

# CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

**Petition No. 391/TT/2023**

**Coram:**

**Shri Jishnu Barua, Chairperson  
Shri Ramesh Babu V., Member  
Shri Harish Dudani, Member**

**Date of Order: 29.10.2025**

## **In the Matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for determination-cum-truing-up of transmission tariff for the 2014-19 tariff period for Asset-1 and determination of transmission tariff for the 2019-24 tariff period for Asset-1 and for Asset-2 to Asset-15 from their COD to 31.3.2024 under "Establishment of Fibre Optic Communication System in the Northern Region" under "Fibre Optic Expansion Project (Additional Requirement)".

## **And in the matter of:**

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

**.....Petitioner**

## **Versus**

- 1. Ajmer Vidyut Vitran Nigam Limited,**  
Corporate office, Vidyut Bhawan,  
Panchsheel Nagar, Makarwali Road,  
Ajmer-305004 (Rajasthan).
- 2. Jaipur Vidyut Vitran Nigam Limited,**  
132 kV, GSS RVPNL Sub-Station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur-302017 (Rajasthan).
- 3. Jodhpur Vidyut Vitran Nigam Limited,**  
New Power House, Industrial Area,  
Jodhpur-342003 (Rajasthan).



4. **Himachal Pradesh State Electricity Board Limited,**  
Vidyut Bhawan,  
Kumar House Complex Building II,  
Shimla-171004.
5. **Punjab State Power Corporation Limited,**  
The Mall, PSEB Head Office,  
Patiala-147001.
6. **Haryana Power Purchase Centre,**  
Shakti Bhawan, Sector-6,  
Panchkula-134109 (Haryana).
7. **Jammu Kashmir Power Corporation Limited,**  
220/66/33 kV Gladni SS SLDC Building  
Narwal, Jammu.
8. **Uttar Pradesh Power Corporation Limited,**  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226001.
9. **BSES Yamuna Power Limited,**  
B-Block, Shakti Kiran, Building (Near Karkardooma Court),  
Karkardooma 2<sup>nd</sup> Floor,  
New Delhi-110092.
10. **BSES Rajdhani Power Limited,**  
BSES Bhawan, Nehru Place,  
New Delhi.
11. **TATA Power Delhi Distribution Limited,**  
33 kV Sub-station, Building,  
Hudson Lane, Kingsway Camp,  
North Delhi-110009.
12. **Chandigarh Administration,**  
Sector-9, Chandigarh.
13. **Uttarakhand Power Corporation Limited,**  
Urja Bhawan, Kanwali Road,  
Dehradun.
14. **North Central Railway,**  
Allahabad.
15. **New Delhi Municipal Council,**  
Palika Kendra, Sansad Marg,  
New Delhi-110002.



16. **Power Transmission Corporation of Uttarakhand Limited,**  
Vidyut Bhawan near ISBT Crossing,  
Saharanpur Road, Majra,  
Dehradun-248002.

17. **Bhakra Beas Management Board,**  
Sector 19-B, Madhya Marg,  
Chandigarh-160019.

18. **Punjab State Transmission Corporation Limited,**  
Registered office, PSEB Head Office, The Mall,  
Patiala-147001.

...Respondent(s)

**Parties Present:** Shri Vivek Kumar Singh, PGCIL  
Shri V.C. Sekhar, PGCIL

### **ORDER**

The instant Petition has been filed by Power Grid Corporation of India Limited, for determination-cum-truing-up of transmission tariff for the 2014-19 tariff period for Asset-1 (from the COD to 31.3.2019) under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of transmission tariff for the 2019-24 tariff period for Asset-1 and determination of transmission tariff for Asset-2 to Asset-15 (hereinafter referred to as the “communication assets”) from their COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) under “Establishment of Fibre Optic Communication System in the Northern Region” under “Fibre Optic Expansion Project (Additional Requirement)”. (hereinafter referred to as the “Communication System”). The Communication System consists of the following assets:



- Asset-1:** Establishment of Fibre Optic Communication System in the Northern Region for 400 kV Parbati Pooling Station (Banala) to Hamirpur Link (82.055 km) (Central Sector)
- Asset-2:** Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)
- Asset-3:** Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)
- Asset-4:** Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Dehar-Ganguwal BBMB Link (56 km) (State Sector)
- Asset-5:** Establishment of Fibre Optic Communication System in the Northern Region for 8 Nos. PSTCL links (162.52 km) (State Sector)
- Asset-6:** Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. PSTCL links (113 km) (State Sector)
- Asset-7:** Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. HPSEBL links (210.462 km) (State Sector)
- Asset-8:** Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (192.555 km) (Central Sector)
- Asset-9:** Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector
- Asset-10:** Establishment of Fibre Optic Communication System in the Northern Region for 7 Nos. PSTCL links (122.915 km) (State Sector)
- Asset-11:** Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. PSTCL links (92.79 km) (State Sector)
- Asset-12:** Establishment of Fibre Optic Communication System in the Northern Region for 43 Nos. PSTCL links (889.998 km) (State Sector)
- Asset-13:** Establishment of Fibre Optic Communication System in the Northern Region for 9 Nos. HPSEBL links (208.774 km) (State Sector)
- Asset-14:** Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (169.24 km) (Central Sector)
- Asset-15:** Establishment of Fibre Optic Communication System in the Northern Region for 4 Nos. HPSEBL links (104 km) (State Sector)

2. The Petitioner has made the following prayers in the instant Petition:



- “1) Approve the True Transmission Tariff for 2014-19 block for Asset-1 and transmission tariff for 2019-24 block for all the assets covered under this petition, as per para 10.4 and 11.4 above and approve the DOCO of the assets at para 6.*
- 2) Allow interim tariff for Asset-1 in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and for all assets in accordance with clause 10(3) of Regulation 10 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for the purpose of inclusion in the PoC charges.*
- 3) Admit the capital cost as claimed in the Petition, approve the Additional Capitalisation incurred / projected to be incurred, condone the delay and allow IDC /IEDC as claimed in petition.*
- 4) Tariff may be allowed on the estimated completion cost, since a few elements of the project are yet to be completed, the completion cost for the assets covered under instant Petition are within the overall project cost.*
- 5) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 11 above for respective block.*
- 6) 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 Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 7) Allow the petitioner to bill and recover Licensee fee and RLDC fees and Charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 8) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 and 2019-24 period, if any, from the respondents.*
- 9) Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 11.9 above.*
- 10) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 11) Allow the petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission 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.”*

### **Background**

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



- a. The Petitioner has been entrusted with the implementation of the Communication System in the 28<sup>th</sup> NRPC and 25<sup>th</sup> TCC meetings held on 26.4.2013 and 25.4.2013, respectively.
- b. The Investment Approval (IA) for the Communication System was accorded by the Board of Directors (BoD) of the Petitioner's Company in its 311<sup>th</sup> meeting held on 4.3.2015 and communicated vide Memorandum Reference No. K/K.A./F.O.C.S. N.R.(AD) dated 11.3.2015 at an estimated cost of ₹19740 lakh, including an IDC of ₹1325 lakh based on the October 2014 price level. The Communication System was scheduled to be commissioned within 36 months from the date of IA.
- c. The scope of work covered under the Communication System broadly includes:
- i. Implementation of OPGW Fibre Optic Cable on existing EHV Transmission Lines of POWERGRID (~2806 km) & constituents (~2161 km) – total estimated length – 4967 km.
  - ii. Installation of 216 Nos. terminal equipment based on Synchronous Digital Hierarchy (SDH) technology at Sub-stations of POWERGRID and constituents, 301 Nos. Multiplexers/D&I/DACS at wideband nodes and Network Management System (NMS).
  - iii. DC Power Supply – Presently envisaged at all the wideband locations where equipment is to be installed. However, the requirement shall be optimized during detailed engineering.
  - iv. Approach Cable for providing connectivity between OPGW and equipment.
- d. The details of the communication assets commissioned under the Communication System are as under:



**Previous Petition:**

| <b>Assets</b>                                                                                                                                       | <b>COD</b> | <b>Petition No.</b>                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------|
| <b>Asset-1:</b> Central Sector Portion for 660.145 km of Fibre Optic Communication System                                                           | 3.3.2019   | Covered in the order dated 20.6.2023 in Petition No. 18/TT/2022 |
| <b>Asset-2:</b> UPPTCL Portion for 252.913 km of Fibre Optic Communication System                                                                   | 3.3.2019   |                                                                 |
| <b>Asset-3:</b> Establishment of Fibre Optic Communication System in Northern Region Kishenpur-New Wanpoh Link (137.52 km) (Central sector portion) | 1.2.2018   |                                                                 |
| <b>Asset-4:</b> Establishment of Fibre Optic Communication System in Northern Region Bairasul-Pong Link (96.77 km) (Central Sector Portion)         | 25.8.2018  |                                                                 |

**Covered under instant Petition:**

| <b>Asset No.</b> | <b>Assets Name</b>                                                                                                                                                 | <b>SCOD</b> | <b>COD</b> | <b>Delay days</b> |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|-------------------|
| Asset-1          | Establishment of Fibre Optic Communication System in the Northern Region for 400 kV Parbati Pooling Station (Banala) to Hamirpur Link (82.055 km) (Central Sector) | 3.3.2018    | 29.12.2018 | 301               |
| Asset-2          | Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)                                       | 3.3.2018    | 9.7.2019   | 493               |
| Asset-3          | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)                                            | 3.3.2018    | 31.10.2019 | 607               |
| Asset-4          | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Dehar-Ganguwal BBMB Link (56 km) (State Sector)                                | 3.3.2018    | 5.11.2019  | 612               |
| Asset-5          | Establishment of Fibre Optic Communication System in the Northern Region for 8 Nos. PSTCL links (162.52 km) (State Sector)                                         | 3.3.2018    | 2.1.2020   | 607 to 670        |
| Asset-6          | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. PSTCL links (113 km) (State Sector)                                            | 3.3.2018    | 2.1.2021   | 395 to 417        |
| Asset-7          | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. HPSEBL links (210.462 km) (State Sector)                                       | 3.3.2018    | 2.1.2021   | 396 to 992        |
| Asset-8          | Establishment of Fibre Optic Communication System in the Northern                                                                                                  | 3.3.2018    | 2.1.2021   | 671 to 979        |



| Asset No. | Assets Name                                                                                                                    | SCOD     | COD                     | Delay days   |
|-----------|--------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|--------------|
|           | Region for 2 Nos. links (192.555 km) (Central Sector)                                                                          |          |                         |              |
| Asset-9   | Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector | 3.3.2018 | 27.3.2021               | 579 to 1120  |
| Asset-10  | Establishment of Fibre Optic Communication System in the Northern Region for 7 Nos. PSTCL links (122.915 km) (State Sector)    | 3.3.2018 | 19.8.2021               | 655 to 1264  |
| Asset-11  | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. PSTCL links (92.79 km) (State Sector)      | 3.3.2018 | 28.10.2021              | 425 to 1334  |
| Asset-12  | Establishment of Fibre Optic Communication System in the Northern Region for 43 Nos. PSTCL links (889.998 km) (State Sector)   | 3.3.2018 | 30.4.2022               | 424 to 1519  |
| Asset-13  | Establishment of Fibre Optic Communication System in the Northern Region for 9 Nos. HPSEBL links (208.774 km) (State Sector)   | 3.3.2018 | 22.8.2022               | 1414 to 1632 |
| Asset-14  | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (169.24 km) (Central Sector)         | 3.3.2018 | 30.9.2023 (Anticipated) | 1854         |
| Asset-15  | Establishment of Fibre Optic Communication System in the Northern Region for 4 Nos. HPSEBL links (104 km) (State Sector)       | 3.3.2018 | 30.9.2023 (Anticipated) | 1854         |

- e. The Petitioner, vide affidavit dated 26.4.2024, has requested to condone an inadvertent error in the calculation of the number of days of time over-run in the main Petition and consider the following number of days of time over-run in commissioning of the communication assets:

| Asset No. | Asset Description                                                                                                                                                   | SCOD     | COD        | Delay in days |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|---------------|
| Asset-1   | Establishment of Fibre Optic Communication System in the Northern Region for 400 kV Parbati Pooling. Station (Banala) to Hamirpur Link (82.055 km) (Central Sector) | 3.3.2018 | 29.12.2018 | 301           |



| Asset No. | Asset Description                                                                                                                   | SCOD     | COD        | Delay in days |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------|----------|------------|---------------|
| Asset-2   | Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)        | 3.3.2018 | 9.7.2019   | 493           |
| Asset-3   | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)             | 3.3.2018 | 31.10.2019 | 607           |
| Asset-4   | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Dehar-Ganguwal BBMB Link (56 km) (State Sector) | 3.3.2018 | 5.11.2019  | 612           |
| Asset-5   | Establishment of Fibre Optic Communication System in the Northern Region for 8 Nos. PSTCL links (162.52 km) (State Sector)          | 3.3.2018 | 2.1.2020   | 670           |
| Asset-6   | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. PSTCL links (113 km) (State Sector)             | 3.3.2018 | 2.1.2021   | 1036          |
| Asset-7   | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. HPSEBL links (210.462 km) (State Sector)        | 3.3.2018 | 2.1.2021   | 1036          |
| Asset-8   | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (192.555 km) (Central Sector)             | 3.3.2018 | 2.1.2021   | 1036          |
| Asset-9   | Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector.     | 3.3.2018 | 27.3.2021  | 1120          |
| Asset-10  | Establishment of Fibre Optic Communication System in the Northern Region for 7 Nos. PSTCL links (122.915 km) (State Sector)         | 3.3.2018 | 19.8.2021  | 1265          |
| Asset-11  | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. PSTCL links (92.79 km) (State Sector)           | 3.3.2018 | 28.10.2021 | 1335          |
| Asset-12  | Establishment of Fibre Optic Communication System in the Northern Region for 43 Nos. PSTCL links (889.998 km) (State Sector)        | 3.3.2018 | 30.4.2022  | 1519          |



| Asset No. | Asset Description                                                                                                            | SCOD     | COD                     | Delay in days |
|-----------|------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|---------------|
| Asset-13  | Establishment of Fibre Optic Communication System in the Northern Region for 9 Nos. HPSEBL links (208.774 km) (State Sector) | 3.3.2018 | 22.8.2022               | 1633          |
| Asset-14  | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (169.24 km) (Central Sector)       | 3.3.2018 | 31.7.2024 (Anticipated) | 2342          |
| Asset-15  | Establishment of Fibre Optic Communication System in the Northern Region for 4 Nos. HPSEBL links (104 km) (State Sector)     | 3.3.2018 | 31.7.2024 (Anticipated) | 2342          |

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

5. The Petitioner has served the Petition on the Respondents, and notice regarding the filing 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 aforesaid notice published in the newspapers by the Petitioner. None of the Respondents has filed their respective replies despite providing opportunities.

6. It has been observed that the Petitioner has claimed the tariff of Asset-14 and Asset-15 on the basis of the anticipated COD. The Petitioner was directed to submit the current status of the same. In compliance with the Commission's direction, the Petitioner vide affidavit dated 26.4.2024 has submitted that the same are not yet commissioned and are anticipated to be commissioned by 31.7.2024. Since the said assets are not yet commissioned, we are not inclined to approve the tariff of Asset-14 and Asset-15. The



Petitioner is directed to file a fresh Petition for the determination of the tariff of Asset-14 and Asset-15 based on the actual COD. The Petitioner is also directed to submit the CMD Certificate, CEA Energisation Certificate, and RLDC Certificate in line with the 2019 Tariff Regulations on the basis of the actual COD of Asset-14 and Asset-15. Accordingly, the tariff for Asset-1 to Asset-13 is being determined in this order.

7. This order is issued considering the submissions of the Petitioner in the Petition vide affidavit dated 20.9.2023 and subsequent affidavit dated 26.4.2024.

8. The hearing in this matter was held on 20.8.2024, and the order in the matter was reserved. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the Petition.

**DETERMINATION AND TRUING-UP OF THE ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

9. The Petitioner has claimed the following transmission-cum-trued-up tariff in respect of Asset-1 for the 2014-19 tariff period:

**Asset-1**

| Particulars                 | (₹ in lakh)                   |
|-----------------------------|-------------------------------|
|                             | 2018-19<br>(Pro-rata 93 days) |
| Depreciation                | 2.46                          |
| Interest on Loan            | 1.94                          |
| Return on Equity            | 2.30                          |
| Interest on Working Capital | 0.20                          |
| O&M Expenses                | 1.18                          |
| <b>Total</b>                | <b>8.08</b>                   |

10. The details of the Interest on Working Capital (IWC)-cum-trued-up IWC claimed by the Petitioner in respect of Asset-1 is as under:



## Asset-1

| Particulars                        | (₹ in lakh)                   |
|------------------------------------|-------------------------------|
|                                    | 2018-19<br>(Pro-rata 93 days) |
| O&M Expenses                       | 0.39                          |
| Maintenance Spares                 | 0.69                          |
| Receivables                        | 5.28                          |
| Total Working Capital              | 6.36                          |
| Rate of Interest (in %)            | 12.20                         |
| <b>Interest on Working Capital</b> | <b>0.20</b>                   |

## Date of Commercial Operation (“COD”)

11. The Petitioner has claimed the COD of Asset-1 as 29.12.2018.

12. Regulation 4(3) of the 2014 Tariff Regulations provides as under:

**“4. Date of Commercial Operation:** The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxxxxx

(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

Provided that:

- (i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:
- (ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.”

13. The communication system under the aforementioned scheme considered in the instant Petition comprises Fibre Optic and Microwave Systems for providing



communication facilities between the control centres and data concentrator nodes for handling large data volumes. The operating voltage for the communication system operation is a 24/48 volt D/C supply. Therefore, as per Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulation, 2010 (herein referred to as “the 2010 CEA Regulations”), a minimum of 650 volts is required for the inspection. Further, the Central Government has specified the notified voltage for the purpose of self-certification under Regulation 30 and Regulation 43 of the 2010 CEA Regulations as 11 kV, that is, up to 11 kV, no inspection is required by the CEA Inspector. Hence, the CEA clearance letter is not applicable in the case of the communication system having up to 11 kV volt.

14. In support of the COD, the Petitioner has submitted the NRLDC Certificate of successful commissioning of the communication assets dated 22.3.2021 and the self-declaration COD Certificate dated 25.6.2021. **Considering the NRLDC Certificate dated 22.3.2021 certifying the successful commissioning of the communication asset on 28.12.2018 and the self-declaration COD Certificate dated 25.6.2021, we approve the COD of Asset-1 as 29.12.2018.**

### **Capital Cost**

15. Regulation 9(1) and Regulation 9(2) 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;  
 (bi) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period shall form part of the capital cost.  
 (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.”

16. The Petitioner has claimed the following capital cost supported by the Auditor's Certificate dated 17.3.2023 in respect of Asset-1:

| (₹ in lakh) |                              |                                    |                                               |                                |
|-------------|------------------------------|------------------------------------|-----------------------------------------------|--------------------------------|
| Asset       | FR Apportioned Approved cost | Expenditure up to COD (29.12.2018) | Additional Capital Expenditure during 2018-19 | Estimated Cost as on 31.3.2019 |
| Asset-1     | 258.07                       | 150.83                             | 4.19                                          | 155.02                         |

17. The Petitioner has submitted that the estimated capital cost of Asset-1 is within the FR apportioned approved cost as on 31.3.2019 and has claimed that there is no cost overrun. However, the Petitioner has submitted the item-wise cost variation between the apportioned approved cost vis-à-vis the estimated completion cost along with the Petition.

18. The Petitioner has further submitted the details for the variation in cost. With regard to variation in the cost of individual items, the Petitioner has submitted that the packages under the subject scope of works comprising a large number of items are



awarded through the 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, the lowest bidder can be arrived at/evaluated on an overall basis only. Hence, item-wise unit prices in contracts and their variation over unit rate considered in FR estimates were beyond the control of the Petitioner.

19. The Petitioner has also submitted that, being a government enterprise, it is following a well-laid-down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, the lowest possible market prices for required product/services/as per detailed designing, is obtained, and contracts are awarded on the basis of the lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon the prevailing market forces, design and site requirements, whereas the estimates are prepared by the Petitioner as per well-defined procedures. The FR cost estimate is a broad indicative cost worked out generally on the basis of the average unit rates of recently awarded contracts/general practice.

20. We have considered the Petitioner's submissions. It has been observed that the estimated completion cost is within the FR apportioned approved cost. Hence, there is no cost overrun in the case of Asset-1.

### **Time Overrun**

21. As per the IA dated 4.3.2015, the communication project was scheduled to be put into commercial operation (SCOD) within 36 months from the date of IA, i.e., by 4.3.2018. The details of the SCOD, COD and time overrun with respect to Asset-1 are as under:



| Asset   | SCOD     | COD        | Time Over-run |
|---------|----------|------------|---------------|
| Asset-1 | 3.3.2018 | 29.12.2018 | 301 days      |

22. The Petitioner has submitted that there is a delay of approximately 301 days in the commissioning of Asset-1, mainly on account of RoW issues at various locations. The RoW issues at these locations were addressed by the Petitioner itself, and after several discussions with land owners, the work could be undertaken, which ultimately delayed the completion of OPGW works. The unavailability of the shutdown was also a contributing factor to the delay in commissioning the communication asset.

23. We have considered the Petitioner's submissions and have gone through the documents submitted by the Petitioner. The Petitioner has submitted that the delay was due to the various RoW issues and the non-availability of shutdown periods. It has been observed that the Petitioner has not submitted any supporting documents for the RoW issues and shutdown details. Consequently, the claimed time overrun of 301 days, as put forth by the Petitioner, cannot be condoned and hence rejected.

