor with four conductors) –(₹ lakh/km) | 1.21    |

65. The Petitioner has computed normative O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations. Accordingly, the allowed O&M Expenses are as follows:

|         |         | (₹ in lakh) |
|---------|---------|-------------|
| Asset-1 | Element | 2018-19     |
| ·       |         |             |

|   |   | (pro-rata)<br>(12 days) |
|---|---|-------------------------|
| 765kV D/C Bhuj Pool Sub-station-<br>Banaskantha T/L along with associated<br>bays at both ends, 2x330 MVAR                                      | 765 kV Bhuj-Banaskantha T/L Double circuit (Bundled conductor with four or more sub-conductors) | 11.47                   |
| Switchable Line Reactors along with associated bays at both ends, 1 no. 1500 MVA, 765/400 kV ICT-2 and 1 no. 765 kV, 330 MVAr Bus Reactor along | having line length 288.507 km 10 nos. of 765 kV bays  | 31.62                   |
| with associated bays at Bhuj Pooling Station  | 1 no. of 400 kV bay   | 2.25                    |
| Total O&M Exper   | nses Allowed  | 45.34                   |

| Asset-2  | Element             | 2018-19<br>(pro-rata)<br>(8 days) |
|--|---------------------|-----------------------------------|
| 1 no. 1500 MVA, 765/400 kV ICT-1                   | 1 no. of 765 kV bay | 2.10                              |
| along with associated bays at Bhuj Pooling Station | 1 no. of 400 kV bay | 1.50                              |
| Total O&M Exper                                    | 3.60                |                                   |

| Asset-3   | Element             | 2018-19<br>(pro-rata)<br>(2 days) |
|---|---------------------|-----------------------------------|
| 1 no. 400 kV, 125 MVAR Bus Reactor along with associated bays at Bhuj Pooling Station | 1 no. of 400 kV bay | 0.37                              |
| Total O&M Expenses Allowed  |                     | 0.37                              |

| Asset-4   | Element               | 2018-19<br>(pro-rata)<br>(1 days) |
|---|-----------------------|-----------------------------------|
| 2 nos. 500MVA, 400/220 kV ICTs along with associated bays at Bhuj Pooling | 2 nos. of 400 kV bays | 0.37                              |
| Station   | 2 nos. of 400 kV bays | 0.26                              |
| Total O&M Exper   | nses Allowed          | 0.63                              |

# **Interest on Working Capital (IWC)**

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

# "28. Interest on Working Capital

- (1) The working capital shall cover:
- (c) Hydro generating station including pumped storage hydroelectric generating station and transmission system including communication system:
- (i) Receivables equivalent to two months of fixed cost;
- (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and



- (iii) Operation and maintenance expenses for one month"
- (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the 72 transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.
- "(5) 'Bank Rate' means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;"
- 67. As per the 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:

#### a) Maintenance spares:

Maintenance spares @ 15% Operation and maintenance expenses specified in Regulation 29.

# b) O & M expenses:

Operation and maintenance expenses have been considered for one month of the O&M expenses.

#### c) Receivables:

The receivables have been worked out on the basis of 2 months of annual fixed cost as worked out above.

# d) Rate of interest on working capital:

As per Clause 28 (3) of the 2014 Tariff Regulations, SBI Base Rate as on 1.4.2018 (8.70%) plus 350 bps i.e. 12.20% has been considered as the rate of interest on working capital.

68. Accordingly, the interest on working capital is summarized as under:

(₹ in lakh)

|                             | Asset-1                 | Asset-2                | Asset-3                | Asset-4               |
|-----------------------------|-------------------------|------------------------|------------------------|-----------------------|
| Particulars                 | 2018-19                 | 2018-19                | 2018-19                | 2018-19               |
|                             | (Pro-rata)<br>(12 Days) | (Pro-rata)<br>(8 Days) | (Pro-rata)<br>(2 Days) | (Pro-rata)<br>(1 Day) |
| Maintenance Spares          | 206.86                  | 24.64                  | 10.13                  | 34.49                 |
| O&M Expenses                | 114.92                  | 13.69                  | 5.63                   | 19.16                 |
| Receivables                 | 4125.48                 | 229.62                 | 42.70                  | 165.09                |
| Total                       | 4447.27                 | 267.94                 | 58.45                  | 218.75                |
| Rate of Interest (%)        | 12.20                   | 12.20                  | 12.20                  | 12.20                 |
| Interest on working Capital | 17.84                   | 0.72                   | 0.04                   | 0.07                  |