**Interest During Construction (IDC) / Incidental Expenditure During Construction (IEDC)**

24. The Petitioner has claimed the IDC in respect of Asset-1 and has submitted the statement showing the IDC claim, discharge of the IDC liability as on the COD and has submitted the Auditor's Certificate in support of the same, and the same are as under:

| (₹ in lakh) |                                  |                         |                                           |                               |
|-------------|----------------------------------|-------------------------|-------------------------------------------|-------------------------------|
| Asset       | IDC as per Auditor's Certificate | IDC Discharged upto COD | IDC discharged during 2018-19 (after COD) | IDC discharged during 2019-20 |
| Asset-1     | 15.18                            | 14.81                   | 0.00                                      | 0.37                          |



25. We have considered the Petitioner's submissions. As discussed above, the time overrun in the commissioning of the transmission asset has not been condoned. Accordingly, the IDC on a cash basis up to the COD has been worked out based on the loan details given in the statement showing the discharge of the IDC and Form-9C for the communication asset. The IDC claimed and considered as on the COD and the summary of discharge of the IDC liability up to the COD and thereafter is as under:

| (₹ in lakh) |                                      |                    |                         |                      |                                |
|-------------|--------------------------------------|--------------------|-------------------------|----------------------|--------------------------------|
| Asset       | IDC as per Auditor's Certificate (A) | IDC Disallowed (B) | IDC Allowed (C)=(A)-(B) | Undischarged IDC (D) | IDC allowed on COD (E)=(C)-(D) |
| Asset-1     | 15.18                                | 6.29               | 8.89                    | 0.00                 | 8.89                           |

26. The Petitioner has claimed the IEDC for Asset-1 as per the Auditor's Certificate. The Petitioner has submitted that the entire IEDC mentioned in the Auditor's Certificate is on a cash basis and has been paid up to the COD. As the time overrun for the communication asset has not been condoned, there is a disallowance of the IEDC on a proportionate basis. The IEDC claimed, as per the Auditor's Certificate, that the IEDC considered and discharged up to the COD as under:

| (₹ in lakh) |                                               |                                                      |                    |
|-------------|-----------------------------------------------|------------------------------------------------------|--------------------|
| Asset       | IEDC claimed as per Auditor's Certificate (A) | IEDC disallowed due to time overrun not condoned (B) | IEDC Allowed (A-B) |
| Asset-1     | 10.01                                         | 2.16                                                 | 7.85               |

### **Initial Spares**

27. Regulation 13(d) of the 2014 Tariff Regulations provides as follows:

***"13. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost, subject to the 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%”

28. The Initial Spares, as claimed by the Petitioner in respect of Asset-1, are as under:

(₹ in lakh)

| Asset   | Particulars          | Capital Cost for calculation of Initial Spares (A) | Initial Spares Claimed (B) | Ceiling limit as mentioned in Regulation (in %) (C) | Initial Spares worked out D = $[(A-B)*C / (100-C)]$ | Excess Initial Spares [B-D] if B>D |
|---------|----------------------|----------------------------------------------------|----------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------|
| Asset-1 | Communication System | 229.43                                             | 15.31                      | 3.50                                                | 7.77                                                | 7.54                               |

29. We have considered the Petitioner’s submissions and have gone through the documents provided. The Petitioner has claimed the Initial Spares, but has not indicated the amount in the Auditor’s Certificate submitted. Accordingly, the Initial Spares allowed in respect of the communication assets are as under:

(₹ in lakh)

| Asset   | Particulars          | Plant & Machinery Cost up to the cut-off date (excluding IDC, IEDC & FC) (A) | Initial Spares Claimed (B) | Ceiling limit as mentioned in Regulation (%) (C) | Initial Spares worked out D = $[(A-B)*C / (100-C)]$ | Excess Initial Spares [B-D] if B>D | Initial Spares Allowed |
|---------|----------------------|------------------------------------------------------------------------------|----------------------------|--------------------------------------------------|-----------------------------------------------------|------------------------------------|------------------------|
| Asset-1 | Communication System | 229.43                                                                       | 15.31                      | 3.50                                             | 7.77                                                | 7.54                               | 7.77                   |

30. The details of the capital cost allowed in respect of Asset-1 as on the COD after the adjustment of the IDC, IEDC and Initial Spares, are as under:



| (₹ in lakh) |                                                                 |                    |                     |                               |                                    |
|-------------|-----------------------------------------------------------------|--------------------|---------------------|-------------------------------|------------------------------------|
| Asset       | Capital Cost claimed as on COD as per Auditor's Certificate (A) | IDC disallowed (B) | IEDC disallowed (C) | Initial Spares disallowed (D) | Capital Cost as on COD (E=A-B-C-D) |
| Asset-1     | 150.83                                                          | 6.29               | 2.16                | 7.54                          | 134.83                             |

### **Additional Capital Expenditure (ACE)**

31. Regulation 14(1) 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.”*

32. Regulation 3(13) of the 2014 Tariff Regulations defines “cut-off” date as follows:

*“(13) ‘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:*

*Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cutoff date for reasons beyond the control of the project developer.”*

33. The Petitioner has claimed the following ACE based on the actual expenditure and has submitted the Auditor's Certificate in support of the same:



| (₹ in lakh) |               |
|-------------|---------------|
| Asset       | ACE (2018-19) |
| Asset-1     | 4.19          |

34. The Petitioner has submitted that the ACE has been claimed under Regulation 14(1)(ii) of the 2014 Tariff Regulations, and the same is within the cut-off date.

35. The ACE claimed by the Petitioner has been verified from the Auditor's Certificate. Accordingly, the ACE (including the IDC discharge) has been allowed under Regulations 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. The capital cost allowed in respect of Asset-1 for the 2014-19 tariff period is as under:

| (₹ in lakh) |                              |                                |             |                              |
|-------------|------------------------------|--------------------------------|-------------|------------------------------|
| Asset       | FR apportioned approved cost | Capital Cost allowed as on COD | ACE 2018-19 | Capital Cost as on 31.3.2019 |
| Asset-1     | 258.07                       | 134.83                         | 4.19        | 139.02                       |

### **Debt-Equity Ratio**

36. Regulation 19(1) of the 2014 Tariff Regulations provides as under:

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

*Provided that:*

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

***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.”



37. The Petitioner has claimed the debt-equity ratio of 70:30 as on the COD. The debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of the debt-equity ratio as on the COD and as on 31.3.2019 in respect of Asset-1 considered for the purpose of tariff determination for the 2014-19 period are as under:

#### **Asset-1**

| <b>Funding</b> | <b>Capital Cost as on COD<br/>(₹ in lakh)</b> | <b>(in %)</b> | <b>ACE during 2014-19<br/>(₹ in lakh)</b> | <b>(in %)</b> | <b>Capital Cost as on 31.3.2019<br/>(₹ in lakh)</b> | <b>(in %)</b> |
|----------------|-----------------------------------------------|---------------|-------------------------------------------|---------------|-----------------------------------------------------|---------------|
| Debt           | 94.38                                         | 70.00         | 2.93                                      | 70.00         | 97.31                                               | 70.00         |
| Equity         | 40.45                                         | 30.00         | 1.26                                      | 30.00         | 41.71                                               | 30.00         |
| <b>Total</b>   | <b>134.83</b>                                 | <b>100.00</b> | <b>4.19</b>                               | <b>100.00</b> | <b>139.02</b>                                       | <b>100.00</b> |

#### **Depreciation**

38. Regulation 27 of the 2014 Tariff Regulations provides as under:

##### ***“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 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 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.*

*Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable.*

*(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.*

*(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) alongwith justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.*

*(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”*

39. Regulation 3(67) of 2014 Tariff Regulations defines the useful life of a transmission system as under:

*“(67) ‘**Useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:*

|                                                                                 |          |
|---------------------------------------------------------------------------------|----------|
| (a) Coal/Lignite based thermal generating station                               | 25 years |
| (b) Gas/Liquid fuel based thermal generating station                            | 25 years |
| (c) AC and DC sub-station                                                       | 25 years |
| (d) Gas Insulated Sub-station (GIS)                                             | 25 years |
| (e) Hydro generating station including pumped Storage hydro generating stations | 35 years |
| (f) Transmission line (including HVAC & HVDC)                                   | 35 years |
| (g) Communication system                                                        | 15 years |

*Provided that the useful life for AC and DC Sub-stations and GIS for which Notice Inviting Tender is floated on or after 01.04.2014 shall be considered as 35 years.*



*Provided further that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission.”*

40. The depreciation in respect of the communication asset has been allowed considering the capital expenditure as on the COD and approved ACE during the 2014-19 tariff period. Since the communication asset consists of only one element of PLCC, the gross block during the 2014-19 tariff period has been depreciated at a rate of 6.33% as provided for the communication equipment in the 2014 Tariff Regulations. The depreciation for the 2014-19 tariff period is trued-up in respect of the communication asset as per the methodology provided under Regulation 27 of the 2014 Tariff Regulations, and the same is as under:

**Asset-1**

|   |                                                   | (₹ in lakh)                          |
|---|---------------------------------------------------|--------------------------------------|
|   | Particulars                                       | 2018-19<br>(Pro-rata for<br>93 days) |
|   | <b>Depreciation</b>                               |                                      |
| A | Opening Gross Block                               | 134.83                               |
| B | ACE                                               | 4.19                                 |
| C | Closing Gross Block (A+B)                         | 139.02                               |
| D | Average Gross Block                               | 136.93                               |
| E | Weighted average rate of Depreciation (WAROD) (%) | 6.33                                 |
| F | Balance useful life of the asset                  | 15                                   |
| G | Aggregate Depreciable Value                       | 123.23                               |
| H | Lapsed Life (Year)                                | 0                                    |
| I | <b>Depreciation during the year</b>               | <b>2.21</b>                          |
| J | Cumulative Depreciation at the end of the year    | 2.21                                 |
| K | Remaining Depreciable Value                       | 121.02                               |

41. The details of the depreciation claimed in respect of Asset-1 in the instant Petition and trued-up depreciation in this order are as under:



**Asset-1**

|   |                                                   | (₹ in lakh)                       |
|---|---------------------------------------------------|-----------------------------------|
|   | Particulars                                       | 2018-19<br>(Pro-rata for 93 days) |
| A | Claimed by the Petitioner in the instant Petition | 2.46                              |
| B | Allowed after true-up in this order               | 2.21                              |

**Interest on Loan (IoL)**

42. Regulation 26 of 2014 Tariff Regulations defines Interest on Loan, and the same is as follows:

***“26. Interest on loan capital: (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 de-capitalisation of such asset.*

*(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

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

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

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

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

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the*



beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

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

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

*Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of refinancing of loan.”*

43. The Petitioner has claimed the actual rate of IoL based on the various loans deployed.

44. The IoL in respect of Asset-1 has been calculated based on the actual interest rate submitted by the Petitioner, in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of Asset-1 is as under:

**Asset-1**

| Particulars                                      | (₹ in lakh)                       |
|--------------------------------------------------|-----------------------------------|
|                                                  | 2018-19<br>(Pro-rata for 93 days) |
| <b>Interest on Loan</b>                          |                                   |
| Gross Normative Loan                             | 94.38                             |
| Cumulative Repayments upto Previous Year         | 0.00                              |
| Net Loan-Opening                                 | 94.38                             |
| Additions                                        | 2.93                              |
| Repayment during the year                        | 2.21                              |
| Net Loan-Closing                                 | 95.11                             |
| Average Loan                                     | 94.74                             |
| Weighted Average Rate of Interest on Loan (in %) | 7.2201                            |
| <b>Interest on Loan</b>                          | <b>1.74</b>                       |

45. The details of trued-up IoL claimed and allowed in respect of the communication assets is as follows:



|   | Particulars                                       | Asset-1<br>2018-19<br>(Pro-rata for 93 days)<br>(₹ in lakh) |
|---|---------------------------------------------------|-------------------------------------------------------------|
|   | <b>Interest on Loan</b>                           |                                                             |
| A | Claimed by the Petitioner in the instant petition | 1.94                                                        |
| B | Allowed after true up in this order               | 1.74                                                        |

### **Return on Equity (RoE)**

46. Regulation 24 and Regulation 25 of the 2014 Tariff Regulations provide 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:

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

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

#### **Illustration-**

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 20.96% including surcharge and cess: Rate of return on equity =  $15.50/(1-0.2096) = 19.610\%$

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

(a) Estimated Gross Income from generation or transmission business for FY 2014-15 is Rs 1000 crore.

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

(c) Effective Tax Rate for the year 2014-15 = Rs 240 Crore/Rs 1000 Crore = 24%

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis.”

47. The Petitioner has claimed the RoE for Asset-1 in terms of Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:



| Year    | Claimed effective tax rate<br>(in %) | Grossed-up RoE<br>[(Base Rate)/(1-t)] (in %) |
|---------|--------------------------------------|----------------------------------------------|
| 2018-19 | 21.549                               | 19.757                                       |

48. The Commission, vide order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same are as follows:

| Year    | Notified MAT rates<br>(inclusive of surcharge &<br>cess) (in %) | Effective tax (in %) |
|---------|-----------------------------------------------------------------|----------------------|
| 2018-19 | 21.549                                                          | 21.549               |

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

| Year    | Notified MAT rates<br>(inclusive of<br>surcharge & cess)<br>(in %) | Base rate of RoE<br>(in %) | Grossed-up RoE<br>[(Base Rate)/(1-t)]<br>(in %) |
|---------|--------------------------------------------------------------------|----------------------------|-------------------------------------------------|
| 2018-19 | 21.549                                                             | 15.50                      | 19.758                                          |

50. The trued-up RoE is allowed in respect of the communication asset on the basis of the MAT rates applicable in the respective years for the 2014-19 tariff period are as under:

#### **Asset-1**

(₹ in lakh)

| Particulars                         | 2018-19<br>(Pro-rata for 93 days) |
|-------------------------------------|-----------------------------------|
| Opening Equity (A)                  | 40.45                             |
| Additions (B)                       | 1.26                              |
| Closing Equity (C) = (A+B)          | 41.71                             |
| Average Equity (D) = (A+C)/2        | 41.08                             |
| Return on Equity (Base Rate) (in %) | 15.500                            |
| MAT Rate for respective year (in %) | 21.549                            |
| Rate of Return on Equity (in %)     | 19.758                            |
| <b>Return on Equity</b>             | <b>2.07</b>                       |



51. The details of RoE claimed in respect of the communication asset in the instant Petition and trued-up RoE allowed in this order are as under:

**Asset-1**

| (₹ in lakh) |                                                   |                                   |
|-------------|---------------------------------------------------|-----------------------------------|
|             | Particulars                                       | 2018-19<br>(Pro-rata for 93 days) |
|             | <b>Return on Equity</b>                           |                                   |
| A           | Claimed by the Petitioner in the instant Petition | 2.30                              |
| B           | Allowed after true up in this order               | 2.07                              |

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

52. The Petitioner has claimed the following actual O&M Expenses for Asset-1, supported by the Auditor's certificate for the 2014-19 period:

| (₹ in lakh) |         |
|-------------|---------|
| Asset       | 2018-19 |
| Asset-1     | 1.18    |

53. We have considered the Petitioner's submissions. The actual O&M Expenses allowed in respect of Asset-1 are as under:

| (₹ in lakh) |         |
|-------------|---------|
| Asset       | 2018-19 |
| Asset-1     | 1.18    |

54. The details of the O&M Expenses claimed in respect of the communication assets in the instant Petition and trued-up O&M Expenses allowed in this order are as under:

**Asset-1**

| (₹ in lakh) |                                                   |                                   |
|-------------|---------------------------------------------------|-----------------------------------|
|             | Particulars                                       | 2018-19<br>(Pro-rata for 93 days) |
|             | <b>O&amp;M Expenses</b>                           |                                   |
| A           | Claimed by the Petitioner in the instant Petition | 1.18                              |
| B           | Allowed after true up in this order               | 1.18                              |



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

55. Regulation 28(1)(c) and Regulation 3(5) of the 2014 Tariff Regulations provides as under:

***“28. Interest on Working Capital: (1) The working capital shall cover:***

*(a) Xxxxx*

*(b) Xxxxx*

*(c) Hydro generating station including pumped storage hydro-electric 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*

*xxxxxx*

*(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 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;”*

56. The IWC in respect of Asset-1 has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations, and the same is as under:

#### **Asset-1**

| <b>(₹ in lakh)</b>                                                 |                                           |
|--------------------------------------------------------------------|-------------------------------------------|
| <b>Particulars</b>                                                 | <b>2018-19<br/>(Pro-rata for 93 days)</b> |
| WC for O&M Expenses (O&M Expenses for one month)                   | 0.39                                      |
| WC for Maintenance Spares (15% of O&M Expenses)                    | 0.69                                      |
| WC for Receivables (Equivalent to two months of annual fixed cost) | 4.83                                      |
| <b>Total Working Capital</b>                                       | <b>5.91</b>                               |
| Rate of Interest (in %)                                            | 12.20                                     |
| <b>Interest on Working Capital</b>                                 | <b>0.18</b>                               |



57. The trued-up IWC claimed in the instant Petition and allowed in the instant order in respect of the communication asset as per the 2014 Tariff Regulations is as under:

**Asset-1**

(₹ in lakh)

|   | Particulars                                       | 2018-19<br>(Pro-rata for 93 days) |
|---|---------------------------------------------------|-----------------------------------|
|   | <b>Interest on Working Capital</b>                |                                   |
| A | Claimed by the Petitioner in the instant Petition | 0.20                              |
| B | Allowed after true up in this order               | 0.18                              |

**Annual Fixed Charges for the 2014-19 Tariff Period**

58. The trued-up transmission charges allowed in respect of Asset-1 for the 2014-19 tariff period are as under:

**Asset-1**

(₹ in lakh)

|  | Particulars                 | 2018-19<br>(Pro-rata for 93 days) |
|--|-----------------------------|-----------------------------------|
|  | Depreciation                | 2.21                              |
|  | Interest on Loan            | 1.74                              |
|  | Return on Equity            | 2.07                              |
|  | Interest on Working Capital | 0.18                              |
|  | O&M Expenses                | 1.18                              |
|  | <b>Total</b>                | <b>7.38</b>                       |

59. The trued-up AFC claimed in the instant Petition and allowed after true up in the instant order for Asset-1 is as under:

**Asset-1**

(₹ in lakh)

|   | Particulars                                       | 2018-19<br>(Pro-rata for 93 days) |
|---|---------------------------------------------------|-----------------------------------|
|   | <b>Annual Fixed Charges</b>                       |                                   |
| A | Claimed by the Petitioner in the instant Petition | 8.08                              |
| B | Allowed after true up in this order               | 7.38                              |



## **DETERMINATION OF THE ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD**

60. The Petitioner has claimed the following transmission charges for Asset-1 for the 2019-2024 tariff period and for Asset-2 to Asset-13 from their respective COD to 31.3.2024:

### **Asset-1**

| (₹ in lakh)                 |              |              |              |              |              |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| Particulars                 | 2019-20      | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
| Depreciation                | 10.03        | 10.85        | 11.44        | 13.78        | 16.12        |
| Interest on Loan            | 7.51         | 7.36         | 6.96         | 7.86         | 8.63         |
| Return on Equity            | 8.93         | 9.66         | 10.19        | 12.27        | 14.35        |
| Interest on Working Capital | 0.62         | 0.64         | 0.65         | 0.73         | 0.81         |
| O&M Expenses                | 5.09         | 5.09         | 5.09         | 5.09         | 5.09         |
| <b>Total</b>                | <b>32.18</b> | <b>33.60</b> | <b>34.33</b> | <b>39.73</b> | <b>45.00</b> |

### **Asset-2**

| (₹ in lakh)                 |                                       |              |              |              |              |
|-----------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| Particulars                 | 2019-20<br>(pro rata for<br>267 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
| Depreciation                | 12.26                                 | 17.80        | 18.60        | 23.78        | 23.78        |
| Interest on Loan            | 10.41                                 | 13.96        | 13.20        | 16.05        | 18.35        |
| Return on Equity            | 10.92                                 | 15.85        | 16.56        | 21.16        | 25.62        |
| Interest on Working Capital | 0.80                                  | 1.11         | 1.13         | 1.32         | 1.49         |
| O&M Expenses                | 6.63                                  | 9.09         | 9.09         | 9.09         | 9.09         |
| <b>Total</b>                | <b>41.02</b>                          | <b>57.81</b> | <b>58.58</b> | <b>71.40</b> | <b>83.33</b> |

### **Asset-3**

| (₹ in lakh)                 |                                       |              |              |              |              |
|-----------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| Particulars                 | 2019-20<br>(pro-rata for<br>153 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
| Depreciation                | 6.18                                  | 16.41        | 16.66        | 17.86        | 20.22        |
| Interest on Loan            | 4.98                                  | 12.46        | 11.52        | 11.64        | 12.18        |
| Return on Equity            | 5.51                                  | 14.60        | 14.82        | 15.9         | 17.99        |
| Interest on Working Capital | 0.25                                  | 0.66         | 0.65         | 0.68         | 0.76         |
| O&M Expenses                | 0.00                                  | 0.00         | 0.00         | 0.00         | 0.00         |
| <b>Total</b>                | <b>16.92</b>                          | <b>44.13</b> | <b>43.65</b> | <b>46.08</b> | <b>51.15</b> |



**Asset-4**

(₹ in lakh)

| Particulars                 | 2019-20<br>(pro-rata for<br>148 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| Depreciation                | 3.84                                  | 10.54        | 10.71        | 11.48        | 12.97        |
| Interest on Loan            | 3.06                                  | 7.93         | 7.31         | 7.26         | 7.59         |
| Return on Equity            | 3.42                                  | 9.38         | 9.53         | 10.22        | 11.55        |
| Interest on Working Capital | 0.15                                  | 0.42         | 0.42         | 0.44         | 0.48         |
| O&M Expenses                | 0.00                                  | 0.00         | 0.00         | 0.00         | 0.00         |
| <b>Total</b>                | <b>10.47</b>                          | <b>28.27</b> | <b>27.97</b> | <b>29.40</b> | <b>32.59</b> |

**Asset-5**

(₹ in lakh)

| Particulars                 | 2019-20<br>(pro-rata for<br>90 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24       |
|-----------------------------|--------------------------------------|--------------|--------------|--------------|---------------|
| Depreciation                | 6.63                                 | 28.38        | 32.96        | 38.45        | 40.47         |
| Interest on Loan            | 5.70                                 | 22.80        | 23.94        | 25.64        | 24.34         |
| Return on Equity            | 5.90                                 | 25.26        | 29.34        | 34.22        | 36.02         |
| Interest on Working Capital | 0.27                                 | 1.15         | 1.3          | 1.48         | 1.52          |
| O&M Expenses                | 0.00                                 | 0.00         | 0.00         | 0.00         | 0.00          |
| <b>Total</b>                | <b>18.50</b>                         | <b>77.59</b> | <b>87.54</b> | <b>99.79</b> | <b>102.35</b> |

**Asset-6**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 89 days) | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|-----------------------------------|--------------|--------------|--------------|
| Depreciation                | 4.86                              | 21.84        | 24.78        | 25.9         |
| Interest on Loan            | 4.04                              | 17.08        | 17.73        | 16.75        |
| Return on Equity            | 4.33                              | 19.44        | 22.06        | 23.06        |
| Interest on Working Capital | 0.19                              | 0.82         | 0.91         | 0.92         |
| O&M Expenses                | 0.00                              | 0.00         | 0.00         | 0.00         |
| <b>Total</b>                | <b>13.42</b>                      | <b>59.18</b> | <b>65.48</b> | <b>66.63</b> |

**Asset-7**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 89 days) | 2021-22      | 2022-23       | 2023-24       |
|-----------------------------|-----------------------------------|--------------|---------------|---------------|
| Depreciation                | 8.68                              | 36.13        | 40.46         | 44.63         |
| Interest on Loan            | 6.64                              | 26.08        | 26.8          | 27.06         |
| Return on Equity            | 7.72                              | 32.16        | 36.01         | 39.72         |
| Interest on Working Capital | 0.32                              | 1.33         | 1.45          | 1.56          |
| O&M Expenses                | 0.00                              | 0.00         | 0.00          | 0.00          |
| <b>Total</b>                | <b>23.36</b>                      | <b>95.70</b> | <b>104.72</b> | <b>112.97</b> |



**Asset-8**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 89 days) | 2021-22      | 2022-23      | 2023-24       |
|-----------------------------|-----------------------------------|--------------|--------------|---------------|
| Depreciation                | 7.15                              | 29.58        | 33.42        | 37.24         |
| Interest on Loan            | 5.34                              | 20.87        | 21.7         | 22.29         |
| Return on Equity            | 6.36                              | 26.33        | 29.75        | 33.15         |
| Interest on Working Capital | 0.38                              | 1.56         | 1.67         | 1.78          |
| O&M Expenses                | 2.87                              | 11.77        | 11.77        | 11.77         |
| <b>Total</b>                | <b>22.10</b>                      | <b>90.11</b> | <b>98.31</b> | <b>106.23</b> |

**Asset-9**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 5 days) | 2021-22       | 2022-23       | 2023-24       |
|-----------------------------|----------------------------------|---------------|---------------|---------------|
| Depreciation                | 2.70                             | 217.74        | 238.08        | 238.08        |
| Interest on Loan            | 2.20                             | 168.44        | 167.81        | 150.56        |
| Return on Equity            | 2.41                             | 193.82        | 211.92        | 211.92        |
| Interest on Working Capital | 0.14                             | 11.22         | 11.75         | 11.48         |
| O&M Expenses                | 1.03                             | 75.22         | 75.22         | 75.22         |
| <b>Total</b>                | <b>8.48</b>                      | <b>666.44</b> | <b>704.78</b> | <b>687.26</b> |

**Asset-10**

(₹ in lakh)

| Particulars                 | 2021-22<br>(pro-rata for 225 days) | 2022-23      | 2023-24      |
|-----------------------------|------------------------------------|--------------|--------------|
| Depreciation                | 18.73                              | 32.09        | 34.89        |
| Interest on Loan            | 13.38                              | 21.25        | 21.08        |
| Return on Equity            | 16.67                              | 28.57        | 31.05        |
| Interest on Working Capital | 0.64                               | 1.07         | 1.14         |
| O&M Expenses                | 0.00                               | 0.00         | 0.00         |
| <b>Total</b>                | <b>49.42</b>                       | <b>82.98</b> | <b>88.16</b> |

**Asset-11**

(₹ in lakh)

| Particulars                 | 2021-22<br>(pro-rata for 155 days) | 2022-23      | 2023-24      |
|-----------------------------|------------------------------------|--------------|--------------|
| Depreciation                | 11.56                              | 27.95        | 29.28        |
| Interest on Loan            | 8.34                               | 18.85        | 17.93        |
| Return on Equity            | 10.29                              | 24.87        | 26.07        |
| Interest on Working Capital | 0.39                               | 0.94         | 0.96         |
| O&M Expenses                | 0.00                               | 0.00         | 0.00         |
| <b>Total</b>                | <b>30.58</b>                       | <b>72.61</b> | <b>74.24</b> |



**Asset-12**

| (₹ in lakh)                 |                                    |               |
|-----------------------------|------------------------------------|---------------|
| Particulars                 | 2022-23<br>(pro-rata for 336 days) | 2023-24       |
| Depreciation                | 215.04                             | 251.19        |
| Interest on Loan            | 168.22                             | 180.11        |
| Return on Equity            | 191.42                             | 223.59        |
| Interest on Working Capital | 7.54                               | 8.56          |
| O&M Expenses                | 0.00                               | 0.00          |
| <b>Total</b>                | <b>582.22</b>                      | <b>663.45</b> |

**Asset-13**

| (₹ in lakh)                 |                                    |               |
|-----------------------------|------------------------------------|---------------|
| Particulars                 | 2022-23<br>(pro-rata for 222 days) | 2023-24       |
| Depreciation                | 32.24                              | 58.81         |
| Interest on Loan            | 26.12                              | 44.32         |
| Return on Equity            | 28.7                               | 52.34         |
| Interest on Working Capital | 1.14                               | 2.03          |
| O&M Expenses                | 0.00                               | 0.00          |
| <b>Total</b>                | <b>88.20</b>                       | <b>157.50</b> |

61. The Petitioner has claimed the following Interest on Working Capital (IWC) in respect for Asset-1 to Asset-13 for the 2019-24 tariff period:

**Asset-1**

| (₹ in lakh)                        |             |             |             |             |             |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Particulars                        | 2019-20     | 2020-21     | 2021-22     | 2022-23     | 2023-24     |
| O&M Expenses                       | 0.42        | 0.42        | 0.42        | 0.42        | 0.42        |
| Maintenance Spares                 | 0.76        | 0.76        | 0.76        | 0.76        | 0.76        |
| Receivables                        | 3.96        | 4.14        | 4.23        | 4.90        | 5.53        |
| Total Working Capital              | 5.14        | 5.32        | 5.41        | 6.08        | 6.71        |
| Rate of Interest (in %)            | 12.05       | 12.05       | 12.05       | 12.05       | 12.05       |
| <b>Interest on Working Capital</b> | <b>0.62</b> | <b>0.64</b> | <b>0.65</b> | <b>0.73</b> | <b>0.81</b> |

**Asset-2**

| (₹ in lakh)           |                                    |         |         |         |         |
|-----------------------|------------------------------------|---------|---------|---------|---------|
| Particulars           | 2019-20<br>(pro rata for 267 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| O&M Expenses          | 0.76                               | 0.76    | 0.76    | 0.76    | 0.76    |
| Maintenance Spares    | 1.36                               | 1.36    | 1.36    | 1.36    | 1.36    |
| Receivables           | 6.91                               | 7.13    | 7.22    | 8.80    | 10.25   |
| Total Working Capital | 9.03                               | 9.25    | 9.34    | 10.92   | 12.37   |



| Particulars                        | 2019-20<br>(pro rata for<br>267 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------------------------|---------------------------------------|---------|---------|---------|---------|
| Rate of Interest (in %)            | 12.05                                 | 12.05   | 12.05   | 12.05   | 12.05   |
| <b>Interest on Working Capital</b> | 0.80                                  | 1.11    | 1.13    | 1.32    | 1.49    |

### Asset-3

(₹ in lakh)

| Particulars                        | 2019-20<br>(pro rata for<br>153 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------------------------|---------------------------------------|---------|---------|---------|---------|
| O&M Expenses                       | 0.00                                  | 0.00    | 0.00    | 0.00    | 0.00    |
| Maintenance Spares                 | 0.00                                  | 0.00    | 0.00    | 0.00    | 0.00    |
| Receivables                        | 4.98                                  | 5.44    | 5.38    | 5.68    | 6.29    |
| Total Working Capital              | 4.98                                  | 5.44    | 5.38    | 5.68    | 6.29    |
| Rate of Interest (in %)            | 12.05                                 | 12.05   | 12.05   | 12.05   | 12.05   |
| <b>Interest on Working Capital</b> | 0.25                                  | 0.66    | 0.65    | 0.68    | 0.76    |

### Asset-4

(₹ in lakh)

| Particulars                        | 2019-20<br>(pro rata for<br>148 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------------------------|---------------------------------------|---------|---------|---------|---------|
| O&M Expenses                       | 0.00                                  | 0.00    | 0.00    | 0.00    | 0.00    |
| Maintenance Spares                 | 0.00                                  | 0.00    | 0.00    | 0.00    | 0.00    |
| Receivables                        | 3.19                                  | 3.49    | 3.45    | 3.62    | 4.01    |
| Total Working Capital              | 3.19                                  | 3.49    | 3.45    | 3.62    | 4.01    |
| Rate of Interest (in %)            | 12.05                                 | 12.05   | 12.05   | 12.05   | 12.05   |
| <b>Interest on Working Capital</b> | 0.15                                  | 0.42    | 0.42    | 0.44    | 0.48    |

### Asset-5

(₹ in lakh)

| Particulars                        | 2019-20<br>(pro rata for<br>90 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------------------------|--------------------------------------|---------|---------|---------|---------|
| O&M Expenses                       | 0.00                                 | 0.00    | 0.00    | 0.00    | 0.00    |
| Maintenance Spares                 | 0.00                                 | 0.00    | 0.00    | 0.00    | 0.00    |
| Receivables                        | 9.25                                 | 9.57    | 10.79   | 12.30   | 12.58   |
| Total Working Capital              | 9.25                                 | 9.57    | 10.79   | 12.30   | 12.58   |
| Rate of Interest (in %)            | 11.25                                | 11.25   | 11.25   | 11.25   | 11.25   |
| <b>Interest on Working Capital</b> | 0.27                                 | 1.15    | 1.30    | 1.48    | 1.52    |



**Asset-6**

(₹ in lakh)

| Particulars                        | 2020-21<br>(pro rata for 89 days) | 2021-22     | 2022-23     | 2023-24     |
|------------------------------------|-----------------------------------|-------------|-------------|-------------|
| O&M Expenses                       | 0.00                              | 0.00        | 0.00        | 0.00        |
| Maintenance Spares                 | 0.00                              | 0.00        | 0.00        | 0.00        |
| Receivables                        | 6.78                              | 7.30        | 8.07        | 8.19        |
| Total Working Capital              | 6.78                              | 7.30        | 8.07        | 8.19        |
| Rate of Interest (in %)            | 11.25                             | 11.25       | 11.25       | 11.25       |
| <b>Interest on Working Capital</b> | <b>0.19</b>                       | <b>0.82</b> | <b>0.91</b> | <b>0.92</b> |

**Asset-7**

(₹ in lakh)

| Particulars                        | 2020-21<br>(pro rata for 89 days) | 2021-22     | 2022-23     | 2023-24     |
|------------------------------------|-----------------------------------|-------------|-------------|-------------|
| O&M Expenses                       | 0.00                              | 0.00        | 0.00        | 0.00        |
| Maintenance Spares                 | 0.00                              | 0.00        | 0.00        | 0.00        |
| Receivables                        | 11.81                             | 11.80       | 12.91       | 13.89       |
| Total Working Capital              | 11.81                             | 11.80       | 12.91       | 13.89       |
| Rate of Interest (in %)            | 11.25                             | 11.25       | 11.25       | 11.25       |
| <b>Interest on Working Capital</b> | <b>0.32</b>                       | <b>1.33</b> | <b>1.45</b> | <b>1.56</b> |

**Asset-8**

(₹ in lakh)

| Particulars                        | 2020-21<br>(pro rata for 89 days) | 2021-22     | 2022-23     | 2023-24     |
|------------------------------------|-----------------------------------|-------------|-------------|-------------|
| O&M Expenses                       | 0.98                              | 0.98        | 0.98        | 0.98        |
| Maintenance Spares                 | 1.77                              | 1.77        | 1.77        | 1.77        |
| Receivables                        | 11.17                             | 11.11       | 12.12       | 13.06       |
| Total Working Capital              | 13.92                             | 13.86       | 14.87       | 15.81       |
| Rate of Interest (in %)            | 11.25                             | 11.25       | 11.25       | 11.25       |
| <b>Interest on Working Capital</b> | <b>0.38</b>                       | <b>1.56</b> | <b>1.67</b> | <b>1.78</b> |

**Asset-9**

(₹ in lakh)

| Particulars                        | 2020-21<br>(pro rata for 5 days) | 2021-22      | 2022-23      | 2023-24      |
|------------------------------------|----------------------------------|--------------|--------------|--------------|
| O&M Expenses                       | 6.27                             | 6.27         | 6.27         | 6.27         |
| Maintenance Spares                 | 11.28                            | 11.28        | 11.28        | 11.28        |
| Receivables                        | 76.37                            | 82.16        | 86.89        | 84.50        |
| Total Working Capital              | 93.92                            | 99.71        | 104.44       | 102.05       |
| Rate of Interest (in %)            | 11.25                            | 11.25        | 11.25        | 11.25        |
| <b>Interest on Working Capital</b> | <b>0.14</b>                      | <b>11.22</b> | <b>11.75</b> | <b>11.48</b> |



**Asset-10**

(₹ in lakh)

| Particulars                        | 2021-22<br>(pro rata for 225 days) | 2022-23 | 2023-24 |
|------------------------------------|------------------------------------|---------|---------|
| O&M Expenses                       | 0.00                               | 0.00    | 0.00    |
| Maintenance Spares                 | 0.00                               | 0.00    | 0.00    |
| Receivables                        | 9.88                               | 10.23   | 10.84   |
| Total Working Capital              | 9.88                               | 10.23   | 10.84   |
| Rate of Interest (in %)            | 10.50                              | 10.50   | 10.50   |
| <b>Interest on Working Capital</b> | 0.64                               | 1.07    | 1.14    |

**Asset-11**

(₹ in lakh)

| Particulars                        | 2021-22<br>(pro rata for 155 days) | 2022-23 | 2023-24 |
|------------------------------------|------------------------------------|---------|---------|
| O&M Expenses                       | 0.00                               | 0.00    | 0.00    |
| Maintenance Spares                 | 0.00                               | 0.00    | 0.00    |
| Receivables                        | 8.88                               | 8.95    | 9.13    |
| Total Working Capital              | 8.88                               | 8.95    | 9.13    |
| Rate of Interest (in %)            | 10.50                              | 10.50   | 10.50   |
| <b>Interest on Working Capital</b> | 0.39                               | 0.94    | 0.96    |

**Asset-12**

(₹ in lakh)

| Particulars                        | 2022-23<br>(pro rata for 336 days) | 2023-24 |
|------------------------------------|------------------------------------|---------|
| O&M Expenses                       | 0.00                               | 0.00    |
| Maintenance Spares                 | 0.00                               | 0.00    |
| Receivables                        | 77.98                              | 81.57   |
| Total Working Capital              | 77.98                              | 81.57   |
| Rate of Interest (in %)            | 10.50                              | 10.50   |
| <b>Interest on Working Capital</b> | 7.54                               | 8.56    |

**Asset-13**

(₹ in lakh)

| Particulars                        | 2022-23<br>(pro rata for 222 days) | 2023-24 |
|------------------------------------|------------------------------------|---------|
| O&M Expenses                       | 0.00                               | 0.00    |
| Maintenance Spares                 | 0.00                               | 0.00    |
| Receivables                        | 17.88                              | 19.36   |
| Total Working Capital              | 17.88                              | 19.36   |
| Rate of Interest (in %)            | 10.50                              | 10.50   |
| <b>Interest on Working Capital</b> | 1.14                               | 2.03    |

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

62. The Petitioner has claimed the following CODs in respect of Asset-2 to Asset-13:



| Assets   | Asset Description                                                                                                                   | SCOD as per IA | COD        |
|----------|-------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|
| Asset-2  | Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)        | 4.3.2018       | 9.7.2019   |
| Asset-3  | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)             |                | 31.10.2019 |
| Asset-4  | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Dehar-Ganguwal BBMB Link (56 km) (State Sector) |                | 5.11.2019  |
| Asset-5  | Establishment of Fibre Optic Communication System in the Northern Region for 8 Nos. PSTCL links (162.52 km) (State Sector)          |                | 2.1.2020   |
| Asset-6  | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. PSTCL links (113 km) (State Sector)             |                | 2.1.2021   |
| Asset-7  | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. HPSEBL links (210.462 km) (State Sector)        |                | 2.1.2021   |
| Asset-8  | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (192.555 km) (Central Sector)             |                | 2.1.2021   |
| Asset-9  | Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector      |                | 27.3.2021  |
| Asset-10 | Establishment of Fibre Optic Communication System in the Northern Region for 7 Nos. PSTCL links (122.915 km) (State Sector)         |                | 19.8.2021  |
| Asset-11 | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. PSTCL links (92.79 km) (State Sector)           |                | 28.10.2021 |
| Asset-12 | Establishment of Fibre Optic Communication System in the Northern Region for 43 Nos. PSTCL links (889.998 km) (State Sector)        |                | 30.4.2022  |
| Asset-13 | Establishment of Fibre Optic Communication System in the Northern Region for 9 Nos. HPSEBL links (208.774 km) (State Sector)        |                | 22.8.2022  |



| Assets   | Asset Description                                                                                                        | SCOD as per IA | COD                        |
|----------|--------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|
| Asset-14 | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (169.24 km) (Central Sector)   |                | 31.7.2024<br>(Anticipated) |
| Asset-15 | Establishment of Fibre Optic Communication System in the Northern Region for 4 Nos. HPSEBL links (104 km) (State Sector) |                | 31.7.2024<br>(Anticipated) |

63. The Petitioner has submitted that the trial operation of the links in the respective communication assets was carried out progressively on different dates, but the COD of the communication assets containing the related links was declared on the last date of the trial run operation. Since the value and length of many links are very small, the Petitioner has considered it unjustified to file separate Petitions for individual links. This is also in compliance with the direction of the Commission that the number of Petitions in respect of a single project to be filed must be reduced. Accordingly, the Petitioner has combined the COD for various links to minimise the number of Petitions.

64. In response to the technical validation letter dated 15.4.2024, the Petitioner vide affidavit dated 26.4.2024 has submitted that the Asset-14 and Asset-15 have not yet commissioned and are anticipated to be commissioned on 31.7.2024. Therefore, as discussed above, we are not determining the tariff for Asset-14 and Asset-15.

65. Regulation 5 of the 2019 Tariff Regulations provides as under:

***“5. Date of Commercial Operation: (1) The date of commercial operation of a generating station or unit thereof or a transmission system or element thereof and associated communication system shall be determined in accordance with the provisions of the Grid Code.***

***(2) In case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected generating station or the transmission system of other transmission licensee as per the agreed project implementation schedule is not ready for commercial operation, the transmission***



licensee may file petition before the Commission for approval of the date of commercial operation of such transmission system or element thereof:

*Provided that the transmission licensee seeking the approval of the date of commercial operation under this clause shall give prior notice of at least one month, to the generating company or the other transmission licensee and the long term customers of its transmission system, as the case may be, regarding the date of commercial operation:*

*Provided further that the transmission licensee seeking the approval of the date of commercial operation of the transmission system under this clause shall be required to submit the following documents along with the petition:*

- (a) Energisation certificate issued by the Regional Electrical Inspector under Central Electricity Authority;*
- (b) Trial operation certificate issued by the concerned RLDC for charging element with or without electrical load;*
- (c) Implementation Agreement, if any, executed by the parties;*
- (d) Minutes of the coordination meetings or related correspondences regarding the monitoring of the progress of the generating station and transmission systems;*
- (e) Notice issued by the transmission licensee as per the first proviso under this clause and the response;*
- (f) Certificate of the CEO or MD of the company regarding the completion of the transmission system including associated communication system in all respects.”*

66. The Petitioner has submitted the following documents in support of the COD of the communication assets covered in the instant Petition:

| Assets  | COD        | Documents Submitted               |                                  |
|---------|------------|-----------------------------------|----------------------------------|
|         |            | RLDC Certificate                  | Self-declaration COD Certificate |
| Asset-2 | 9.7.2019   | RLDC Certificate dated 13.12.2019 | 23.1.2020                        |
| Asset-3 | 31.10.2019 | RLDC Certificate dated 22.3.2021  | 25.6.2021                        |
| Asset-4 | 5.11.2019  | RLDC Certificate dated 23.3.2021, | 25.6.2021                        |
| Asset-5 | 2.1.2020   | RLDC Certificates dated 4.9.2020  | 3.11.2020                        |
| Asset-6 | 2.1.2021   | RLDC Certificates dated 24.2.2021 | 3.3.2021                         |
| Asset-7 | 2.1.2021   | RLDC Certificates dated 24.2.2021 | 3.3.2021                         |
| Asset-8 | 2.1.2021   | RLDC Certificates dated 9.2.2021  | 3.3.2021                         |



| Assets   | COD        | Documents Submitted                                                |                                  |
|----------|------------|--------------------------------------------------------------------|----------------------------------|
|          |            | RLDC Certificate                                                   | Self-declaration COD Certificate |
| Asset-9  | 27.3.2021  | RLDC Certificates dated 1.11.2019, 2.6.2020, 30.3.2021, 26.3.2021, | 5.4.2021                         |
| Asset-10 | 19.8.2021  | RLDC Certificates dated 6.4.2022, 7.4.2022,                        | 6.5.2022                         |
| Asset-11 | 28.10.2021 | RLDC Certificates dated 2.3.2022, 24.2.2022, 23.2.2022             | 14.3.2022                        |
| Asset-12 | 30.4.2022  | RLDC Certificates dated 17.6.2022, 7.11.2022,                      | 16.11.2022                       |
| Asset-13 | 22.8.2022  | RLDC Certificates dated 7.11.2022                                  | 16.11.2022                       |

67. Taking into consideration the RLDC Certificates and Self-declaration COD Certificates for Assets-2 to Asset-13 as submitted by the Petitioner, we approve the COD of the communication assets as under:

| SL. No         | Asset Name                                                                                                                          | RLDC Trial Run          |                     | Self-declaration COD Certificate | COD Approved |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|----------------------------------|--------------|
|                |                                                                                                                                     | Successful commissioned | Date of Certificate |                                  |              |
| <b>Asset-2</b> | Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)        | 8.7.2019                | 13.12.2019          | 23.1.2020                        | 9.7.2019     |
| <b>Asset-3</b> | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)             | 30.10.2019              | 22.3.2021           | 25.6.2021                        | 31.10.2019   |
| <b>Asset-4</b> | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Dehar-Ganguwal BBMB Link (56 km) (State Sector) | 4.11.2019               | 23.3.2021           | 25.6.2021                        | 5.11.2019    |
| <b>Asset-5</b> | Establishment of Fibre Optic Communication System in the Northern Region for 8 Nos. PSTCL links (162.52 km) (State Sector)          |                         |                     |                                  |              |
| i              | 132 kV Jalandhar-I - Kapurthala                                                                                                     | 9.11.2019               | 4.9.2020            | 3.11.2021                        | 2.1.2020     |
| ii             | 132 kV Verpal - Verka                                                                                                               | 1.1.2020                | 4.9.2020            |                                  |              |



| SL. No         | Asset Name                                                                                                                     | RLDC Trial Run             |                        | Self-declaration<br>COD<br>Certificate | COD<br>Approved |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------|----------------------------------------|-----------------|
|                |                                                                                                                                | Successful<br>commissioned | Date of<br>Certificate |                                        |                 |
| iii            | 220 kV Butari - Verpal                                                                                                         | 1.1.2020                   | 4.9.2020               |                                        |                 |
| iv             | 132 kV Bilaspur - Doraha - Sahnewal                                                                                            | 6.11.2019                  | 4.9.2020               |                                        |                 |
| v              | 220 kV Wadala Granthian-FC Churian                                                                                             | 1.1.2020                   | 4.9.2020               |                                        |                 |
| vi             | 220 kV FC Churian - Civil Lines Amritsar                                                                                       | 1.1.2020                   | 4.9.2020               |                                        |                 |
| vii            | 132 kV Muktsar - Muktsar                                                                                                       | 30.11.2019                 | 4.9.2020               |                                        |                 |
| viii           | 132 kV Moga I - Moga                                                                                                           | 31.10.2019                 | 4.9.2020               |                                        |                 |
| <b>Asset-6</b> | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. PSTCL links (113 km) (State Sector)        |                            |                        |                                        |                 |
| i              | 132 kV MPH-I-II-III-IV - Shri Har Gobindpur - Wadala Granthian (5 Links)                                                       | 2.4.2019                   | 24.2.2021              | 3.3.2021                               | 2.1.2021        |
| ii             | 220 kV Civil Lines Amritsar - Khassa                                                                                           | 24.4.2019                  | 24.2.2021              |                                        |                 |
| <b>Asset-7</b> | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. HPSEBL links (210.462 km) (State Sector)   |                            |                        |                                        |                 |
| i              | 132 kV Solan- Giri                                                                                                             | 4.4.2019                   | 24.2.2021              | 3.3.2021                               | 2.1.2021        |
| ii             | 132 kV Giri- Kala Amb                                                                                                          | 3.4.2019                   | 24.2.2021              |                                        |                 |
| lii            | 132 kV Giri- Poanta                                                                                                            | 8.4.2019                   | 24.2.2021              |                                        |                 |
| iv             | 132 kV Bassi- Palampur                                                                                                         | 19.11.2020                 | 24.2.2021              |                                        |                 |
| v              | 132 kV Jassore- Kandrori                                                                                                       | 2.1.2020                   | 24.2.2021              |                                        |                 |
| Vi             | 132 kV Solan- Kunihar                                                                                                          | 3.12.2019                  | 24.2.2021              |                                        |                 |
| <b>Asset-8</b> | Establishment of Fibre Optic Communication System in the Northern Region for 2 Nos. links (192.555 km) (Central Sector)        |                            |                        |                                        |                 |
| i              | 400kV Abdullapur - Deepalpur (LILO strn. of Abdullapur - Bawana)                                                               | 6.11.2020                  | 9.2.2021               | 3.3.2021                               | 2.1.2021        |
| ii             | 400kV Abdullapur - Kurukshetra                                                                                                 | 3.1.2020                   | 9.2.2021               |                                        |                 |
| <b>Asset-9</b> | Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector |                            |                        |                                        |                 |
| I.             | 400 kV Zarda - Bhinmal                                                                                                         | 3.10.2019                  | 1.11.2019              | 5.4.2021                               | 27.3.2021       |