# **Annual Transmission charges**



69. Accordingly, the annual transmission charges being allowed for the instant assets are as under:

(₹ in lakh)

| Particulars                 | Asset-1                            | Asset-2                           | Asset-3                           | Asset-4                          |
|-----------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
|                             | 2018-19<br>(Pro-rata)<br>(12 Days) | 2018-19<br>(Pro-rata)<br>(8 Days) | 2018-19<br>(Pro-rata)<br>(2 Days) | 2018-19<br>(Pro-rata)<br>(1 Day) |
| Depreciation                | 285.29                             | 9.81                              | 0.38                              | 0.74                             |
| Interest on Loan            | 143.11                             | 5.05                              | 0.20                              | 0.43                             |
| Return on Equity            | 322.22                             | 11.01                             | 0.42                              | 0.84                             |
| Interest on Working Capital | 17.84                              | 0.72                              | 0.04                              | 0.07                             |
| O&M Expenses                | 45.34                              | 3.60                              | 0.37                              | 0.63                             |
| Total                       | 813.79                             | 30.20                             | 1.40                              | 2.71                             |

# Filing fee and the publication expenses

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

#### **License fee and RLDC Fees and Charges**

71. The Petitioner has prayed to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that the Petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) of Regulation 52 in the 2014 Tariff Regulations.

#### **Goods and Services Tax**

72. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

#### **Sharing of Transmission Charges**

- 73. The Petitioner has submitted that the transmission charges of the instant assets should be recovered on monthly basis and the billing, collection and disbursement of Transmission Charges shall be governed by the provisions of CERC (Sharing of Interstate Transmission Charges and Losses Regulations, 2010).
- 74. The Commission vide RoP of hearing dated 13.2.2020 directed the Petitioner to submit copy of the order where Regulatory Approval for the scheme covered under the Transmission Project were accorded along with copy of PPA, LTA, TSA signed with respondents, if any. In response, the Petitioner vide affidavit dated 14.5.2020 has submitted that the subject scheme is system strengthening scheme which was agreed by the beneficiaries in the 36th Standing Committee meeting of Power System Planning of Western Region held on 29.8.2013 and 24th WRPC meeting held on 9.10.2013 and hence, the regulatory approval was not required. Further, the Petitioner vide affidavit dated 8.6.2020 has submitted copy of PPAs and details of LTAs.
- 75. The Commission vide ROP of hearing dated 29.6.2020 directed the Petitioner to submit the status of generators associated with the Transmission Project and status of LTA. In response, the Petitioner *vide* affidavit dated 16.7.2020 has submitted that the scheme was discussed and agreed in the 32<sup>nd</sup> standing committee meeting of Northern region held on 31.08.2013, 36<sup>th</sup> standing committee meeting of Western region held on 26.9.2013 as well as in respective RPCs., Subject assets are part of the above comprehensive ISTS strengthening scheme under Green Energy Corridors required due to urgent strengthening required for Mundra UMPP/ Adani Mundra generation complexes as well as short gestation

period of renewables.. Therefore, beneficiaries are governed by All India PoC Pool mechanism.

- 76. Further, the Petitioner has submitted requisite details of LTAs associated with Bhuj PS-Banaskantha 76 5kV D/c line and/or 2x1500 MVA, 765/400 kV and 2x500 MVA, 400/220 kV Bhuj PS along with details of operationalization of LTA and commissioning status of various generators associated with the instant project. Also, since the above element is part of identified strengthening scheme viz. Green Energy Corridor Part C, the Petitioner has prayed for allowing the transmission charges of instant assets, in POC pool.
- 77. The Commission vide order dated 25.4.2019 in petition no 244/TT/2018 related to the Transmission Project namely GEC Part B has held as under:
  - "92. We observe that Green Energy Corridor scheme was discussed and agreed as comprehensive ISTS strengthening scheme in 32<sup>nd</sup> standing committee meeting of Northern Region held on 31.08.2013 as well as in respective RPCs, due to urgent requirement of strengthening for Mundra UMPP/Adani Mundra generation complexes as well as short generation period of Renewables. Therefore, the transmission charges for the asset allowed in this order shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations."
- 78. We have considered the submissions of the Petitioner. We observe that the Transmission Project was discussed and agreed in the 36<sup>th</sup> Standing Committee meeting of Power System Planning of Western Region held on 29.8.2013 as well as in 24<sup>th</sup> WRPC meeting held on 09.10.2013, due to urgent requirement of strengthening for Mundra UMPP/ Adani Mundra generation complexes as well as short gestation period of renewables.
- 79. Accordingly, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges

and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of 2014 Tariff Regulation.