| SL. No          | Asset Name                                                                                                                   | RLDC Trial Run             |                        | Self-declaration<br>COD<br>Certificate | COD<br>Approved |
|-----------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------|----------------------------------------|-----------------|
|                 |                                                                                                                              | Successful<br>commissioned | Date of<br>Certificate |                                        |                 |
| II.             | 400 kV Mainpuri - Ballabgarh                                                                                                 | 8.11.2019                  | 2.6.2020               |                                        |                 |
| III.            | 400 kV Bhiwadi to Hissar                                                                                                     | 26.3.2021                  | 30.3.2021              |                                        |                 |
| IV.             | 400 kV Agra to Bassi (Jaipur)                                                                                                | 7.3.2020                   | 2.6.2020               |                                        |                 |
| V.              | 400 kV D/C Neemrana to Sikar                                                                                                 | 25.3.2021                  | 26.3.2021              |                                        |                 |
| <b>Asset-10</b> | Establishment of Fibre Optic Communication System in the Northern Region for 7 Nos. PSTCL links (122.915 km) (State Sector)  |                            |                        |                                        |                 |
| i.              | 220 kV Ablowal - Rajila                                                                                                      | 18.12.2019                 | 6.4.2022               | 6.5.2022                               | 19.8.2021       |
| ii.             | LILO of 220 kV Rajila - Patran at Kakrala                                                                                    | 22.6.2021                  | 6.4.2022               |                                        |                 |
| iii             | LILO of 220 kV Rajila - Patran at Patran                                                                                     | 3.7.2021                   | 7.4.2022               |                                        |                 |
| iv              | LILO of 220 kV Wadala Granthian- Verpal at Udhoke                                                                            | 18.7.2021                  | 6.4.2022               |                                        |                 |
| v               | 220 kV Patran - Sunam                                                                                                        | 18.12.2019                 | 7.4.2022               |                                        |                 |
| vi              | LILO of 220 kV Patran - Sunam at Bangan                                                                                      | 18.8.2021                  | 7.4.2022               |                                        |                 |
| vii             | 220 kV Nabha - Phaggan Majra                                                                                                 | 27.2.2021                  | 6.4.2022               |                                        |                 |
| <b>Asset-11</b> | Establishment of Fibre Optic Communication System in the Northern Region for 6 Nos. PSTCL links (92.79 km) (State Sector)    |                            |                        |                                        |                 |
| i               | 132 kV IGC Bathinda - GNDTP                                                                                                  | 2.5.2019                   | 23.2.2022              | 14.3.2022                              | 28.10.2021      |
| ii              | LILO of 220 kV Wadala Granthian - FC Churian at Kotli Surat Mali                                                             | 23.7.2021                  | 2.3.2022               |                                        |                 |
| iii             | LILO of 220 kV FC Churian - Civil Lines Amritsar at Majitha                                                                  | 27.10.2021                 | 24.2.2022              |                                        |                 |
| iv              | LILO of 220 kV Civil Lines Amritsar - Khassa at Chugawan                                                                     | 24.7.2021                  | 2.3.2022               |                                        |                 |
| v               | 220 kV Lalton Kalan - Pakhowal                                                                                               | 23.12.2020                 | 2.3.2022               |                                        |                 |
| vi              | 220 kV sunam - Mansa                                                                                                         | 3.5.2019                   | 2.3.2022               |                                        |                 |
| <b>Asset-12</b> | Establishment of Fibre Optic Communication System in the Northern Region for 43 Nos. PSTCL links (889.998 km) (State Sector) |                            |                        |                                        |                 |



| SL. No | Asset Name                                                | RLDC Trial Run             |                        | Self-declaration<br>COD<br>Certificate | COD<br>Approved |
|--------|-----------------------------------------------------------|----------------------------|------------------------|----------------------------------------|-----------------|
|        |                                                           | Successful<br>commissioned | Date of<br>Certificate |                                        |                 |
| i      | LILO of 132 kV Jalandhar-I - Kapurthala at children Park  | 7.4.2022                   | 17.6.2022              | 16.11.2022                             | 30.4.2022       |
| ii     | LILO of 132 kV Jalandhar-I - Kapurthala at PIMS           | 7.4.2022                   | 17.6.2022              |                                        |                 |
| iii    | LILO of 132 kV Jalandhar-I - Kapurthala at Science city   | 7.4.2022                   | 17.6.2022              |                                        |                 |
| iv     | LILO portion of Jamsher - Jadla at Goraya                 | 7.4.2022                   | 17.6.2022              |                                        |                 |
| v      | 220 kV Jadla - GGSSTP(RTP)                                | 4.4.2022                   | 17.6.2022              |                                        |                 |
| vi     | 220 kV Sultanpur - Patti                                  | 17.12.2020                 | 17.6.2022              |                                        |                 |
| vii    | LILO of Sultanpur - Patti at Chola Sahib                  | 17.12.2020                 | 17.6.2022              |                                        |                 |
| viii   | 220 kV Rajila - Patran                                    | 3.7.2021                   | 17.6.2022              |                                        |                 |
| ix     | 220 kV Lalton kalan - Sahnewal                            | 3.9.2019                   | 17.6.2022              |                                        |                 |
| x      | 220 kV Sahnewal - GGSSTP                                  | 8.10.2021                  | 17.6.2022              |                                        |                 |
| xi     | LILO of Sahnewal - GGSSTP LILO Point - Koharam            | 26.10.2021                 | 17.6.2022              |                                        |                 |
| xii    | LILO of 220 kV Sahnewal 220 - GGSSTP at Gaunsgarh 220     | 26.10.2021                 | 17.6.2022              |                                        |                 |
| xiii   | LILO of Sahnewal - GGSSTP LILO Point 189 - Ghulal         | 22.12.2020                 | 17.6.2022              |                                        |                 |
| xiv    | 220 kV Jamsher - Mahilpur                                 | 7.4.2022                   | 17.6.2022              |                                        |                 |
| xv     | LILO of 220 kV Jamsher - Mahilpur at Rehana Jattan        | 7.4.2022                   | 17.6.2022              |                                        |                 |
| xvi    | 220 kV Mohali I - Dera Bassi                              | 9.3.2021                   | 17.6.2022              |                                        |                 |
| xvii   | LILO of 220 kV Mohali I - Dera Bassi at Lalru             | 9.3.2021                   | 17.6.2022              |                                        |                 |
| xviii  | 132 kV ASPH-I - ASPH II                                   | 1.5.2019                   | 7.11.2022              |                                        |                 |
| xix    | 132 kV Malaout - GNDTP                                    | 14.12.2019                 | 7.11.2022              |                                        |                 |
| xx     | 220 kV Jamsher - Jadla                                    | 7.4.2022                   | 7.11.2022              |                                        |                 |
| xxi    | 132 kV Mana Singh Wala - Ferozepur                        | 8.8.2019                   | 7.11.2022              |                                        |                 |
| xxii   | 132 kV Ropar - GGSSTP                                     | 23.10.2019                 | 7.11.2022              |                                        |                 |
| xxiii  | 132 kV Shamaspur - Ghulal                                 | 21.10.2019                 | 7.11.2022              |                                        |                 |
| xxiv   | LILO of 132 kV ASPH-I - ASPH II at Anandpur Sahib         | 15.12.2020                 | 7.11.2022              |                                        |                 |
| xxv    | LILO of 132 kV Malaout 132 KV - GNDTP 220 at Balluana 132 | 3.2.2022                   | 7.11.2022              |                                        |                 |
| xxvi   | LILO of 132 kV Malaout - GNDTP at Gidderbaha              | 23.9.2020                  | 7.11.2022              |                                        |                 |
| xxvii  | LILO of 132 kV Verpal - Verka at Malmandi                 | 17.7.2021                  | 7.11.2022              |                                        |                 |
| xxviii | 220 kV Moga - Talwandi Bhai                               | 29.4.2021                  | 7.11.2022              |                                        |                 |



| SL. No          | Asset Name                                                                                                                   | RLDC Trial Run             |                        | Self-declaration<br>COD<br>Certificate | COD<br>Approved |
|-----------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------|----------------------------------------|-----------------|
|                 |                                                                                                                              | Successful<br>commissioned | Date of<br>Certificate |                                        |                 |
| xxix            | 220 kV Talwandi Bhai - Ferozpur                                                                                              | 12.1.2021                  | 7.11.2022              |                                        |                 |
| xxx             | LILO of Talwandi Bhai-Ferozpur with LILO Point of 121 - Sadiq                                                                | 29.4.2022                  | 7.11.2022              |                                        |                 |
| xxxi            | LILO of 220 kV Ablowal - Rajila at Passiana                                                                                  | 21.12.2019                 | 7.11.2022              |                                        |                 |
| xxxii           | LILO of 220 kV sunam - Mansa at Jhunir                                                                                       | 20.12.2019                 | 7.11.2022              |                                        |                 |
| xxxiii          | 220 kV Mansa - GHTP                                                                                                          | 28.11.2019                 | 7.11.2022              |                                        |                 |
| xxxiv           | LILO of 220 kV Mansa - GHTP at Dhanoula                                                                                      | 20.9.2020                  | 7.11.2022              |                                        |                 |
| xxxv            | LILO Portion of GHTP - Mansa at Talwandi Sabo                                                                                | 24.11.2020                 | 7.11.2022              |                                        |                 |
| xxxvi           | LILO Portion of GHTP - Mansa at Mour                                                                                         | 29.4.2022                  | 7.11.2022              |                                        |                 |
| xxxvii          | 220 kV Muktsar - Bathinda                                                                                                    | 3.2.2022                   | 7.11.2022              |                                        |                 |
| xxxviii         | 220 kV Patti - Rashiana                                                                                                      | 16.4.2022                  | 7.11.2022              |                                        |                 |
| xxxix           | LILO of Muktsar - Bathinda at with LILO Point 84 - Malout                                                                    | 30.4.2022                  | 11.11.2022             |                                        |                 |
| xl              | LILO of Muktsar - Bathinda at pt.28 Badal                                                                                    | 1.9.2020                   | 7.11.2022              |                                        |                 |
| xli             | LILO Portion of 220 kV Talwandi Bahi - Ferozepur with LILO Point 80 Botianwala Line                                          | 24.4.2022                  | 7.11.2022              |                                        |                 |
| xlii            | 220 kV Botianwala - Mastewala                                                                                                | 30.4.2021                  | 7.11.2022              |                                        |                 |
| xlili           | LILO of 220 kV Botianwala - Mastewala at Makhu                                                                               | 26.4.2022                  | 7.11.2022              |                                        |                 |
| <b>Asset-13</b> | Establishment of Fibre Optic Communication System in the Northern Region for 9 Nos. HPSEBL links (208.774 km) (State Sector) |                            |                        |                                        |                 |
| i               | Jutogh - Maliana                                                                                                             | 25.2.2022                  | 7.11.2022              | 16.11.2022                             | 22.8.2022       |
| ii              | Nogli - Samauli                                                                                                              | 3.3.2022                   | 7.11.2022              |                                        |                 |
| iii             | Sainj - Hulli                                                                                                                | 18.5.2022                  | 7.11.2022              |                                        |                 |
| iv              | Guuma - Sainj                                                                                                                | 21.8.2022                  | 7.11.2022              |                                        |                 |
| v               | Samauli - Andhra                                                                                                             | 20.4.2022                  | 7.11.2022              |                                        |                 |
| vi              | Nathpa - Ghanvi                                                                                                              | 3.8.2022                   | 7.11.2022              |                                        |                 |
| vii             | Ghanvi - Jeori                                                                                                               | 15.1.2022                  | 7.11.2022              |                                        |                 |
| viii            | Kumarsain - Gumma                                                                                                            | 18.4.2022                  | 7.11.2022              |                                        |                 |
| ix              | Barthi - Kurthala                                                                                                            | 14.3.2022                  | 7.11.2022              |                                        |                 |



## **Capital Cost**

68. Regulation 19 of the 2019 Tariff Regulations provides as under:

**“19. Capital Cost:** (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

(2) *The Capital Cost of a new project shall include the following:*

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) *Expenditure on account of change in law and force majeure events; and*
- (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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



- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
  - (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
  - (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
  - (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
  - (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
  - (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.
- (4) The capital cost in case of existing or new hydro generating station shall also include:
- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
  - (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.
- (5) The following shall be excluded from the capital cost of the existing and new projects:
- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
  - (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:
- Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-capitalised only after its redeployment;*
- Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*
- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
  - (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
  - (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."



69. The Petitioner vide Auditor's Certificate dated 17.3.2023, has claimed the following capital cost incurred as on the COD and Additional Capital Expenditure (ACE), including the IDC discharge projected to be incurred in respect of the communication assets, and the same are as under:

(₹ in lakh)

| Asset   | FR Appportioned Approved Cost | Expenditure as on 31.3.2019 | Projected ACE |         |         |         |         | Estimated completion cost |
|---------|-------------------------------|-----------------------------|---------------|---------|---------|---------|---------|---------------------------|
|         |                               |                             | 2019-20       | 2020-21 | 2021-22 | 2022-23 | 2023-24 |                           |
| Asset-1 | 258.07                        | 155.02                      | 7.09          | 18.64   | 0.0     | 73.89   | 0.00    | 254.63                    |

(₹ in lakh)

| Assets   | FR Appportioned Approved Cost | Expenditure up to COD | Projected ACE |         |         |         |         | Total Estimated Cost |
|----------|-------------------------------|-----------------------|---------------|---------|---------|---------|---------|----------------------|
|          |                               |                       | 2019-20       | 2020-21 | 2021-22 | 2022-23 | 2023-24 |                      |
| Asset 2  | 461.59                        | 270.08                | 1.20          | 19.97   | 5.30    | 158.12  | 0.00    | 454.67               |
| Asset 3  | 343.81                        | 218.87                | 37.27         | 6.49    | 1.00    | 37.15   | 37.15   | 337.93               |
| Asset 4  | 222.29                        | 140.98                | 23.72         | 4.13    | 0.63    | 23.64   | 23.64   | 216.74               |
| Asset 5  | 649.58                        | 427.99                | 3.90          | 34.08   | 109.58  | 63.73   | 0.00    | 639.28               |
| Asset 6  | 416.23                        | 318.71                |               |         | 55.04   | 35.46   | 0.00    | 409.21               |
| Asset 7  | 717.63                        | 559.92                |               | 12.32   | 1.06    | 131.70  | 0.00    | 705.00               |
| Asset 8  | 599.39                        | 459.80                |               | 7.86    | 0.00    | 120.63  | 0.00    | 588.29               |
| Asset 9  | 3808.41                       | 3191.94               |               |         | 569.18  | 0.00    | 0.00    | 3761.12              |
| Asset 10 | 579.78                        | 476.12                |               |         | 8.80    | 44.13   | 44.13   | 573.18               |
| Asset 11 | 485.47                        | 430.92                |               |         |         | 21.13   | 21.13   | 473.17               |
| Asset 12 | 4083.78                       | 3571.53               |               |         |         | 297.49  | 198.33  | 4067.35              |
| Asset 13 | 989.00                        | 815.10                |               |         |         | 65.12   | 97.68   | 977.88               |
| Asset 14 | 702.71                        | 641.48                |               |         |         | 0.00    | 50.81   | 692.30               |
| Asset 15 | 901.46                        | 829.38                |               |         |         | 0.00    | 61.51   | 890.90               |

70. We have considered the submissions of the Petitioner and also gone through the documents submitted by the Petitioner. It has been observed that the estimated



completion cost of different transmission assets is within the FR apportioned approved cost. Hence, there is no cost overrun.

### **Time Over-run**

71. As per the IA dated 4.3.2015, the communication system was scheduled to be put into commercial operation within 36 months from the date of the IA, i.e., by 3.3.2018. The details of the SCOD, COD and time overrun with respect to the communication assets claimed by the Petitioner in the instant Petition vide affidavit dated 26.4.2024 are as under:

| Assets   | SCOD as per IA | COD (Combined) | Delay(in days) |
|----------|----------------|----------------|----------------|
| Asset-2  | 3.3.2018       | 9.7.2019       | 493            |
| Asset-3  |                | 31.10.2019     | 607            |
| Asset-4  |                | 5.11.2019      | 612            |
| Asset-5  |                | 2.1.2020       | 670            |
| Asset-6  |                | 2.1.2021       | 1036           |
| Asset-7  |                | 2.1.2021       | 1036           |
| Asset-8  |                | 2.1.2021       | 1036           |
| Asset-9  |                | 27.3.2021      | 1120           |
| Asset-10 |                | 19.8.2021      | 1265           |
| Asset-11 |                | 28.10.2021     | 1335           |
| Asset-12 |                | 30.4.2022      | 1519           |
| Asset-13 |                | 22.8.2022      | 1633           |

72. The Petitioner has submitted the following reasons for the time overrun to substantiate its claim in execution of Asset-2 to Asset-13:

### **Asset-2**

73. The link was completed on 2.3.2017 as per plan. Further, the link was to be connected to SLDC via the OPGW link Gladni-Hiranagar. This Gladni-Hiranagar link was not ready due to the non-availability of funds by JKPDD. Consequently, the LILO of Sarna-Gladni link at Hiranagar was executed by the telecom department of the Petitioner. For the commissioning of the Sewa-Hiranagar, Hiranagar station was



bypassed, which was to be connected via the JKPDD network. However, Hiranagar got connected via the telecom network, and Sewa was connected directly to Gladni. The link got commissioned on 8.7.2019 with a delay of 15 months, and the COD was declared w.e.f. 9.7.2019.

### **Asset-3**

74. In June 2016, before the award of the OPGW installation package, the Bhakra Beas Management Board (BBMB) expressed the need for reconductoring the Bhakra-Jamalpur line from tower no. 55 to tower no. 276. So, the work could not be started after the award of the OPGW work. During the 15<sup>th</sup> meeting of the Telecommunication SCADA and Telemetry Committee (TeST) held on 7.8.2019, BBMB and the Petitioner discussed the tower modifications for the same line. The Petitioner raised concerns about the tower modification such as raising the height of the tower and tower shifting, which were to be carried out by BBMB. BBMB provided the details of the proposed modifications for towers from tower nos. 55 to 270, but no information was provided for the section of towers nos. 1 to 55. BBMB stated that initially, the LILO was proposed for this line, but that proposal was withdrawn later. BBMB requested the Petitioner to carry out the work on the link as it is required for redundancy. The Petitioner stated that they would carry out the OPGW installation work for the links as per the existing plan submitted by the BBMB and any modifications in the link after the OPGW installation would be the responsibility of BBMB. BBMB agreed on the same. Subsequently, the work on this link began after 7.8.2019, and it was completed, including the trial run operation, by 30.10.2019.



#### **Asset-4**

75. The delay of approximately 612 days in the commissioning of Asset-4 is on account of severe RoW issues faced by the Petitioner at various locations. The RoW issue was taken up by the Petitioner itself, and various discussions were carried out with the land owners, which ultimately delayed the completion of OPGW works. Further, the non-availability of a shutdown was also a contributing factor to the delay in the commissioning of the Asset.

#### **Asset-5**

76. The delay in commissioning of Asset-5 is due to the following reasons:

- a. Scope revision and addition by Punjab State Transmission Corporation Limited (PSTCL): As per 10<sup>th</sup> TeST Meeting dated 22.3.2017, PSTCL representative stated that due to the LILO of some lines covered under package 1(a) and addition of new Sub-stations in Punjab, the scope of OPGW may be revised from 1197 km to 1378 km. Further, as per the 14<sup>th</sup> TeST Meeting dated 17.12.2018, additional links of total length 654.1514 km were put up for approval. As a result, the quantity was changed in the OPGW as well as the communication equipment due to changes in the scope of the OPGW for PSTCL lines. Post BOQ approvals, the installation of the material was completed. Further, as per the 18<sup>th</sup> TeST Meeting held on 9.8.2021. During the execution of the OPGW project for the State Sector under Fibre Optics Communication System (Additional Requirement), based on the PSTCL's request, some additional links were incorporated in this project due



to the connectivity requirement. These additional OPGW links were discussed with PSTCL in various meetings.

- b. Additional requirement of DCPS and BB given by PSTCL: As per the 14<sup>th</sup> TeST meeting dated 17.12.2018, it was mentioned that 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries) were also required, which were to be procured and installed by the Petitioner, as has been done for other Sub-stations.
- c. RoW Issues: As per the 16<sup>th</sup> TeST meeting dated 14.11.2019, the remaining 4.71 km of 220 kV Jamsher-Jadla link for laying of OPGW was pending for more than two and a half years due to severe RoW issues. The said issues were raised in the 15<sup>th</sup> MoM dated 7.8.2019, and PSTCL was required to take up the issue with the civil administration/SDMs for resolving the RoW issue. The Petitioner informed that these 14 more links could not be completed and PSTCL is also suffering from further data unavailability. PSTCL stated that they would arrange the meeting with the civil administration and requested the Petitioner to ensure the vendor's availability at that time. The Petitioner has also submitted all the documents pertaining to RoW issues as follows:

| Date      | From                     | To                                        | Remarks                                        |
|-----------|--------------------------|-------------------------------------------|------------------------------------------------|
| 27.1.2018 | Dy. Manager<br>POWERGRID | Tendot                                    | E-mail regarding RoW in Jamsher Jadala Link    |
| 29.1.2018 | Dy. Manager<br>POWERGRID | AO,<br>Transmission<br>PSTCL<br>Jalandhar | Letter regarding RoW in Jamsher - Jadala Link. |
| 12.3.2018 | Dy. Manager<br>POWERGRID | Tendot                                    | E-mail regarding ROW in Jamsher Jadala Link    |



| Date       | From                                             | To                                           | Remarks                                                                                                                                                            |
|------------|--------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.3.2018  | Dy. Manager<br>POWERGRID                         | Add. S.E.<br>Communication,<br>PSTCL Patiala | Letter regarding RoW in 3 no. links. Jadala -RTP, Jamsher - Jadala & Fatehgarh Churian - Civil Line Links.                                                         |
| 19.3.2018  | Dy. Manager<br>POWERGRID                         | Tendot                                       | RoW in Fatehgarh Churian - Civil Lines Link                                                                                                                        |
| 4.4.2018   | Dy. Manager<br>POWERGRID                         | Add. S.E.<br>PSTCL, Patiala                  | E-mail/Reminder regarding RoW in 3 no. links. Jadala - RTP, Jamsher - Jadala & Fatehgarh Churian- Civil Line Links.                                                |
| 12.4.2018  | Chief<br>Manager<br>POWERGRID                    | Add. S.E.<br>PSTCL, Patiala                  | Letter regarding RoW in 4 no. links. Jadala - RTP, Jamsher - Jadala, Fatehgarh Churian - Civil Line & Lalton Kalan - Sahnewal Links.                               |
| 22.5.2018  | Dy. Manager<br>POWERGRID                         | DM,<br>Nawan Shahr,<br>Punjab                | Request for Police Protection for execution of work in Jamsher Jadala Link.                                                                                        |
| 26.6.2018  | District<br>Magistrate<br>Nawan Shahr,<br>Punjab | Dy. Manager<br>POWERGRID                     | Letter from District Magistrate Shaheed Bhagat Singh Nagarh regarding release of unpaid compensation to farmers pending since construction of Jamsher Jadala Line. |
| 23.7.2018  | Dy. Manager<br>POWERGRID                         | DM<br>Nawan Shahr,<br>Punjab                 | Letter to District Magistrate regarding assurance for release of compensation to farmers for damage to crop occurred during laying of OPGW.                        |
| 26.12.2018 | Sr. DGM,<br>POWERGRID                            | DC, Nawan<br>Shahr, Punjab                   | Request for Police Protection for execution of work in Jamsher Jadala Link.                                                                                        |
| 13.9.2019  | Dy. Manager<br>POWERGRID                         | Add. S.E.<br>PSTCL, Patiala                  | Mail to PSTCL regarding clearing of RoW/Short closing of Tendot work.                                                                                              |
| 24.10.2019 | Dy. Manager<br>POWERGRID                         | Add. S.E.<br>PSTCL, Patiala                  | Various E-mails regarding clearing ROW in 220 kV Jadla Goraya and Jadla Jamsher links.                                                                             |
| 4.11.2019  | Dy. Manager<br>POWERGRID                         | Add. S.E.<br>PSTCL, Patiala                  | Mail regarding deployment of PSTCL officer for resolving the RoW                                                                                                   |
| 22.11.2019 | S.E.<br>PSTCL,<br>Patiala                        | Dy. Manager<br>POWERGRID                     | Regarding deployment of gangs after clearing RoW in 220 kV Jadla Goraya and Jadla Jamsher links.                                                                   |
| 25.11.2019 | Sr. DGM,<br>POWERGRID                            | S.E.<br>PSTCL, Patiala                       | RoW in 220 kV Jadla Goraya and Jadla Jamsher links to be resolved by PSTCL as per Punjab Adminstartion.                                                            |
| 30.12.2019 | Prem Power<br>Construction                       | Dy. Manager<br>POWERGRID                     | Mail regarding work started after RoW clearance by Prem Power Construction.                                                                                        |

- d. In line with the MoM with PSTCL dated 12.4.2022, the Petitioner mentioned that the issues were faced in the integration of nodes with PSTCL Ablowal due to routing the same through third-party equipment. To resolve this issue of integration with already existing third-party equipment, the 220 kV RTP-



Jadla Fibre Link was commissioned by the Petitioner on 4.4.2022. After commissioning of the RTP-Jadla Fibre Link, the following nodes were integrated with PSTCL, SLDC, Ablowal on 7.4.2022:

| SL | Name of Station     | SL | Name of Station     |
|----|---------------------|----|---------------------|
| 01 | Mohali 220 kV       | 12 | Derabassi 220 kV    |
| 02 | GGSTP Ropar         | 13 | Jadla 220 kV        |
| 03 | Ghulal 220 kV       | 14 | Gorava 220 kV       |
| 04 | Gaunsgarh 220 kV    | 15 | ASPH-I 132 kV       |
| 05 | Kohara 220 kV       | 16 | ASPH- II 132 kV     |
| 06 | Sahnewal 220 kV     | 17 | Anandpur Sahib      |
| 07 | Lalton Kalan 220 kV | 18 | Moga 132 kV         |
| 08 | Doraha 132 kV       | 19 | Talwani Bhai 220 kV |
| 09 | Shamashnur 132 kV   | 20 | Botianwala 220 kV   |
| 10 | Ropar 132 kV        | 21 | Mastewala 220 kV    |
| 11 | Lalru 220 kV        | 22 | Bilaspur 132 kV     |

- e. SDH in the scope of PSTCL: As per the Minutes of Meeting (MoM) with PSTCL dated 12.4.2022, point 02, connectivity of 132 kV Kapurthala- Jal-I (BBMB) with LILO at PIMS, Children Park, Science City were integrated with PSTCL Jamsheer on 104 protocol through ECI SDH equipment. There was no fibcom SDH proposed at Jamsheer in this package. Hence, as suggested by PSTCL, fibcom SDH from Children Park was shifted to Jamsheer and connected with Ablowal through Goraya for proper integration. Accordingly, the following stations were integrated with PSTCL, SLDC, and Ablowal through Jamsheer:

- i. Kapurthala 132 kV
- ii. Science City 132 kV
- iii. PIMS 132 kV
- iv. Jalandhar- 1 220 kV BBMB
- v. Jamsheer 220 kV
- vi. Rihana Jattan 220 kV
- vii. Mahilpur 220 kV



f. In line with the MoM with PSTCL dated 21.4.2022, after commissioning of the Sultanpur Patti Chola Sahib Link, 10 nodes mentioned below were also integrated with PSTCL SLDC, Ablowal and NMS at the Petitioner's Company, Jalandhar.

- i. 220 kV Rashina Sub-station
- ii. 220 kV Varpal Sub-station
- iii. 220 kV Butari Sub-station
- iv. 132 kV Verka Sub-station
- v. 220 kV Udhoke Sub-station
- vi. 220 kV Waldala Grantiah
- vii. Shri Hargobindpur Sub-station
- viii. MPH-IV, III, II, I.
- ix. Kotli Surat Mali
- x. Fatehgarh Churian

77. The Petitioner has also submitted the reasons for link-wise delay as under:

**Link-1: 132 kV Jalandhar-I-Kapurthala, Delay 616 days (Length: 33.93 km)**

The integration of the said link with the SLDC was affected due to RoW issues and the delay in the availability of the SDH, which fell within PSTCL's scope. End-to-end testing of the link was completed by October 2019, and the link was commissioned on 9.11.2019. Combined COD was declared w.e.f. 2.1.2020

**Link-2: 132 kV Varpal – Verka, Delay: 669 days (Length: 13.09 km)**

As per para 77(b) above, 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type) batteries were required for 220 kV Varpal under the additional requirement of DCPS and BB given by PSTCL. This addition in the scope of work resulted in the delay in the commissioning of the 132 kV Varpal-Verka link. Additionally, a delay occurred in the supply from vendors for all



associated activities, including the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment.

**Link-3: 220 kV Butari – Verpal, Delay: 669 days (Length: 31 km)**

As per para 77(b), 48 V, 15 Amp CPS battery charges and 200 AH VRLA type batteries were required for 220 kV Verpal under the additional requirement of DCPS and BB given by PSTCL.

**Link-4: 132 kV Bilaspur – Doraha – Sahnewal, Delay: 613 days, (Length: 19.6 km)**

As per para 77(a) above, LILO of Sahnewal 220 – GGSSTP 220 at Kohara 220 and LILO of Sahnewal 220 – GGSSTP 220 at Gaunsgarh 220 were an addition to the scope of the work. These newly added links were a part of the network for data integration to SLDC from Bilaspur 132 – Doraha 132 – Sahnewal. Further, there was a delay in supply from vendors for all associated activities such as the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, supply & installation of communication equipment.

**Link-5: 220 kV Wadala Granthian - FC Churian, Delay: 669 days, (Length: 33.9 km)**

As per para 77(a) above, the scope was revised by the PSTCL. LILO of Wadala Granthian 220 kV - FC Churian 220 at Kotli Surat was also added. Therefore, the integration with the SLDC got delayed. Further, there was a delay in supply from vendors for all associated activities, such as the supply of OPGW & hardware accessories, the installation & commissioning of



OPGW accessories, and the supply & installation of communication equipment.

**Link-6: 220 kV FC Churian - Civil Lines Amritsar, Delay: 669 days, (Length: 21.6 km)**

As per para 77(a) above, the scope of work was revised by PSTCL. Further, there was a delay in supply from vendors for all associated activities, such as the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment.

**Link-7: 132 kV Muktsar – Muktsar, Delay: 637 days, (Length: 2 km)**

As per para 77(a) above, the scope of work was revised by PSTCL. The integration with SDLC was delayed due to the revision of the scope by PSTCL, wherein, according to para (a) above, LILO of 220 kV Muktsar 220 – Bathinda at Badal & Malout was added, as a result, the connectivity of the main link Muktsar - Muktsar with SLDC was affected. Further, there was a delay in supply from vendors for all associated activities such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment.

**Link-8: 132 kV Moga I – Moga, Delay: 607 days, (Length: 7.4 km)**

The commissioning of the said link was affected due to severe RoW issues and non-availability of the shutdown.

**Asset-6**

78. The delay in commissioning of Asset-6 is due to the following reasons:



**Link-1: 132 kV MPH-I-II-III-IV - Shri Har Gobindpur - Wadala Granthian (5 Links), Delay: 395 days, (Length: 80 km)**

The delay was due to the revision in the scope of work by PSTCL as per para 77(a) above. Further, there was a delay in supply from vendors for all associated activities, such as the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment.

**Link-2: 220 kV Civil Lines Amritsar – Khassa, Delay: 417 days, (Length: 33 km)**

The integration with SDLC was delayed due to the revision in the scope by PSTCL according to para 77(a) above. LILO of 220 kV Civil Lines Amritsar - Khassa at Chugwan was added, resulting in the connectivity of the main link 220 kV Civil Lines Amritsar - Khassa with SLDC being affected. Therefore, the integration with the SLDC got affected. Further, there was a delay in supply from vendors for all associated activities, such as the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment.

**Asset-7**

79. There is a delay of approximately 612 days in the commissioning of Asset-7 on account of severe RoW issues at various locations. The Petitioner took up the RoW issue, and after several discussions with the landowners, the work could be taken up, which ultimately delayed the completion of OPGW works. Further, the non-availability of a shutdown was also a contributing factor in the delayed commissioning of the communication asset. Moreover, the OPGW laying work was impacted due to adverse



weather/rainfall/fog during December 2018 to February 2019 at the HPSEBL site since all links are situated in hilly areas.

#### **Asset-8**

80. There is a delay of approximately 671 to 979 days in the commissioning of Asset-8 on account of severe RoW issues at various locations. The RoW issue was taken up by the Petitioner, and after several discussions with the landowners, the work could be taken up, which ultimately delayed the completion of OPGW works. Further, non-availability of shutdown was also a contributing factor in delaying the commissioning of the asset. Moreover, OPGW laying work was impacted due to bad weather/rainfall/fog during December 2018 to February 2019 at the HPSEBL site since all links are situated in hilly areas.

#### **Asset-9**

81. The reasons to substantiate the time over-run with respect to Asset-9 are as under:

##### **a. Delay due to non-availability of Permit to Work (PTW)**

- i. OPGW installation works were carried out in several transmission lines of 765/400/220 voltage level under the establishment of OPGW communication network for the ULDC. These works were being carried out under live line conditions by changing the auto reclose relay setting from auto to non-auto mode, and for this purpose, the respective control centre, i.e., NLDC/RLDC/SLDCs, issues codes based on the OCC approval. During the OPGW laying works under this project, it was observed that the NLDC and RLDC were reluctant to issue code in view of perceived grid security, even though the OPGW installation work was carried out in live line conditions and approvals were



obtained in the monthly OCC meetings. PTW had been denied by the NLDC and RLDC on several occasions, especially in the 400 kV Bhinmal - Zerda line and the Sikar - Neemrana line on some pretext or the other.

- ii. PTW was denied on several occasions in the 400 kV Bhinmal - Zerda line due to the perceived grid security and criticality of the NR-WR inter-connector transmission line. In this regard, various communications were exchanged between the Petitioner and POSOCO to confirm the delay in work. Further, the Bhinmal - Zerda line was very critical to meet the power demand of the NR-WR. During the outage of Agra station due to a severe dust storm in the intervening night of 2<sup>nd</sup> and 3<sup>rd</sup> May 2018, multiple towers collapsed and equipment got damaged. Non-auto permission was denied by the Grid Operator (NLDC / NRLDC) for more than 5 months. The Petitioner had reported this issue several times during the OPGW installation.
- iii. In some cases, the shutdown was required in stretches where the earth wire was not available, or was in poor condition, or there was a breakdown of the earth wire during installation. However, a shutdown was not available immediately when these situations were encountered, as NRLDC on several occasions insisted on prior OCC approval of the shutdown which was not possible in the instant case. This led to manpower idling, stoppage of work and demobilisation of manpower due to uncertainty in getting the shut-down. Approval for auto recloser was granted during the 147<sup>th</sup>, 148<sup>th</sup>, and 149<sup>th</sup> OCC meetings. However, despite the approval, the work permit was denied by NRLDC. The Petitioner had raised concern multiple times through letters dated 10.5.2018, 16.5.2018, 11.7.2018, 19.7.2018, 23.7.2018, 6.8.2018, 14.8.2018, 16.8.2018 and



11.9.2018. Consequently, all teams/gangs left the site, and subsequent redeployment required significant effort. Additionally, issues related to RoW arose due to OPGW cables, drums, and materials left at the site and paddy fields, all in the absence of proper work permits.

- b. **Severe RoW issue during OPGW laying:** Severe RoW issues were reported in the Hissar - Bhiwadi, Sikar - Neemrana, and Agra - Bassi lines. The matter was brought to the attention of the district administration, and police protection was secured to facilitate the completion of the works. The OPGW links were completed at different times, and SAT/DOCO letters were submitted for record by the Petitioner. To avoid multiple Petitions, a combined COD was filed. The delay, as evident from the above, was beyond the control of the Petitioner and the same may be condoned in line with Regulation 12(2)(i) of the 2014 Tariff Regulations under “uncontrollable factors”.

#### **Asset-10**

82. The link-wise delay reasons with respect to Asset-10 are as under:

**Link-1: 220 kV Ablowal - Rajila, Delay 655 days, Length: 28.866 km:**

The scope was revised by PSTCL. LILO of 220 kV Ablowal 220 - Rajila 220 at Passiana was added. The connectivity of main link Ablowal 220 - Rajila 220 with the SLDC was affected and the integration with the SLDC also got delayed. Also, all the associated activities such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment by the various vendors got delayed.



**Link-2: LILO of 220 kV Rajila - Patran at Kakrala, Delay: 1207 Days, Length: 3.389 km:**

The scope was revised by PSTCL. The addition of the link were regularized/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities such as supply of the OPGW & hardware accessories, installation & commissioning of the OPGW accessories, supply & installation of the communication equipment by various vendors got delayed due to the scope addition at later stage.

**Link-3: LILO of 220 kV Rajila - Patran at Patran, Delay 1218 days, Length: 6 km :**

The scope was revised by PSTCL. The addition of link was regularized/approved by the NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities such as the supply of the OPGW & hardware accessories, installation & commissioning of the OPGW accessories, supply & installation of the communication equipment by various vendors got delayed due to the scope addition at later stage.

**Link-4: LILO of 220 kV Wadala Granthian- Verpal at Udhoke, Delay: 1233 days, Length: 3 km:**

48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries) were required for Verpal Sub-station and Chola Sub-station under the additional requirement of DCPS and BB given by PSTCL. It is further mentioned that the LILO of Sultanpur-Patti at Chola was added during TEST MOM 14.

**Link-5: 220 kV Patran - Sunam, Delay: 655 days, Length 35.66 km:**

The scope was revised by PSTCL. LILO of 220 kV Patran 220 - Sunam 220 at Bangan 220 was added in TEST MOM 14 due to which integration of the main link Patran 220 - Sunam 220 got affected and integration with the SLDC also got



delayed. Also, all the associated activities such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment by various vendors got delayed. Further, 48 V, 15 Amp DCPS battery chargers and 200 AH VRLA type batteries was required for 6 Nos. Sub-stations under Additional requirement of DCPS and BB given by PSTCL.

Additional requirement of DCPS and BB given by PSTCL: In line with the TEST MOM 14 Clause 2.3.3 A2, wherein, it has been mentioned that 48 V, 15 Amp DCPS battery chargers and 200 AH VRLA type batteries for 220 kV Bangan Sub-stations are required, too, for PDH/SDH which may be procured and installed by the Petitioner as has been done for other Sub-stations under package 1 a/Package IV package

**Link-6: LILO of 220 kV Patran - Sunam at Bangan, Delay: 1264 days, Length: 13 km:**

The scope was revised by PSTCL. The addition of the link was regularised/approved by the NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All associated activities, including the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment from various vendors, were delayed due to a scope addition at a later stage. Further, 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries were required for Bangan Sub-stations under the additional requirement of DCPS and BB given by PSTCL.

**Link-7: 220 kV Nabha - Phaggan Majra, Delay 1092 days, Length: 33 km:**

The delay of approximately 612 days in the commissioning of the subject link was on account of the severe RoW issues at various locations. The RoW issues



at these various locations were taken up by the Petitioner itself, and after several discussions with land owners, the work could be taken up, which ultimately delayed the completion of OPGW works. The non-availability of the shutdown was also a contributing factor to the delay of commissioning of the communication asset.

### **Asset-11**

83. The link-wise delay reasons with respect to Asset-11 are as under:

**Link-1: 132 kV IGC Bathinda - GNDTP 220, Delay 425 days, Length: 17 km:**

The delay of approximately 612 days in commissioning of the subject link was on account of the severe RoW issues at various locations. The RoW issues at those locations were taken up by the Petitioner itself, and after several discussions with landowners, the work could be taken up, which ultimately delayed the completion of OPGW works. The non-availability of a shutdown was also a contributing factor to the delay in the commissioning of the communication asset.

**Link-2: LILO of 220 kV Wadala Granthian - FC Churian at Kotli Surat Mali, Delay: 1238 days, Length 9.08 km:**

The scope was revised by PSTCL. The addition of the link was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors, got delayed due to the scope addition at a later stage.



**Link-3: LILO of 220 kV FC Churian - Civil Lines Asr at Majitha, Delay: 1334 days, Length: 5.44 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors, got delayed due to the scope addition at a later stage. Further, there was a problem with the battery charger at Khassa Sub-station, which was under the scope of PSTCL. The Petitioner requested PSTCL to power up the Khassa SDH to integrate 132 kV Civil Lines and 220 kV Majithia.

**Link-4: LILO of 220 kV Civil Lines Amritsar - Khassa at Chugawan, Delay: 1239 days, Length: 5.484 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors, got delayed due to the scope addition at a later stage.

**Link-5: 220 kV Lalton Kalan – Pakhowal, Delay: 1026 days, Length: 15.786 km:**

The delay of approximately 612 days in commissioning the subject link was due to severe RoW issues at various locations. The RoW issues at those locations were taken up by the Petitioner itself, and after several discussions with the land owners, the work could be taken up, which ultimately delayed the completion of



the OPGW works. The non-availability of the shutdown was also a contributing factor to the delay of commissioning of the communication asset.

**Link-6: 220 kV Sunam – Mansa, Delay: 426 days, Length: 39.898 km:**

The scope was revised by PSTCL. The LILO of 220 kV Sunam 220 - Mansa at Jhunir 220 was added in TEST MoM 14. As a result, all the associated activities such as the supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment by various vendors, got delayed.

**Asset-12**

84. Link-wise delay reasons with respect to Asset 12 are as under:

**Link-1: LILO of 132 kV Jalandhar - I - Kapurthala at Children Park, Delay: 1496 days, Length: 2.424 km:**

The scope was revised by PSTCL because of the LILO of some lines, the addition of new links and new Sub-stations. As a result, all associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment by various vendors, got delayed. Further, the integration of the said link with SLDC was affected due to the RoW issues at Jamsher-Jadla and the delay in the availability of SDH at Jamsher, which was under the scope of PSTCL. The commissioning of the link was also delayed due to the RoW issues. End-to-end testing of the link was completed by March 2022, and the link was commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f 30.4.2022.



**Link-2: LILO of 132 kV Jalandhar - I - Kapurthala at PIMS, Delay: 1496 days, Length: 0.408 km:**

The scope was revised by PSTCL because of the LILO of some lines, the addition of new links and new Sub-stations. As a result, all the associated activities, such as supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. Further, the integration of the said link with the SLDC was affected due to the RoW issues at Jamsher-Jadla and the delay in the availability of the SDH at Jamsher which was under the scope of PSTCL. The commissioning of the link was also delayed due to the RoW issues. End-to-end testing of the link was completed by March 2022, and the link was commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-3: LILO of 132 kV Jalandhar - I - Kapurthala at Science City, Delay: 1496 days, Length: 1.909 km:**

PSTCL revised the scope due to the LILO of some lines, the addition of new links, and the construction of new Substations. As a result, all associated activities, including the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment by various vendors, were delayed. Further, the integration of said link with SLDC was affected due to the RoW issues at Jamsher-Jadla and the delay in the availability of the SDH at Jamsher, which was under the scope of PSTCL. The commissioning of the link was also delayed due to the RoW issues. End-to-end testing of the link was completed by March 2022,



and the link was commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-4: LILO portion of Jamsher - Jadla at Goraya, Delay: 1496 days, Length: 7.828 km:**

The scope was revised by PSTCL because of the LILO of some lines, the addition of new links and new Sub-stations. As a result, all associated activities, including the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment by various vendors, were delayed. Further, the integration of the said link with SLDC was affected due to the RoW issues at Jamsher-Jadla and the delay in the availability of SDH at Jamsher, which was under the scope of PSTCL. The commissioning of the link was also delayed due to the RoW issues. End-to-end testing of links was completed by March 2022, and the link got commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-5: 220 kV Jadla - GGSSTP(RTP), Delay: 1493 days, Length: 45.185 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by the NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All associated activities, including the supply of OPGW & hardware accessories, the installation & commissioning of OPGW accessories, and the supply & installation of communication equipment from various vendors, were delayed due to the addition of scope at a later stage. End-to-end testing of the link was completed by March 2022, and the link was commissioned on 7.4.2022 with a delay of 1493 days. The combined COD was declared w.e.f. 30.4.2022.



**Link-6: 220 kV Sultanpur – Patti, Delay: 1020 days, Length: 37.972 km:**

The scope was revised by PSTCL because of the LILO of some lines, the addition of new links and new Sub-stations. The LILO of 220 kV Sultanpur 220 - Patti 220 at Chola Sahib was added, which affected the connectivity of the main link with the SLDC. The integration got delayed. Also, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. End-to-end testing of the link was completed by December 2020, and the link was commissioned on 17.12.2020 with a delay of 1020 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-7: LILO of 220 kV Sultanpur - Patti at Chola Sahib, Delay: 1020 days, Length: 4.672 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to scope addition at a later stage. The 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries) were required for the 220 kV Chola Shahib Sub-station under the additional requirement of DCPS and BB given by PSTCL. The end-to-end testing of the link was completed by December 2020, and the link got commissioned on 17.12.2020 with a delay of 1020 days. The combined COD was declared w.e.f. 30.4.2022.