80. The annual transmission charges being allowed for the instant assets for the 2014-19 tariff period are as under:

(₹ in lakh)

| Asset-1    | Asset-2    | Asset-3    | Asset-4    |
|------------|------------|------------|------------|
| 2018-19    | 2018-19    | 2018-19    | 2018-19    |
| (Pro-rata) | (Pro-rata) | (Pro-rata) | (Pro-rata) |
| (12 Days)  | (8 Days)   | (2 Days)   | (1 Day)    |
| 813.79     | 30.20      | 1.40       | 2.71       |

81. This order disposes of Petition No.172/TT/2019.

Sd/ Sd/ Sd/
(Arun Goyal) (I. S. Jha) (P. K. Pujari)
Member Member Chairperson

| Asset-1                              | Capital Cost<br>as COD                        | Projected<br>Additional         | Admitted<br>Capital Cost | Rate of<br>Depreciation | Annual<br>Depreciation |
|--------------------------------------|---|---------------------------------|--------------------------|-------------------------|------------------------|
| (2014-19)                            |   | Capitalisation during tariff    | as on<br>31.3.2019       | as per<br>Regulations   | as per<br>Regulations  |
| Capital<br>Expenditure               |   | period<br>2014-19               |                          |                         | 2018-19                |
| Land-<br>Freehold                    | 1,875.03                                      |                                 | 1,875.03                 | %00.0                   | ı                      |
| Land-Lease<br>hold                   | ı   | ı                               |                          | 3.34%                   | ı                      |
| Building, Civil<br>Works &<br>Colony | 665.48  | 4.61                            | 620.09                   | 3.34%                   | 22.30                  |
| Transmission<br>Line                 | 1,30,256.85                                   | 1,676.04                        | 1,31,932.89              | 5.28%                   | 6,921.81               |
| Substation                           | 29,621.70                                     | 930.87                          | 30,552.57                | 5.28%                   | 1,588.60               |
| PLCC                                 | 1,040.66                                      | 188.91                          | 1,229.57                 | 6.33%                   | 71.85                  |
| IT Equipment (Incl. Software)        | 487.28  |                                 | 487.28                   | 15.00%                  | 73.09                  |
| Total                                | 163947.00                                     | 2800.43                         | 166747.43                | Total                   | 8,677.66               |
|                                      | Average G                                     | Average Gross Block (₹ in lakh) | in lakh)                 |                         | 165347.22              |
| Weig                                 | Weighted Average Rate of Depreciation (WAROD) | Rate of Deprec                  | iation (WARO             | (a                      | 5.2481%                |
|                                      |   |                                 |                          |                         |                        |

| Capital         period         31.3.2019           Land-Land-Land-Lease         0.00         0.00         0.00%           Land-Lease         0.00         0.00         3.34%           Building, Civil         0.00         0.00         3.34%           Works & Colony         0.00         0.00         5.28%           Line         Substation         0.00         0.00         5.28%           PLCC         0.00         0.00         6.33%           IT Equipment         0.00         0.00         6.33%           IT Equipment         0.00         0.00         15.00%           (Incl. Software)         8453.70         0.00         0.00         15.00%           Average Gross Block (₹ in lath)         Total         Total   | Asset-2<br>(2014-19)                 | Capital<br>Cost as on<br>COD | Projected<br>Additional<br>Capitalisation<br>during tariff | Admitted<br>Capital<br>Cost<br>as on | Rate of<br>Depreciation<br>as per<br>Regulations | Annual Depreciation as per Regulations |
|---|--------------------------------------|------------------------------|--|--------------------------------------|--|--|
| 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0  | Capital<br>Expenditure               |                              | period<br>2014-19  | 31.3.2019                            |  | 2018-19                                |
| 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0  | Land-<br>Freehold                    | 0.00                         | 00:00  | 0.00                                 | %00.0  | 0.00                                   |
| 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0  | Land-Lease<br>hold                   | 0.00                         | 0.00   | 0.00                                 | 3.34%  | 0.00                                   |
| tation 8453.70 0.00 0.00 0.00 0.00 1 tation 8453.70 49.12 8502.82 0.00 0.00 0.00 0.00 0.00 0.00 0.00  | Building, Civil<br>Works &<br>Colony | 0.00                         | 00:0   | 0.00                                 | 3.34%  | 0.00                                   |
| tation 8453.70 49.12 8502.82  0.00 0.00 0.00  puipment 0.00 0.00 0.00  vare) 0.00 0.00 0.00  rate) 0.00 8502.82  Total Average Gross Block (₹ in lakh)  | Transmission<br>Line                 | 0.00                         | 0.00   | 0.00                                 | 5.28%  | 0.00                                   |
| 2000   0.00 | Substation                           | 8453.70                      | 49.12  | 8502.82                              | 5.28%  | 447.65                                 |
| Pare   0.00 | PLCC                                 | 0.00                         | 00:00  | 0.00                                 | 6.33%  | 00.00                                  |
| 1 8453.70 0.00 8502.82<br>Average Gross Block (₹ in lakh)   | IT Equipment (Incl. Software)        | 0.00                         | 0.00   | 0.00                                 | 15.00%   | 0.00                                   |
| Average Gross Block (₹ in lakh)   | Total                                | 8453.70                      | 0.00   | 8502.82                              | Total  | 447.65                                 |
| Weighted Average Date of Depreciation (WADOD)   |                                      | Average G                    | ross Block (₹  | in lakh)                             |  | 8478.26                                |
| Weighted Avelage hate of Deplectation (WANOD)   | Weight                               | ed Average                   | Rate of Deprec   | iation (WAI                          | ROD)   | 5.2800%                                |