**Link-8: 220 kV Rajila - Patran, Delay: 1218 days, Length: 18.841 km:**

The scope was revised by PSTCL. The LILO of 220 kV Rajila 220 - Patran 220 at Kakrala was added in TEST MOM 14, and the connectivity of the main link with the SLDC was affected. The integration got delayed. Also, all the associated activities, such as the supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end-to-end testing of the link was completed by July 2021, and the link was commissioned on 3.7.2021 with a delay of 1218 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-9: 220 kV Lalton kalan – Sahnewal, Delay: 549 days, Length: – 74.180 km:**

The scope was revised by PSTCL. Lalton kalan 220 – Sahnewal - GGSSTP with LILO at Kohara, Gaunsgarh and Ghulal was added in TEST MOM 14, and the connectivity of the main link with the SLDC was affected. The integration got delayed. Also, all the associated activities, such as supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end-to-end testing of the link was completed by September 2019, and the link was commissioned on 3.9.2019 with a delay of 549 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-10: 220 kV Sahnewal - GGSSTP, Delay: 1315 days, Length: 2.843 km:**

The scope was revised by PSTCL. Lalton kalan 220 – Sahnewal -GGSSTP with LILO at Kohara, Gaunsgarh and Ghulal was added in TEST MOM 14, and the connectivity of the main link with the SLDC was affected. The integration got



delayed. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end-to-end testing of the link was completed by October 2021, and the link was commissioned on 8.10.2021 with a delay of 1315 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-11: LILO of 220 kV Sahnewal - GGSSTP LILO Point – Koharam**  
**Delay:1333 days, Length: 16.685 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. The end-to-end testing of the link was completed by October 2021, and the link was commissioned on 26.10.2021 with a delay of 1333 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-12: LILO of 220 kV Sahnewal - GGSSTP at Gaunsgarh, Delay: 1333**  
**days, Length– 5.634 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. The end-to-end testing of the link was completed by



October 2021, and the link was commissioned on 26.10.2021 with a delay of 1333 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-13: LILO of 220 kV Sahnewal- GGSSTP LILO Point 189 – Ghulal, Delay: 1025 days, Length–45.360 km:**

The scope was revised by PSTCL. Lalton kalan 220 – Sahnewal - GGSSTP with LILO at Kohara, Gaunsgarh and Ghulal was added in the TEST MOM 14, and the connectivity of the main link with SLDC was affected. The integration got delayed. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end-to-end testing of the link was completed by December 2020, and the link was commissioned on 22.12.2020 with a delay of 1025 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-14: 220 kV Jamsher – Mahilpur, Delay: 1496 days, Length-5.746 km:**

The scope was revised by PSTCL. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The commissioning of the link was also delayed due to the RoW issues. The end-to-end testing of the link was completed by March 2022, and the link got commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-15: LILO of 220 kV Jamsher - Mahilpur at Rehana Jattan, Delay: 1496 days, Length– 34.448 km:**

The scope was revised by PSTCL. All the associated activities, such as supply of the OPGW & hardware accessories, installation & commissioning of OPGW



accessories, supply & installation of the communication equipment by various vendors got delayed. The commissioning of the link was also delayed due to the RoW issues. The end-to-end testing of the link was completed by March 2022, and the link was commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-16: 220 kV Mohali I - Dera Bassi, Delay: 1102 days, Length: 34.448 km.**

The scope was revised by PSTCL. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end-to-end testing of the link was completed by February 2021, and the link got commissioned on 9.3.2021 with a delay of 1102 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-17: LILO of 220 kV Mohali I - Dera Bassi at Lalru, Delay: 1102 days Length: 16.835 km:**

The scope was revised by PSTCL. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end-to-end testing of the link was completed by February 2021, and the link got commissioned on 9.3.2021 with a delay of 1102 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-18: 132 kV ASPH-I - ASPH II, Delay: 424 days, Length: 10.320 km:**

The scope was revised by PSTCL. LILO of ASPH-I 132 kV - ASPH II 132 kV at Anandpur Sahib was added in the TEST MOM 14, and the connectivity of the main link with SLDC was affected. The integration got delayed. All the associated



activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries were required for the 132 kV ASPH-I Sub-station under the additional requirement of DCPS and BB given by PSTCL. The end-to-end testing of the link was completed by April 2019, and the link got commissioned on 1.5.2019 with a delay of 424 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-19: Malaout - GNDTP, Delay: 651 days, Length: 42.060 km:**

The scope was revised by PSTCL. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The commissioning of the link was also delayed due to the RoW issues. The end-to-end testing of the link was completed by December 2019, and the link was commissioned on 14.12.2019 with a delay of 651 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-20: 220 kV Jamsher 220 – Jadla, Delay: 1496 days, Length: 67.326 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to scope addition at a later stage. The commissioning of the link was also delayed due to



the RoW issues. The end-to-end testing of the link was completed by March 2022, and the link got commissioned on 7.4.2022 with a delay of 1496 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-21: 132 kV Mana Singh Wala – Ferozepur, Delay: 523 days, Length: 11.50 km:**

The scope was revised by PSTCL. LILO of Talwandi Bhai - Ferozpur at Sadiq was added in the TEST MOM 14, which affected the connectivity of Mana Singh Wala 132 kV - Ferozepur 220 kV for integration to SLDC. The integration got delayed. All associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end to end testing of the link was completed by July 2019 and the link got commissioned on 8.8.2019 with a delay of 523 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-22: 132 kV Ropar – GGSSTP, Delay: 599 days, Length: 20 km:**

The scope was revised by PSTCL. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end to end testing of the link was completed by October 2019 and the link got commissioned on 23.10.2019 with a delay of 599 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-23: 132 kV Shamaspur – Ghulal, Delay: 597 days, Length: 7 km:**

The scope was revised by PSTCL. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of



OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end to end testing of the link was completed by October 2019 and the link got commissioned on 21.10.2019 with a delay of 597 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-24: LILO of 132 kV ASPH-I- ASPH II at Anandpur Sahib, Delay: 1018 days, Length: 2.992 km:**

The scope was revised by PSTCL. The addition of links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to scope addition at a later stage. 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries were required for 132 KV ASPH-I Sub-station under additional requirement of DCPS and BB given by PSTCL. The end to end testing of the link was completed by December 2020 and the link got commissioned on 15.12.2020 with a delay of 1018 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-25: LILO of 132 kV Malaout- GNDTP at Balluana, Delay: 1433 days, Length: 0.150 km:**

The delay of approximately 1433 days in the commissioning of the subject link was on account of the severe RoW issues at various locations. The RoW issues at those various locations were taken up by the Petitioner itself, and after several discussions with the land owners, the work could be taken up, which ultimately delayed the completion of the OPGW works. The non-availability of the shutdown was also a contributing factor in the delay of commissioning of the



communication asset. The end to end testing of the link was completed by January 2022 and the link got commissioned on 3.2.2022 with a delay of 1433 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-26: LILO of 132 kV Malaout - GNDTP at Gidderbaha, Delay: 935 days Length– 5.164 km:**

The delay of approximately 935 days in commissioning of the subject link was on account of the severe RoW issues at various locations. The RoW issues at those various locations were taken up by the Petitioner itself, and after several discussions with the land owners, the work could be taken up, which ultimately delayed the completion of the OPGW works. The non-availability of the shutdown was also a contributing factor to the delay in the commissioning of the communication asset. The end-to-end testing of the link was completed by September 2020, and the link was commissioned on 23.9.2020 with a delay of 935 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-27: LILO Verpal - Verka at Malmandi, Delay: 1232 days, Length: 2.153 km:**

48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries were required for 220 kV Verpal under the additional requirement of DCPS and BB given by PSTCL. This requirement of additional equipment by PSTCL resulted in the delay in commissioning of the Verpal -Verka link and LILO of Verpal - Verka at Malmandi. All the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed. The end to end testing of the link was completed by July 2021 and the



link got commissioned on 17.7.2021 with a delay of 1232 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-28: 220 kV Moga - Talwandi Bhai, Delay: 1153 days, Length: 22.948 km:**

The delay of approximately 1153 days in commissioning of the subject link was on account of the severe RoW issues at various locations. The RoW issues at these various locations were taken up by the Petitioner itself, and after several discussions with the land owners, the work could be taken up, which ultimately delayed the completion of OPGW works. The non-availability of the shutdown was also a contributing factor in the delay of commissioning of the communication asset. The end to end testing of the link was completed by April 2021 and the link got commissioned on 29.4.2021 with a delay of 1153 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-29: 220 kV Talwandi Bhai – Ferozpur, Delay: 1046 days, Length: 31.526 km:**

The scope was revised by PSTCL. LILO of Talwandi Bhai- Ferozpur at Sadiq was added in the TEST MOM 14, which affected the connectivity of the main link 220 kV Talwandi Bhai - Ferozpur. The integration got delayed. Also, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end to end testing of the link was completed by January 2021 and the link got commissioned on 12.1.2021 with a delay of 1046 days. The combined COD was declared w.e.f. 30.4.2022.



**Link-30: LILO of Talwandi Bhai- Ferozpur at Sadiq, Delay: 1518 days, Length: 23.605 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. In line with the MOM with PSTCL dated 12.4.2022, the issues were faced in the integration of the nodes with PSTCL Ablawal due to routing the same through third-party equipment. To resolve this issue of integration with already existing third-party equipment, the 220 kV RTP-Jadla Fibre Link was commissioned by Power Grid on 4.4.2022. After the commissioning of the RTP-Jadla Link, Talwani Bhai 220 kV nodes were integrated with PSTCL, SLDC, and Ablawal on 7.4.2022. The end to end testing of the link was completed by April 2022 and the link was commissioned on 29.4.2022 with a delay of 1518 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-31: LILO of 220 kV Ablawal - Rajila at Passiana, Delay: 658 days, Length: 1.102 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. The end-to-end testing of the link was completed by



December 2019, and the link was commissioned on 21.12.2019 with a delay of 658 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-32: LILO of 220 kV Sunam - Mansa at Jhunir, Delay: 657 days, Length: 33.585 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply and installation of the communication equipment from various vendors got delayed due to scope addition at a later stage. The 48 V, 15 Amp DCPS battery chargers and 200 AH VRLA type batteries were required for 220 kV Jhunir under the additional requirement of DCPS and BB given by PSTCL. The commissioning of the link was also delayed due to the RoW issues (Jamser Jadla and 14 Links). The end to end testing of the link was completed by December 2019 and the link got commissioned on 20.12.2019 with a delay of 657 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-33: 220 kV Mansa - GHTP, Delay: 635 days, Length: 36.910 km:**

The scope was revised by PSTCL. LILO of 220 kV Mansa 220 - GHTP at Talwandi sabo 220 & Dhanaula was added in the TEST MOM 14. As a result, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end to end testing of the link was completed by November 2019 and the link got commissioned on 28.11.2019 with a delay of 635 days. The combined COD was declared w.e.f. 30.4.2022.



**Link-34: LILO of 220 kV Mansa - GHTP at Dhanoula, Delay: 932 days, Length: 37.890 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition on the later stage. The end to end testing of the link was completed by September 2020 and the link got commissioned on 20.9.2020 with a delay of 932 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-35: LILO Portion of GHTP - Mansa at Talwandi Sabo, Delay: 997 days, Length: 29.122 km**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. The end to end testing of the link was completed by November 2020 and the link got commissioned on 24.11.2020 with a delay of 997 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-36: LILO Portion of GHTP 220 - Mansa at Mour, Delay: 1518 days, Length: 9.475 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the



communication equipment from various vendors got delayed due to the scope addition at a later stage. The end-to-end testing of the link was completed by April 2022, and the link was commissioned on 29.4.2022 with a delay of 1518 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-37: 220 kV Muktsar – Bathinda, Delay: 1433 days, Length: 50.585 km:**

The scope was revised by PSTCL. LILO of 220 kV Muktsar 220 – Bathinda at Badal & Malout was added during the TEST MOM 14, and the connectivity of the main link with the SLDC was affected. The integration got delayed. Also, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The end to end testing of the link was completed by January 2022 and the link got commissioned on 3.2.2022 with a delay of 1433 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-38: 220 kV Patti - 220 kV Rashiana, Delay: 1505 days, Length: 23.027 km:**

The scope was revised by PSTCL. LILO of 220 kV Sultanpur-Patti-Rashaina at Chola Sahib was added during the TEST MOM 14, and the connectivity of Patti-220 kV Rashiana with the SLDC was affected. The integration got delayed. As a result, all the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. The 48 V, 15 Amp DCPS battery chargers and 200 AH VRLA type batteries were required for the 220 kV Rashiana Sub-station under the additional requirement



of DCPS, and PSTCL gave BB. The commissioning of the link was also delayed due to the RoW issues (Jamser Jadla and 14 Links). The end to end testing of the link was completed by April 2022 and the link was commissioned on 16.4.2022 with a delay of 1505 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-39: LILO of Muktsar - Bathinda at Malout, Delay: 1519 days, Length: 24.035 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18th TeST Meeting, 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. The end to end testing of the link was completed by April 2022 and the link was commissioned on 30.4.2022 with a delay of 1519 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-40: LILO of Muktsar - Bathinda at Badal, Delay: 913 days, Length: 25.457 km:**

The scope was revised by PSTCL. The addition of the links was regularised/approved by NRPC in the 18<sup>th</sup> TeST Meeting dated 9.8.2021. All the associated activities, such as supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors got delayed due to the scope addition at a later stage. The end to end testing of the link was completed by August 2020 and the link was commissioned on 1.9.2020 with a delay of 913 days. The combined COD was declared w.e.f. 30.4.2022.



**Link-41: LILO Portion of Talwandi Bahi - Ferozepur at Botianwala, Delay: 1513 days, Length: 18.723 km:**

The scope was revised by PSTCL. LILO Portion of Talwandi Bahi 220-Ferozepur 220 kV at Botianwala was added during the TEST MOM 14, and the connectivity of the main link with the SLDC was affected. The integration got delayed. Also, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. In line with the MOM with PSTCL dated 12.4.2022, issues were faced in the integration of nodes with PSTCL Ablawal due to routing the same through third-party equipment. To resolve this issue of integration with already existing third-party equipment, 220 kV RTP-Jadla Fibre Link was commissioned by the Petitioner on 4.4.2022. After the commissioning of the RTP-Jadla Link, Talwani Bhai 220 kV nodes integrated with PSTCL, SLDC, Ablawal on 7.4.2022. The end-to-end testing of the link was completed by April 2022, and the link was commissioned on 24.4.2022 with a delay of 1513 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-42: 220 kV Botianwala – Mastewala, Delay: 1154 days, Length: 12.124 km:**

The scope was revised by PSTCL. LILO Portion of Talwandi Bahi 220-Ferozepur 220 kV at Botianwala was added during the TEST MOM 14, which affected the connectivity of 220 kV Botianwala 220 kV – Mastewala to SLDC. The integration got delayed. Also, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got



delayed. The end to end testing of the link was completed by April 2021 and the link was commissioned on 30.4.2021 with a delay of 1154 days. The combined COD was declared w.e.f. 30.4.2022.

**Link-43: LILO of 220 kV Botianwala - Mastewala at Makhu, Delay: 1515 days, Length: 0.120 km:**

The scope was revised by PSTCL. LILO Portion of Talwandi Bahi -Ferozepur at Botianwala was added during the TEST MOM 14, which affected the connectivity of 220 kV Botianwala 220 kV – Mastewala to SLDC. The integration got delayed. Also, all the associated activities, such as the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment by various vendors got delayed. In line with the MOM with PSTCL dated 12.4.2022, issues were faced in the integration of nodes with PSTCL Ablowal due to routing the same through third-party equipment. To resolve this issue of integration with already existing third-party equipment, the 220 kV RTP-Jadla Fibre Link was commissioned by the Petitioner on 4.4.2022 after the commissioning of RTP-Jadla Link, Botianwala 220 kV nodes integrated with PSTCL, SLDC, Ablowal on 7.4.2022. The end to end testing of the link was completed by April 2022 and the link was commissioned on 26.4.2022 with a delay of 1515 days. The combined COD was declared w.e.f. 30.4.2022.

**Asset-13**

85. In various TeST meetings, HPSEBL proposed an additional link to be executed under Project: FOCS (Additional Requirement). The condition of these lines was not good. Further, HPSEB agreed to strengthen these lines. The Petitioner, in various test meetings, submitted that these links may be deleted from the project and may be



included/executed under the upcoming project so that the project may be closed. HPSEB requested not to remove the links from the project: FOCS (Additional Requirement), because of which the completion of the balance work got delayed in the project.

**Link-1: 132 kV Jutogh – Maliana, Delay:1455 days, Length: 18.650 km:**

1. In accordance with the 14<sup>th</sup> TeST MoM dated 17.12.2018 and as per clause 2.1.3.5, discussions were held in previous TeST meetings regarding the laying of OPGW. A total of 654 km of OPGW links were incorporated, including 64.88 km for redundancy in the Central Sector and the remaining for the State Sector, comprising HPSEBL-117.079 km & PSTCL-472.187 km for expansion and redundancy in the networks. These incorporations were made based on requests from the respective constituents. However, formal approval from NRPC/TCC is still pending. The Petitioner has requested that the following links be submitted for kind approval by the TeST sub-committee/NRPC.
2. HPSEBL was required to allocate space for the installation of the NMS server in Jutogh, resulting in a delay in the NMS installation. Subsequently, HPSEBL provided the necessary space in September 2021, and the installation was completed. Additionally, HPSEBL was also obligated to supply 48V D/C power at the 132 kV Maliana Sub-station for the I&C of FOTE, leading to a delay in commissioning for this link. A letter regarding this matter was sent to HPSEBL on 7.6.2021.
3. In accordance with the 18<sup>th</sup> TeST MoM dated 6.5.2020, the representative of the NRPC Secretariat communicated that the Petitioner is currently laying



the OPGW for the State sector under the Fibre Optics Communication System (Additional Requirement). Approximately 155 km of OPGW needs to be laid on 66 kV rail pole structures at HPSEBL. However, due to the poor condition of the tower/earthwire, these structures were considered unsafe. HPSEBL was initially tasked with re-conductoring and strengthening the towers before the Petitioner could proceed with the OPGW installation. According to clause 2.3.3, the Petitioner received a letter from HPSEBL, indicating that 93 km out of the total 155 km have been strengthened. The contract for this work has been awarded to M/s Ten Dot. A total of 9 teams will be deployed in this corridor, with gangs mobilised by the 3<sup>rd</sup> week of August, aiming to complete the work by November 2021. Vide clause 2.3.4, the Petitioner requested that HPSEBL promptly complete the remaining strengthening work on the links to facilitate the overall OPGW laying process and avoid frequent mobilization and demobilization of the gangs.

**Link-2: 66 kV Nogli–Samauli, Delay: 1461 days, Length: 31.390 km:**

Due to the addition of new links, as state required for expansion and redundancy network, the commissioning of the link got delayed. Further, HPSEBL had to strengthen the 66 kV rail pole structures and carry out the reconductoring work so that the Petitioner may carry out the work of laying OPGW simultaneously. HPSEBL requested not to delete the links (approximately 155 km) from the scope of the project.

- **Shutdown issues:**

The Petitioner has submitted that as per the 19<sup>th</sup> TeST MoM dated 7.3.2022, the representative of the Petitioner stated that the strengthening and re-



conducting are still pending on some lines at HPSEBL's end. The Petitioner indicated that they have not been receiving timely and continuous shutdowns on certain lines, which is leading to delays in OPGW laying work. HPSEBL reported that strengthening works are pending only on specific lines and have been completed on most of the lines. Regarding the shutdown issues, HPSEBL did not permit a shutdown due to the load patterns on the Jeori-Nogli line, where an alternate source was unavailable. However, they assured that the shutdown would be facilitated by mid-April once an alternate generation source is available. Continuous shutdown cannot be provided on the Gumma-Jutog line. The Petitioner and HPSEBL are conducting a joint inspection by the Petitioner and HPSEBL are underway to explore alternative methods for OPGW laying on this line. The end to end testing of the link was completed by February 2022 and the link got commissioned on 3.3.2022 with a delay of 47 months. The Combined COD was declared w.e.f. 22.8.2022.

86. For the remaining six links, the reasons for the delay are as under:

|         |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link 3: | 66 kV Sainj – Hulli Delay: 1537 days, Length: 5.387 km      | <p>Because of the addition of new links as state required for expansion and redundancy network, the commissioning of the link got delayed.</p> <p>HPSEBL had to strengthen the 66 kV rail pole structures and carry out re-conductoring work so that the Petitioner may carry out the work of laying OPGW simultaneously. HPSEBL requested not to delete the links (approx. 155 km) from the scope of the scheme.</p> <p>The condition of conductor/earth wire was very poor. The work could not be carried out in these conditions. Accordingly, the work had been stopped on these links. HPSEBL had to strengthen the 66 kV rail pole structures and carry out the re-conductoring work so that the Petitioner may carry out the work of laying OPGW simultaneously. HPSEBL requested not to delete the links (approximately 155 km) from the scope</p> |
| Link 4: | 66 kV Guuma - Sainj– Delay: 1632 days, Length: 23.115 km    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Link 5: | 66 kV Samauli – Andhra Delay: 1509 days, Length: 13.662 km  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Link 6: | 66 kV Nathpa – Ghanvi – Delay: 1614 days, Length: 23.631 km |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Link 7: | 66 kV Ghanvi - Jeori Delay: 1414 days, Length: 3.727 km     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Link 8: | 66 kV Kumarsain – Gumma Delay: 1507 days, Length: 3.727 km  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



|         |                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link 9: | 132 kV Barthi - Kurthala<br>Delay: 1472 days,<br>Length: 47.217 km | <p>of the scheme. TeST MoM 18 may also be referred to note that HPSEBL had to carry out works related to re-conductoring and tower strengthening before the Petitioner could lay OPGW on these links.</p> <p>Regarding the shutdown issues, he informed that the same was not allowed due to the load pattern. In the Jeori-Nogli line, shutdown could not be provided due to the non-availability of the alternate source. He assured that the shutdown will be facilitated by mid-April as the alternate generation will be available by then.</p> |
|---------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### **Analysis and Decision**

87. As per IA dated 4.3.2015, the communication project was scheduled to be commissioned within 36 months from the date of IA, i.e., by 3.3.2018, against which the communication assets are put into commercial operation as under:

| Asset No. | Asset Description                                                                                                                  | SCOD as per IA | COD (Combined) | Delay (in days) |
|-----------|------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-----------------|
| Asset-2   | Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)       | 3.3.2018       | 9.7.2019       | 493             |
| Asset-3   | Establishment of Fibre Optic Communication System in the Northern Region for 220kV Bhakra-Jamalpur Link (88 km) (BBMB)             |                | 31.10.2019     | 607             |
| Asset-4   | Establishment of Fibre Optic Communication System in the Northern Region for 220kV Dehar-Ganguwal BBMB Link (56 km) (State Sector) |                | 5.11.2019      | 612             |
| Asset-5   | Establishment of Fibre Optic Communication System in the Northern Region for 8 nos. of PSTCL links (162.52 km) (State Sector)      |                | 2.1.2020       | 670             |
| Asset-6   | Establishment of Fibre Optic Communication System in the Northern Region for 2 nos. of PSTCL links (113 km) (State Sector)         |                | 2.1.2021       | 1036            |



| Asset No. | Asset Description                                                                                                               | SCOD as per IA | COD (Combined) | Delay (in days) |
|-----------|---------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-----------------|
| Asset-7   | Establishment of Fibre Optic Communication System in the Northern Region for 6 nos. of HPSEBL links (210.462 km) (State Sector) |                | 2.1.2021       | 1036            |
| Asset-8   | Establishment of Fibre Optic Communication System in the Northern Region for 2 nos. of links (192.555 km) (Central Sector)      |                | 2.1.2021       | 1036            |
| Asset-9   | Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector  |                | 27.3.2021      | 1120            |
| Asset-10  | Establishment of Fibre Optic Communication System in the Northern Region for 7 nos. of PSTCL links (122.915 km) (State Sector)  |                | 19.8.2021      | 1265            |
| Asset-11  | Establishment of Fibre Optic Communication System in the Northern Region for 6 nos. of PSTCL links (92.79 km) (State Sector)    |                | 28.10.2021     | 1335            |
| Asset-12  | Establishment of Fibre Optic Communication System in the Northern Region for 43 nos. of PSTCL links (889.998 km) (State Sector) |                | 30.4.2022      | 1519            |
| Asset-13  | Establishment of Fibre Optic Communication System in the Northern Region for 9 nos. of HPSEBL links (208.774 km) (State Sector) |                | 22.8.2022      | 1633            |

88. We have considered the Petitioner's submissions and gone through the documents submitted by the Petitioner for the time overrun against the different communication assets. The asset-wise time overrun is analysed, and the same is as follows:



**Asset-2: Sewa-Hiranagar Link (77.58 km) (Central Sector)**

89. The Petitioner has claimed the time overrun of 493 days against Asset-2 and submitted that the link was to be connected to SLDC via the OPGW link Gladni-Hiranagar. However, this Gladni-Hiranagar link was not ready due to the non-availability of funds by JKPDD. Therefore, in order to commission the Sewa-Hiranagar link, Hiranagar station was bypassed and Sewa was connected directly to Gladni. However, Hiranagar got connected via the telecom network.

90. We have gone through the documents submitted by the Petitioner. In support of the documentary evidence, the Petitioner has submitted the letters dated 28.11.2018 and 6.12.2019.

91. The relevant extract of the letter dated 28.11.2018 is as under:



**Draft letter to Chief Secretary J&K**

Ref:

Date: 28.11.18

Subject: Fiber Optic Communication Network on transmission lines of J&K PDD under PMRP - Implementation by POWERGRID

Dear

This is with reference to establishment of Fiber optic Communication Network on J&K transmission lines under PMRP Scheme. J&K PDD has entrusted implementation of the project to POWERGRID on consultancy route in Jan'12.

POWERGRID has informed that the work has been awarded by them. Further, 1475 kms of OPGW supply has been completed and around 1100 km has already been installed. It may please be informed that supply of balance OPGW (325km) is also ready at supplier's work in China since May'17. The installation activity and balance supply are affected for more than one (1) year because POWERGRID has not been able to pay the contracting agencies due to inordinate delay in release of fund by J&K PDD.

It has been given to understand by POWERGRID that so far J&K PDD has released only about ₹ 32 Cr. against total amount of ₹ 80.04 Crs of the project and last installment was released somewhere around Aug'16. Funds released have been fully utilized and further demand of ₹ 34.64 Cr is still to be released by J&K PDD for last two years resulting in total stoppage of works.

You would appreciate that subject project is very critical for J&K Power System improvement and will provide reliable voice and data communication to facilitate efficient management of J&K system. J&K PDD may please be advised to immediately release funds to POWERGRID to facilitate completion of project.

I would request you to please do the needful in the matter. I am also advising CMD POWERGRID to meet you in person at your convenience in this regard.

Yours sincerely,

(Ajay Kumar Bhalla)

The Chief Secretary  
Govt of Jammu & Kashmir,  
Office of the Chief Secretary,  
Civil Secretariat, R. No. 2/7, 2<sup>nd</sup> Floor, Main Building  
Jammu - 188001.



92. As per the above letter, it has been observed that the Petitioner is only implementing the J&K Fibre Optic Network of K&K transmission lines on a consultancy basis. Out of the 1475 km of the OPGW supply, the Petitioner has completed the 1100 km, and the remaining 325 km is not supplied because the Petitioner has not paid the amount to the contract agencies due to the non-release of funds by J&K PDD. Based on this letter, it is concluded that the communication asset is not impacted by any change in law or force majeure events.

93. The relevant extract of the letter dated 6.12.2019 is as under:





पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड  
(भारत सरकार का उद्यम)  
POWER GRID CORPORATION OF INDIA LIMITED  
(A Government of India Enterprise)

Ref : N2JM/EDS/2019/23A

Date : 06.12.2019

To,

The Commissioner/Secretary (Power),  
Govt. of J&K,  
Civil Secretariat, Jammu.

**Subject : Implementation of Works under DDUGJY, PMDP and Other Schemes in UT of J&K and Ladakh**

Sir,

At the very outset, we would like to convey sincere thanks for giving us opportunity along with our Director (Operations) to appraise the status of works being implemented by POWERGRID for PDD and also some issues which may impact the works.

During discussions POWERGRID had raised concern about non availability of lands for 3 no substations, PNC for lines associated with 220KV Substations, amount to be released by PDD towards Project Cost for DDUGJY/PMDP Works, wherein you have assured that these would be resolved expeditiously. Regarding PIA charges, it was assured that a communication would be given by your good self to MoP for booking these charges under Scheme cost.

The issues of long pending payment of Rs. 34.66 crore towards Fibre Optics Network work, ROW issues in Draba - Chandak and modality for addressing issues of O&M etc. pertaining to Srinagar -Leh Transmission System were also deliberated and early resolution of these issues was assured. The point wise issues are summarized as per enclosed attachment.

We are sure that with your kind intervention these issues would be expeditiously resolved suitably.

It is to assure that POWERGRID is committed and making all out efforts to complete these works on TOP PRIORITY.

Thanking you,

Encl: As above

  
Rakesh Kumar  
Executive Director, NR-II



4. **220/33kV GIS Substation at Haripora (Harvan).**

LOA Date : Jun'18 ; Comp Schedule 20 months (Feb'20)

- Land for Harvan provided on 01-08-19
- Issues pertaining to Removal of PHE Water pipe Line from Substation Land need to be resolved by JKPDD.

III. **FIBRE OPTICS NETWORK (OPGW + EQPT) UNDER PMRP -2004** ;Release of fund amounting to Rs. 34.66 Cr pending since Aug'2016.

- MOU date : January'2012
- Total Cost : Rs. 80.04 cr; Released : Rs. 31.78 cr ; Balance Required : Rs. 48.26 cr
- Claim Submitted for Rs. 34.66 cr in 2016 pending for release
- *Vendors are asking for immediate release of fund or else return of material supplied*
- Status of Works :75 % work completed. Work done Rs. 65 cr. Recd Rs. 32 cr  
OPGW : Total – 1800 Km ; Supplied – 1475 Km ; Installed – 1102 Km(TCIL)  
Total Equipment also supplied. (Puncom and ECI)

IV. **RECONSTRUCTION 132KV S/C DRABA-CHANDAK TRANS. LINE OF JKPDD**

Total Project Cost - Rs. 27.62Cr,

Fund received from JKPDD - Rs. 18.50Cr

Release of balance funds amounting to **Rs. 9.12 Cr.**

**Stringing of OPGW:** *Laying of OPGW was under PMRP project which is under hold due to non-receipt of payment. JKPDD requested to explore the possibility of arrangement of required OPGW.*

| Sr. | RoW                                                     | No. of Locations | Locations                                |
|-----|---------------------------------------------------------|------------------|------------------------------------------|
| 1.  | Work heldup due to Non-payment of Compensation by JKPDD | 10               | Loc.No.3,11,25,29,36,37,38, 41,42 and 91 |
| 2.  | Due to Court Case                                       | 4                | Loc. No. 18, 19, 20 & 21.                |
| 3.  | Due to Forest                                           | 5                | Loc. No. 46, 47, 48, 49 and 65           |
| 4.  | Shifting of Existing 33kV Line                          | 2                | Loc. No. 7 and 8                         |

V. **Establishment of Smart Grid Projects at 19 Nos. of Town/Industrial Area in State of J&K**

- Award is ready – funds to be released by J7K – PDD.
- As deliberated during Review Meeting on 14.11.2019, Secretary (Power) has instructed POWERGRID to stop further proceedings of Award as the same has been included by JKPDD in their some other project.

*Written confirmation to be given by J&K – PDD.*

VI. **SRINAGAR LEH TRANSMISSION SYSTEM:**

- Taking over of 220kV Srinagar-Leh Transmission system by JKPDD (TOC).
- MoU to be entered into by JK-PDD for O&M of Line.

94. As per the above letter, we are unable to conclude that whether the Gladni-Hiranagr line is impacted with any change in law/force majeure events.



95. The supporting documents submitted by the Petitioner do not establish how the issues addressed in the letter impacted the execution of the Sewa-Hiranagar Link considered under the instant communication project. Therefore, **we are not inclined to condone the time overrun of 493 days as claimed by the Petitioner against Asset-2. The Petitioner is granted liberty to submit the documents which establish the link to justify the non-availability of funds by JKPDD and its relation with the Sewa-Hiranagar Link at the time of truing up.**

**Asset-3: 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)**

96. The Petitioner has claimed the time overrun of 607 days against Asset-3 and submitted that in June 2016, before the award of the OPGW Installation Package, BBMB had expressed the need to re-conduct the Bhakra-Jamalpur (D/C) transmission line from Tower No. 55 to Tower No. 276. So, the work could not be started after the award of the OPGW work. Accordingly, the details of towers (from Tower No. 55 to Tower No. 270), where modifications were proposed, have been provided by BBMB in the 15<sup>th</sup> meeting of TeST dated 7.8.2019. However, the information on Tower No. 1 to 55 has not been provided by the BBMB. Further, BBMB stated that initially, the LILO was proposed for this line, but this proposal has been withdrawn and requested the Petitioner to carry out the OPGW installation work for the above-mentioned links as per the existing plan, submitted by the BBMB. Accordingly, the work on this link commenced on 7.8.2019 and was completed, including the trial run operation, on 30.10.2019.

97. We have considered the Petitioner's submissions and have gone through the documents submitted by the Petitioner. BBMB vide letter dated 10.6.2016 has informed as under:



|                                                                                   |                                                                                                                                     |                                                                                                                                                            |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  | <b>भाखड़ा ब्यास प्रबन्ध बोर्ड</b><br>कार्यालय अधीक्षण अभियन्ता<br>परि. एवं अनु. परिमण्डल, जमालपुर<br>जिला लुधियाना (पंजाब) - 141010 | <b>BHAKRA BEAS MANAGEMENT BOARD</b><br>Office of: Superintending Engineer<br>Operation & Maintenance Circle<br>Jamalpur Distt. Ludhiana<br>(Punjab)-141010 |  |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|

**सेवा में**  
**DIRECTOR/PRD (TS)**  
**ASE/TRANS/**  
**B.D/B.S./S.D./H/G**  
**H.S./S.D./T/P.A.**

**क्रमांक 5752/53**      **IPD-431**

**R. No. 1527**  
**Date 15-6-16**

**दिनांक 10/06/2016**

**विषय:** Bhakra-Jamalpur OPGW connectivity in Northern Region under Fibre Optic expansion Project-ULDC phase -II OPGW package-I(a).

**Ref.** Your office memo no. 1787/P&D-204/G dated 07-06-16.

Enclosed herewith please find the desired data in tabular form regarding the Bhakra-Jamalpur (DC) transmission. The re-conductoring of the line is to be done from tower no. 55 to tower no. 276 at Jamalpur end. Further it is intimated that as of now no formal instructions are available regarding the re-routing of line from tower no. 1 to tower no. 55 therefore details regarding re-routing cannot be supplied at this moment.

This is for your information and necessary action please.

DA/As above

  
**इंजी. गुरमीर सिंह**  
**अधीक्षण अभियन्ता**  
**परि. एवं अनु. परिमण्डल, जमालपुर**  
**लुधियाना**

CC: Sr. XEN/ O&M Division BBMB Jamalpur.

98. The relevant extract of the minutes of the 15<sup>th</sup> TeST Sub-Committee meeting of NRPC held on 7.8.2019 is as under:

**“2.1.2 BBMB:**

| Name of line              | Constituent | Length (KM) | Remarks           |
|---------------------------|-------------|-------------|-------------------|
| 220 KV<br>Bhakra-Jamalpur | BBMB        | 86          | Lattice Structure |

POWERGRID stated that in the above mentioned link, tower modification (raising of tower height as well as shifting of tower) has to be done by BBMB. Accordingly, details



*of towers (from T. NO. 55 to 270), where modifications are proposed, have been provided by BBMB, while no information has been provided for tower section 1 to 55. He further stated that in this condition, with proposed modification in line, it will not be feasible to carry out the installation and it will be better to carry out the work after completion of proposed modifications.*

*BBMB stated that initially LILO was proposed for this line but this proposal has been withdrawn. He requested POWERGRID to carry out the work on above link as it is required for redundancy.*

*POWERGRID stated that they would carry out the OPGW installation work for the above mentioned links as per the existing plan, submitted by BBMB and any modification in the link, after OPGW installation, would be carried out by BBMB on their own. BBMB, agreed for the same."*

99. As per the above, it has been observed that after the BBMB's letter dated 10.6.2016, the Petitioner has submitted the minutes of the 15<sup>th</sup> TeST Sub-Committee meeting of NRPC held on 7.8.2019. Based on the above minutes, it can be concluded that the Petitioner has provided the details of Tower Nos. 1 to 55, and the Petitioner has carried out the OPGW installation work. **We are of the view that the time period from 10.6.2016 to 7.8.2019 was beyond the control of the Petitioner; therefore, the same has been condoned. Accordingly, the total time overrun of 607 days is hereby condoned.**

**Asset-4: 220 kV Dehar-Ganguwal BBMB Link (56 km)**

100. The Petitioner has claimed the time overrun of 612 days against Asset-4 and has submitted that the delay in commissioning of Asset-4 is on account of the various RoW issues at various locations faced by the Petitioner. The Petitioner has also submitted that the non-availability of the shutdown was a contributing factor to the delay in commissioning of Asset-4.

101. We have considered the Petitioner's submissions, and it has been observed that the Petitioner has failed to establish the direct relation of time overrun for Asset-4 with RoW and the non-availability of a shutdown. Hence, **we are not inclined to condone**



the time overrun of 612 days due to the non-availability of the shutdown and various RoW issues. The Petitioner is granted liberty to submit the documents for non-availability of shutdown and RoW issues, which establish a direct relation with the 220 kV Dehar-Ganguwal BBMB Link at the time of truing up.

**Asset-5: 8 Nos. PSTCL links (162.52 km) (State Sector)**

102. The Petitioner has claimed the time over-run of 670 days against Asset-5 due to the change/addition in the scope of work as per the requirement of PSTCL, the same has been discussed in the 10<sup>th</sup> TeST dated 22.3.2017, 14<sup>th</sup> TeST dated 17.12.2008 & 18<sup>th</sup> TeST dated 9.8.2021, due to various RoW issues faced by the Petitioner which are discussed in 15<sup>th</sup> & 16<sup>th</sup> TeST dated 7.8.2019 & 14.11.2019, respectively. The reasons for the time overrun in commissioning of different links covered under Asset-5, as submitted by the Petitioner is as under:

| Link Number | Link Name                           | Delay Days | Delay Reason                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link-1      | 132 kV Jalandhar-I - Kapurthala     | 616 days   | Due to RoW issues and the delay in the availability of SDH, which was in the scope of PSTCL                                                                                                                                                                                                                                                                                                  |
| Link-2      | 132 kV Verpal - Verka               | 669 days   | Due to the additional requirement of 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries) for 220 kV Verpal. Further, the delay in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors.                                                                            |
| Link-3      | 220 kV Butari - Verpal              | 669 days   | Due to the additional requirement of 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries) for 220 kV Verpal.                                                                                                                                                                                                                                                                  |
| Link-4      | 132 kV Bilaspur - Doraha - Sahnewal | 613 days   | Due to the addition of LILO of Sahnewal 220 – GGSSTP 220 at Kohara 220 and LILO of Sahnewal 220 – GGSSTP 220 at Gaunsgarh 220 in the scope. These newly added links were a part of the network for data integration to SLDC from Bilaspur 132 - Doraha 132 – Sahnewal. Further, the delay in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply |



| Link Number | Link Name                                | Delay Days | Delay Reason                                                                                                                                                                                                                                                                                                                                                   |
|-------------|------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                          |            | & installation of communication equipment from various vendors                                                                                                                                                                                                                                                                                                 |
| Link-5      | 220 kV Wadala Granthian - FC Churian     | 669 days   | Scope was revised by PSTCL. LILO of Wadala Granthian 220 kV - FC Churian 220 kV at Kotli Surat was added. Further, the delay in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors.                                                                |
| Link-6      | 220 kV FC Churian - Civil Lines Amritsar | 669 days   | Due to the revision of the scope by PSTCL. Further, the delay in the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors.                                                                                                                           |
| Link-7      | 132 kV Muktsar - Muktsar                 | 637 days   | Scope was revised by PSTCL. LILO of 220 kV Muktsar 220 – Bathinda at Badal & Malout was added and the connectivity of main link Muktsar -Muktsar with SLDC was affected. Further, the delay in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors. |
| Link-8      | 132 kV Moga I - Moga                     | 607 days   | Due to Severe RoW issues and non-availability of Shutdown.                                                                                                                                                                                                                                                                                                     |

103. We have considered the Petitioner's submission. The communication asset consists of 8 nos. of OPGW links from PSTCL, and the length of the OPGW line is 162.52 km. Based on the documents submitted by the Petitioner, the relevant test minutes and written letters about the RoW problems have been scrutinised. The observations on the documents submitted by the Petitioner for each OPGW link are as under:

| OPGW link | Documents submitted                              | observation                  |
|-----------|--------------------------------------------------|------------------------------|
| Link 1:   | Minutes of the 10 <sup>th</sup> TeST             | Not mentioned about links 1  |
|           | Minutes of the 14 <sup>th</sup> TeST             | Not mentioned about links 1  |
|           | Minutes of the 15 <sup>th</sup> TeST             | Not mentioned about links 1  |
|           | Minutes of the 18 <sup>th</sup> TeST             | Not mentioned about links 1  |
|           | The Petitioner's Letter dated 7.6.2021 to HPSEBL | Not relevant for the link-1. |



|         |                                               |                                                                                                                                                                                                                                    |
|---------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link:2  | Not submitted any minutes or letters          | -                                                                                                                                                                                                                                  |
| Link:3  | Minutes of the 15 <sup>th</sup> TeST          | Not relevant for the link-3.                                                                                                                                                                                                       |
|         | Minutes of the 16 <sup>th</sup> TeST          | Not relevant for the link-3.                                                                                                                                                                                                       |
|         | Row letters                                   | Not mentioned about link-3                                                                                                                                                                                                         |
| Link 4: | Minutes of meeting with PSTCL dated 12.4.2022 | Not mentioned about link-4                                                                                                                                                                                                         |
| Link 5: | Not submitted any minutes or letters          | -                                                                                                                                                                                                                                  |
| Link 6: | Minutes of meeting with PSTCL dated 21.4.2022 | It is mentioned in minutes that 132 kV Civil lines reporting to SLDC, Abolwal taking into SDH in service at Khassa. It is noted that the Petitioner has submitted trial run completed on 1.1.2020 and claimed the COD as 2.1.2020. |
| Link 7: | Not submitted any minutes or letters          |                                                                                                                                                                                                                                    |
| Link 8: | Not submitted any minutes or letters          |                                                                                                                                                                                                                                    |

104. From the above, it is concluded that the OPGW links covered under Asset-5 are not mentioned/added in the 10<sup>th</sup>, 14<sup>th</sup> & 18<sup>th</sup> TeST meetings held on 22.3.2017, 17.12.2018 & 9.8.2021, respectively. Further, it has been observed that the various RoW issues quoted by the Petitioner in support of time over-run in commissioning of Asset-5 is against the Jamsher-Jadla link, and do not relate to the links covered under Asset-5. Further, the Petitioner has failed to establish how the non-availability of the shutdown in commissioning of the different links is impacting time overrun under Asset-5. Therefore, in view of the above, we are not inclined to condone the time overrun of 670 days as claimed by the Petitioner in the **commissioning of Asset-5**.

**Asset-6: 2 Nos. PSTCL links (113 km) (State Sector)**

105. The Petitioner has claimed the time overrun of 1036 days against Asset-6. The reasons for the time overrun in commissioning of the different links covered under Asset-6, as submitted by the Petitioner are as under:



| Link Number | Link Name                                                                | Delay Days | Delay Reason                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|--------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link-1      | 132 kV MPH-I-II-III-IV - Shri Har Gobindpur - Wadala Granthian (5 Links) | 395 days   | Due to the revision of the scope by PSTCL. Further, the delay in the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors.                                                                                                                                                                         |
| Link-2      | 220 kV Civil Lines Amritsar – Khassa                                     | 417 days   | Due to the revision of the scope by PSTCL, LILO of 220 kV Civil Lines Amritsar - Khassa at Chugwan was added. The connectivity of the main 220 kV link from Civil Lines Amritsar to Khassa with SLDC was affected. Further, the delay in the supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors. |

106. We have considered the Petitioner's submissions and observed that the OPGW links covered under Asset-6 were not mentioned/added in the 10th, 14th & 18th TeST meetings held on 22.3.2017, 17.12.2018 & 9.8.2021, respectively. This omission does not establish the revision of the scope of work by PSTCL. Further, any documents in support of the reasons for time over-run in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors, have also not been submitted by the Petitioner. **Hence, in view of the above, we are not inclined to condone the time overrun of 1036 days claimed by the Petitioner in the commissioning of Asset-6.**

**Asset-7: 6 Nos. HPSEBL links (210.462 km) (State Sector)**

107. The Petitioner has claimed the time overrun of 1036 days against Asset-7 and submitted that there is a delay of approximately 612 days in the commissioning of the communication asset on account of severe RoW issues at various locations. The RoW issues at these various locations were taken up by the Petitioner itself, and after several discussions with the land owners, the work could be taken up, which ultimately delayed



the completion of the OPGW works. The non-availability of the shutdown was also a contributing factor in the delay of commissioning of the communication asset. The Petitioner has further submitted that the adverse weather conditions/rainfall and fog/fog in the hilly areas from December 2018 to February 2019 also impacted the laying work of the OPGW at HPSEBL sites.

108. We have considered the Petitioner's submissions, and it has been observed that no supporting documents have been submitted by the Petitioner in support of the reasons for the time overrun in the commissioning of Asset-7. **Hence, in view of the above, we are not inclined to condone the time overrun of 1036 days as claimed by the Petitioner against Asset-7.**

**Asset-8: 2 Nos. links (192.555 km) (Central Sector)**

109. The Petitioner has claimed a time overrun of 1036 days against Asset-8, citing a delay of approximately 671 to 979 days in commissioning the communication asset due to severe RoW issues at various locations. The RoW issues at those various locations were taken up by the Petitioner itself, and after several discussions with the land owners, the work could be taken up, which ultimately delayed the completion of the OPGW works. The non-availability of the shutdown was also a contributing factor in the delay of commissioning of the communication asset. Also, the OPGW laying work was impacted due to the bad weather/rainfall/fog during December 2018 to February 2019 at the HPSEBL site, as all links are situated in the hilly areas.