| Asset-3<br>(2014-19)                 | Capital<br>Cost<br>as on COD | Capital Projected Cost Additional as on COD Capitalisation during tariff | Admitted<br>Capital Cost<br>as on<br>31.3.2019 | Admitted Rate of Capital Cost Depreciation as on as per 31.3.2019 Regulations | Annual Depreciation as per Regulations |
|--------------------------------------|------------------------------|--|--|---|--|
| Capital<br>Expenditure               |                              | period<br>2014-19  |  |   | 2018-19                                |
| Land-<br>Freehold                    | 0.00                         | 00:00  | 0.00   | %00'0   | 0.00                                   |
| Land-Lease<br>hold                   | 0.00                         | 00:00  | 0.00   | 3.34%   | 0.00                                   |
| Building, Civil<br>Works &<br>Colony | 00:00                        | 00.00  | 00:00  | 3.34%   | 0.00                                   |
| Transmission<br>Line                 | 0.00                         | 00:00  | 0.00   | 5.28%   | 0.00                                   |
| Substation                           | 1285.35                      | 23.56  | 1308.91  | 5.28%   | 68.49                                  |
| PLCC                                 | 0.00                         | 00.00  | 0.00   | 6.33%   | 00.00                                  |
| IT Equipment (Incl.                  | 00.00                        | 0.00   | 0.00   | 15.00%  | 0.00                                   |
| Software)                            |                              |  |  |   |  |
| Total                                | 1285.35                      | 23.56  | 1308.91  |   | 68.49                                  |
|                                      | Average G                    | Average Gross Block (₹ in lakh)  | in lakh)                                       |   | 1297.13                                |
| Weight                               | ted Average                  | Weighted Average Rate of Depreciation (WAROD)                            | iation (WAR                                    | OD)   | 5.28%                                  |

| Asset-4 (2014-19)                 | Capital<br>Cost<br>as on<br>COD | Projected<br>Additional<br>Capitalisation<br>during tariff | Admitted<br>Capital<br>Cost<br>as on | Rate of<br>Depreciation<br>as per<br>Regulations | Annual Depreciation as per Regulations |
|-----------------------------------|---------------------------------|--|--------------------------------------|--|--|
| Capital Expenditure               |                                 | period<br>2014-19  | 31.3.2019                            |  | 2018-19                                |
| Land-Freehold                     | 00.0                            | 00:00  | 0.00                                 | 0.00%  | 00:00                                  |
| Land-Lease hold                   | 00.00                           | 00:00  | 0.00                                 | 3.34%  | 00:00                                  |
| Building, Civil Works &<br>Colony | 0.00                            | 00:00  | 0.00                                 | 3.34%  | 0.00                                   |
| Transmission Line                 | 00.0                            | 00:00  | 0.00                                 | 5.28%  | 00:00                                  |
| Substation                        | 5146.30                         | 00:00  | 5146.30                              | 5.28%  | 271.72                                 |
| PLCC                              | 00.00                           | 00:00  | 0.00                                 | 6.33%  | 00:00                                  |
| IT Equipment (Incl.<br>Software)  | 0.00                            | 00:00  | 0.00                                 | 15.00%   | 0.00                                   |
| Total                             | 5146.30                         | 00.00  | 5146.30                              | Total  | 27.1.72                                |
| Avera                             | age Gross B                     | Average Gross Block (₹ in lakh)                            |                                      |  | 5146.30                                |
| Weighted Ave                      | rage Rate of                    | Weighted Average Rate of Depreciation (WAROD)              | WAROD)                               |  | 2.2800%                                |