110. We have considered the Petitioner's submissions and observed that the links covered under Asset-8, i.e., 400 kV Abdullapur-Deepalpur & 400 kV Abdullapur-Kurukshetra, are not related to the HPSEBL sites. Further, the Petitioner has failed to



establish how the RoW issues and the non-availability of shutdown have resulted in the delay of the commissioning of Asset-8. Hence, in view of the above, **we are not inclined to condone the time overrun of 1036 days claimed by the Petitioner against Asset-8. The Petitioner is directed to submit the supporting documents for the RoW issues, non-availability of shutdown and other documents, if any, to substantiate the time overrun in commissioning of the various links covered under Asset-8 at the time of truing up.**

**Asset-9: Additional Requirement in Northern Region for 980.973 km of Central Sector (NR-1)**

111. The Petitioner has claimed the time over-run of 1120 days against Asset-9 and submitted that the main reasons for the time over-run are as under:

- i. **Delay due to non-availability of Permit to Work (PTW):** The Petitioner has submitted that during OPGW laying works under this Project, the NLDC and RLDC were reluctant to issue code in view of perceived grid security, even though the OPGW installation work was carried out in live line conditions and approvals were obtained in monthly OCC meetings. 'Permission to Work' (PTW) had been denied by the NLDC and RLDC on several occasions, especially in the 400 kV Bhinmal-Zerda line and the Sikar-Neemrana line on some pretext or another. PTW was denied on several occasions in the 400 kV Bhinmal-Zerda line due to perceived grid security and the criticality of the NR-WR inter-connector transmission line. In this regard, various communications were exchanged between the Petitioner and POSOCO to confirm the delay in work. The Petitioner has also submitted that, Bhinmal-Zerda line was very critical to meet the power demand of the NR-WR. During the outage of Agra station, due to a severe dust



storm in the intervening night of 2<sup>nd</sup> and 3<sup>rd</sup> May 2018, multiple towers had collapsed and equipment was damaged. Non-auto permission was denied by the Grid Operator (NLDC / NRLDC) for more than 5 months. The Petitioner had reported this issue several times during the OPGW installation. In some cases, the shutdown was required in stretches where earth wire was not available, or they were in poor condition, or there was a breakdown of the earth wire during installation. However, the shutdown was not immediately available when these situations arose, as NRLDC insisted on prior OCC approval on several occasions, which was not possible in this case. The approval for the auto recloser was granted during the 147<sup>th</sup>, 148<sup>th</sup>, and 149<sup>th</sup> OCC meetings. However, despite the approval, the work permit was denied by the NRLDC. The Petitioner had raised concern multiple times through letters dated 10.5.2018, 16.5.2018, 11.7.2018, 19.7.2018, 23.7.2018, 6.8.2018, 14.8.2018, 16.8.2018 and 11.9.2018. Consequently, all the teams left the site, and subsequent re-deployment required significant effort. Additionally, issues related to the RoW arose due to the OPGW cables, drums, and materials left at the site and paddy fields, all in the absence of proper work permits.

- b. **Severe RoW issue during OPGW laying:** The RoW issues were reported in the Hissar-Bhiwadi, Sikar-Neemrana, and Agra-Bassi lines. The matter was brought to the attention of the district administration, and police protection was secured to facilitate completion of the works. The OPGW links were completed at different times, and SAT/COD letters were submitted as evidence by the Petitioner. To avoid the multiple Petitions, a combined COD Petition had been filed. The delay, as evident from the above, was beyond the control of the Petitioner.



112. We have considered the Petitioner's submissions and observed that, as per the documents submitted by the Petitioner, the PTW for the OPGW link for 400 kV Zarda - Bhinmal, considered under Asset-9, had been denied by the NLDC for various reasons. It has been observed that the executing agency, i.e., Ten Dot Net Cable Private Limited of the Petitioner, vide various emails/letters dated 24.4.2018, 4.5.2018, 10.5.2018, 11.5.2018, 25.5.2018, 28.5.2018, 29.5.2018, etc. intimated the Petitioner that due to the non-availability of PTW, the OPGW work got hampered on 14.4.2018, 24.4.2018, 26.4.2019 and 3.5.2018 onwards. The Petitioner had also taken up the matter with the concerned authorities of the NLDC & NRLDC vide letter dated 10.5.2018, 16.5.2018 and requested to allow PTW for laying of OPGW in Live Line Conditions for Bhinmal-Zerda Lines. However, the said PTW request had been denied by the POSOCO due to the outage of the other lines associated with the Agra Sub-station. The Petitioner has again requested PTW vide letters dated 14.8.2018 and 16.8.2018. But NLDC deferred the shutdown on 17.10.2018 due to the already approved shutdown on another transmission line and intimated the Petitioner vide email dated 17.10.2018. With the perusal of documents submitted by the Petitioner, it has been observed that the NLDC had also denied the Petitioner's request to allow the requisite shutdown for OPGW link of 400 kV Zarda-Bhinmal link due to the grid security, shutdown of the other transmission lines and its reasons and intimated the same vide emails dated 11.12.2018, 31.12.2018, 5.1.2019, 2.2.2019, 10.2.2019, 12.5.2019.

113. It has been observed from the above that the matter for the necessary PTW for the OPGW work on 400 kV Zarda- Bhinmal was taken up by the Petitioner. Therefore, the time period from 24.4.2018 to 12.5.2019 (383 days) is condoned on account of the non-availability of PTW.



114. Further, we have gone through the documents submitted by the Petitioner against the different RoW issues faced during the execution of the OPGW link on 400 kV D/C Neemrana-Sikar transmission line considered for Asset-9. It has been observed that the Petitioner has submitted the notices dated 4.7.2017, 10.10.2017, 9.12.2017, 12.12.2017, 4.1.2018, 13.7.2019, 10.7.2019, 19.12.2019, 20.12.2019, 5.3.2020, 6.7.2020, 6.8.2020, 8.8.2020, 13.12.2020, 2.1.2021, 11.1.2021 and 28.1.2021 issued to different persons/land owners requesting to not create the hindrances and allow to execute the work of OPGW link on 400 kV D/C Neemrana-Sikar transmission line at the site.

115. Based on the information submitted by the Petitioner, it has been noted that the Petitioner has successfully completed the trial run of 400 kV Zerda-Bhinmal on 3.10.2019, 400 kV Mainpuri-Ballabgarh line on 8.11.2019, 400 kV Agra to Bassi on 7.3.2020, 400 kV Bhinmal to Hissar on 26.3.2021 and 400 kV Nermana to Sikar on 7.3.2021. Further, it has been noted that even though three nos. of the OPGW links have successfully completed the trial run prior to 31.3.2020, the Petitioner has decided not to claim the COD of these OPGW links and linked with the other two links which have completed the trial operation on 7.3.2021 and 26.3.2021. Based on the documents submitted by the Petitioner, the time overrun from 4.7.2017 to 3.10.2019 on account of the RoW issues is condoned. As mentioned above, the time period from 24.4.2018 to 12.5.2019 (383 days) has already been condoned on account of the non-availability of the PTW and the same has been subsumed in the time period covered under the RoW period, i.e., 4.7.2017 to 3.10.2019.



116. In view of above, out of the total time over-run of 1120 days claimed by the Petitioner, we condone the time over-run of 821 days in respect of Asset-9.

**Asset-10: 7 Nos. PSTCL links (122.915 km) (State Sector)**

117. The Petitioner has claimed the time over-run of 1265 days in commissioning of Asset-10. The main reasons for the time over-run in commissioning of the different links considered under Asset-10, as submitted by the Petitioner are as under:

| Link Number | Link Name                                         | Delay Days | Delay Reason                                                                                                                                                                                                                                |
|-------------|---------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link-1      | 220 kV Ablowal - Rajila                           | 655 days   | Due to the revision in the scope by PSTCL. Further, the delay in supply of the OPGW & hardware accessories, installation & commissioning of the OPGW accessories, supply & installation of the communication equipment from various vendors |
| Link-2      | LILO of 220 kV Rajila - Patran at Kakrala         | 1207 days  |                                                                                                                                                                                                                                             |
| Link-3      | LILO of 220 kV Rajila - Patran at Patran          | 1218 days  |                                                                                                                                                                                                                                             |
| Link-4      | LILO of 220 kV Wadala Granthian- Verpal at Udhoke | 1233 days  | Additional requirement of 48 V, 15 Amp DCPS (Battery Charger and 200 AH VRLA type Batteries) and BB given by PSTCL.                                                                                                                         |
| Link-5      | 220 kV Patran - Sunam                             | 655 days   | Due to the revision in the scope by PSTCL. Further, the delay in the supply of OPGW & hardware accessories, installation & commissioning of the OPGW accessories, supply & installation of the communication equipment from various vendors |
| Link-6      | LILO of 220 kV Patran - Sunam at Bangan           | 1264 days  | Due to the revision in the scope by PSTCL. Further, the delay in supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors     |
| Link-7      | 220 kV Nabha - Phaggan Majra                      | 1092 days  | Severe RoW issues and non-availability of shutdown.                                                                                                                                                                                         |

118. We have considered the Petitioner's submissions and have gone through the documents placed on record in support of the time over-run of different links considered under Asset-10. It has been observed that the information about the revision of the



scope of the OPGW from 1197 km to 1378 km has been intimated by the PSPTCL representative in the 10<sup>th</sup> meeting of Telecommunication, SCADA & Telemetry Sub-Committee held on 13.4.2017. In the said meeting, the Petitioner intimated that the supply of the same has already been taken care of, however, the amendments in the contract of installation packages need to be done and confirmed that the same would be done as per the requirement. Hence, it is evident that the Petitioner already had the knowledge about the respective change in the scope of the work and the same were already taken care by them. Further, the Petitioner has failed to establish a link on how this change in scope of work hampered the progress of the OPGW work in respect of Asset-10 and, thus, there is delay in the commissioning of its respective links.

119. Further, it has been observed that the Petitioner has not submitted any document in support of the contention that the work also get delayed due to the severe RoW issues encountered by the Petitioner, additional requirement of 48 V, 15 Amp DCPS ( Battery Charger and 200 AH VRLA type Batteries) and BB given by PSTCL and the delay in supply of the OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various vendors.

**120. Therefore, the time over-run of 1265 days claimed by the Petitioner in commissioning of Asset-10 due to aforementioned reasons is not condoned. The Petitioner is grated liberty to submit the documents for the RoW issues encountered, additional requirement of 48 V, 15 Amp DCPS (Battery Charger and 200 AH VRLA type Batteries) and BB given by PSTCL and the delay in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of communication equipment from various**



vendors which establishes the relation with links for Asset-10 at the time of truing up.

**Asset-11: 6 Nos. PSTCL links (92.79 km) (State Sector)**

121. The Petitioner has claimed the time over-run of 1335 days in commissioning of Asset-11. The main reasons for the time over-run in commissioning of different links considered under Asset-11, submitted by the Petitioner are as follows:

| Link Number | Link Name                                                        | Delay days | Delay Reason                                                                                                                          |
|-------------|------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Link-1      | 132 kV IGC Bathinda - GNDTP 220                                  | 425 days   | Severe RoW issues and non-availability of shutdown.                                                                                   |
| Link-2      | LILO of 220 kV Wadala Granthian - FC Churian at Kotli Surat Mali | 1238 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. |
| Link-3      | LILO of 220 kV FC Churian - Civil Lines Asr at Majitha           | 1334 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. |
| Link-4      | LILO of 220 kV Civil Lines Asr - Khassa at Chugawan              | 1239 days  |                                                                                                                                       |
| Link-5      | 220 kV Lalton Kalan - Pakhowal                                   | 1026 days  | Severe RoW issues and non-availability of shutdown.                                                                                   |
| Link-6      | 220 kV Sunam – Mansa                                             | 426 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. |

122. We have considered the Petitioner's submissions and have observed that the OPGW links covered under Asset-11 are not mentioned/added in the 10<sup>th</sup>, 14<sup>th</sup> & 18<sup>th</sup> TeST meeting held on 22.3.2017, 17.12.2018 & 9.8.2021, respectively, vide which the scope was revised by PSTCL. Further, any documents in support of the reasons of time over-run due to the various RoW issues encountered during the execution of work has not been submitted by the Petitioner. **Hence, in view of above we are not inclined to**



condone the time over-run of 1335 days as claimed by the Petitioner in commissioning of Asset-11.

123. The Petitioner is granted liberty to submit the documents supporting the scope of revision by PSTCL and the RoW issues encountered to establish relation with the links covered under Asset-11 at the time of truing up.

**Asset-12: 43 Nos. PSTCL links (889.998 km) (State Sector)**

124. The Petitioner has claimed the time over-run of 1519 days in commissioning of Asset-12. The main reasons for the time over-run in commissioning of different links considered under Asset-12, as submitted by the Petitioner are as under:

| Link Number | Link Name                                                | Delay days | Delay Reason                                                                                                                                                                                                                                                   |
|-------------|----------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link-1      | LILO of 132 kV Jalandhar-I - Kapurthala at Children Park | 1496 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. The commissioning of the link was delayed due to the RoW issues. End to end testing of link was completed by March 2022. |
| Link-2      | LILO of 132 kV Jalandhar -I - Kapurthala at PIMS         | 1496 days  |                                                                                                                                                                                                                                                                |
| Link-3      | LILO of 132 kV Jalandhar-I - Kapurthala at Science city  | 1496 days  |                                                                                                                                                                                                                                                                |
| Link-4      | LILO portion of Jamsher - Jadla at Goraya                | 1496 days  |                                                                                                                                                                                                                                                                |
| Link-5      | 220 kV Jadla - GGSSTP(RTP)                               | 1493 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by March 2022.                                                                  |
| Link-6      | 220 kV Sultanpur - Patti                                 | 1020 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by December 2020.                                                               |
| Link-7      | LILO of 220 kV Sultanpur - Patti at Chola Sahib          | 1020 days  | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment                                                                                                                                         |



| Link Number | Link Name                                               | Delay days | Delay Reason                                                                                                                                                                                                                                        |
|-------------|---------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                                         |            | by vendors and additional requirement of DCPS and BB given by PSTCL. End to end testing of link was completed by December 2020.                                                                                                                     |
| Link-8      | 220 kV Rajila - Patran                                  | 1218 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by July 2021.                                                        |
| Link-9      | 220 kV Lalton Kalan - Sahnewal                          | 549 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by September 2019.                                                   |
| Link-10     | 220 kV Sahnewal - GGSSTP                                | 1315 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by October 2021.                                                     |
| Link-11     | LILO of 220 kV Sahnewal - GGSSTP                        | 1333 days  |                                                                                                                                                                                                                                                     |
| Link-12     | LILO of 220 kV Sahnewal - GGSSTP at Gaunsgarh           | 1333 days  |                                                                                                                                                                                                                                                     |
| Link-13     | LILO of 220 kV Sahnewal- GGSSTP LILO Point 189 - Ghulal | 1025 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by December 2020.                                                    |
| Link-14     | 220 kV Jamsher - Mahilpur                               | 1496 days  | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and severe RoW issues. End to end testing of link was completed by March 2022.                                    |
| Link-15     | LILO of 220 kV Jamsher - Mahilpur at Rehana Jattan      | 1496 days  |                                                                                                                                                                                                                                                     |
| Link-16     | 220 kV Mohali I - Dera Bassi                            | 1102 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by February 2021.                                                    |
| Link-17     | LILO of 220 kV Mohali I - Dera Bassi at Lalru           | 1102 days  |                                                                                                                                                                                                                                                     |
| Link-18     | 132 kV ASPH-I - ASPH II                                 | 424 days   | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and additional requirement of DCPS and BB given by PSTCL. End to end testing of link was completed by April 2019. |
| Link-19     | Malaout - GNDTP                                         | 651 days   | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and severe RoW issues. End to                                                                                     |



| Link Number | Link Name                                                 | Delay days | Delay Reason                                                                                                                                                                                                                                           |
|-------------|-----------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                                           |            | end testing of link was completed by December 2019.                                                                                                                                                                                                    |
| Link-20     | 220 kV Jamsher<br>220 - Jadla                             | 1496 days  | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and severe RoW issues. End to end testing of link was completed by March 2022.                                       |
| Link-21     | 132 kV Mana<br>Singh Wala -<br>Ferozepur                  | 523 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by July 2019.                                                           |
| Link-22     | 132 kV Ropar -<br>GGSTP                                   | 599 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by October 2019.                                                        |
| Link-23     | 132 kV<br>Shamaspur -<br>Ghulal                           | 597 days   |                                                                                                                                                                                                                                                        |
| Link-24     | LILO of 132 kV<br>ASPH-I- ASPH II<br>at Anandpur<br>Sahib | 1018 days  | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and additional requirement of DCPS and BB given by PSTCL. End to end testing of link was completed by December 2020. |
| Link-25     | LILO of 132 kV<br>Malaout- GNDTP<br>at Balluana           | 1433 days  | Severe RoW issues and non-availability of shutdown. End to end testing of link was completed by January 2022.                                                                                                                                          |
| Link-26     | LILO of 132 kV<br>Malaout - GNDTP<br>at Gidderbaha        | 935 days   | Severe RoW issues and non-availability of shutdown. End to end testing of link was completed by September 2020.                                                                                                                                        |
| Link-27     | LILO Verpal -<br>Verka at<br>Malmandi                     | 1232 days  | Additional requirement of DCPS and BB given by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by July 2021.                                                |
| Link-28     | 220 kV Moga -<br>Talwandi Bhai                            | 1153 days  | Severe RoW issues and non-availability of shutdown. End to end testing of link was completed by April 2021.                                                                                                                                            |
| Link-29     | 220 kV Talwandi<br>Bhai – Ferozpur                        | 1046 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by January 2021.                                                        |
| Link-30     | LILO of Talwandi<br>Bhai- Ferozpur at<br>Sadiq            | 1518 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors and due to issues faced in integration of nodes with PSTCL Ablawal due                                            |



| Link Number | Link Name                                     | Delay days | Delay Reason                                                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                               |            | to routing the same through third party equipment's. End to end testing of link was completed by January 2021.                                                                                                                                                               |
| Link-31     | LILO of 220 kV Ablowal - Rajila at Passiana   | 658 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by December 2019.                                                                             |
| Link-32     | LILO of 220 kV Sunam - Mansa at Jhunir        | 657 days   | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and additional requirement of DCPS and BB given by PSTCL and severe RoW issues. End to end testing of link was completed by December 2019. |
| Link-33     | 220 kV Mansa - GHTP                           | 635 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by November 2019.                                                                             |
| Link-34     | LILO of 220 kV Mansa - GHTP at Dhanoula       | 932 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by September 2020.                                                                            |
| Link-35     | LILO Portion of GHTP - Mansa at Talwandi Sabo | 997 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by November 2020.                                                                             |
| Link-36     | LILO Portion of GHTP 220 - Mansa at Mour      | 1518 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by April 2022.                                                                                |
| Link-37     | 220 kV Muktsar - Bathinda                     | 1433 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by January 2022.                                                                              |
| Link-38     | 220 kV Patti - 220 kV Rashiana                | 1505 days  | Revision of the scope of work by PSTCL, delay in supply & installation of OPGW accessories and communication equipment by vendors and additional requirement of DCPS and BB given by PSTCL and severe RoW issues. End to end testing of link was completed by April 2022.    |



| Link Number | Link Name                                               | Delay days | Delay Reason                                                                                                                                                                                                                                                                                                             |
|-------------|---------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link-39     | LILO of Muktsar - Bathinda at Malout                    | 1519 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by April 2022.                                                                                                                            |
| Link-40     | LILO of Muktsar - Bathinda at Badal                     | 913 days   | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by August 2020.                                                                                                                           |
| Link-41     | LILO Portion of Talwandi Bahi - Ferozepur at Botianwala | 1513 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors and due to issues faced in integration of nodes with PSTCL Ablawal due to routing the same through third party equipment's. End to end testing of link was completed by April 2022. |
| Link-42     | 220 kV Botianwala - Mastewala                           | 1154 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors. End to end testing of link was completed by April 2021.                                                                                                                            |
| Link-43     | LILO of 220 kV Botianwala - Mastewala at Makhu          | 1515 days  | Revision of the scope of work by PSTCL and delay in supply & installation of OPGW accessories and communication equipment by vendors and due to issues faced in integration of nodes with PSTCL Ablawal due to routing the same through third party equipment's. End to end testing of link was completed by April 2022. |

125. We have considered the Petitioner's submissions and have gone through the documents submitted in support of the time over-run of different links considered under Asset-12. It has been observed that the information about the revision of the scope of OPGW from 1197 km to 1378 km has been intimated by the PSPTCL representative in the 10<sup>th</sup> meeting of Telecommunication, SCADA & Telemetry Sub-committee held on 13.4.2017. In the aforesaid meeting, the Petitioner intimated that the supply of the same has already been taken care of, however, the amendments in the contract of installation packages needs to be done and confirmed that the same would be done as per the



requirement. Thus, it is evident that the Petitioner already had the knowledge about the respective changes in the scope of work and the same was already taken care by them. Further, the Petitioner has not submitted any document on how this change in scope of work hampered the progress of work and, thus, resulted in delay in the commissioning of the respective links of Asset-12.

126. Further, it has been observed that the Petitioner has not submitted any document in support of the contention that the work also got delayed due to the additional requirement of 48 V, 15 Amp DCPS (Battery Charger and 200 AH VRLA type Batteries) and BB given by PSTCL and the delay in supply of OPGW & hardware accessories, installation & commissioning of OPGW accessories, supply & installation of the communication equipment from various vendors.

127. Further, it has been observed that the Petitioner has also claimed the separate time over-run in respect of the individual OPGW links mentioned at Sr. No. i, ii, iii, xiv, xv, xix, xx, xxv, xxvi, xxviii, xxxii, xxxviii. However, it has been observed that the supporting documents substantiating the delay due to the RoW issues encountered by the Petitioner in commissioning of the above-mentioned links have not been submitted by the Petitioner.

128. Further, it has been observed that the Petitioner has also claimed the delay in commissioning of the OPGW link of 220 kV Jamsher-Jhadla due to various RoW issues encountered during the construction. We have gone through the documents submitted by the Petitioner and observed that the Petitioner had taken up the matter of RoW issues with PSTCL and intimated vide emails/letter dated 12.3.2018, 10.3.2018, 4.4.2018, 12.4.2018, 13.9.2019, 23.10.2019, 4.11.2019 and 25.11.2019. The Petitioner had also



taken up the matter with the district administration vide letters dated 22.5.2018 and 23.7.2018 and requested to provide the police protection to execute the work at the earliest.

129. However, it has been observed that the Petitioner has failed to submit any supporting document to substantiate the delay in execution and completion of the OPGW work within the commissioning schedule as per IA, i.e., upto 3.3.2018. Further, it has been observed that the Petitioner had not effectively taken up the matter with PSPTCL from 13.4.2018 to 12.9.2019 and also not submitted any supporting document that when these RoW issues got resolved after 25.11.2019.

130. Therefore, on the basis of above discussions, we are of the view that the Petitioner has not submitted any supporting documents to substantiate the delay reasons for non-completion of the OPGW work of various links considered under Asset-12 within timeframe as per the IA. Further, the Petitioner has failed to justify the reasons of time over-run after the SCOD. **Hence, we are not inclined to condone the time over-run of 1519 days claimed by the Petitioner with respect to Asset-12.**

131. **However, the Petitioner is granted liberty to submit the documents which substantiate the delay reasons for each individual link covered under Asset-12 at the time of truing up.**

**Asset-13: 9 Nos. HPSEBL links (208.774 km) (State Sector)**

132. The Petitioner has claimed the time over-run of 1633 days in commissioning of Asset-13. The main reasons for the time over-run in commissioning of the different links considered under Asset-13, as submitted by the Petitioner, are as under:



|         |                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link:1  | 132 kV Jutogh – Maliana<br>Delay 1455 days                         | HPSEBL had to provide the space for installation of NMS server in Jutogh due to which the installation of NMS got delayed. In addition, HPSEBL also had to provide 48V DC power supply at 132 kV Maliana s/s for I&C of FOTE due to which the commissioning got delayed for this link. Further, due to delay in strengthening the 66 kV Links Rail pole structures by HPSEBL.                                                                                                                                                                                                                          |
| Link:2  | 66 kV Nogli – Samauli Delay:<br>1461days                           | Because of addition of new links as state required for expansion and redundancy network, the commissioning of the link got delayed. Further, due to delay in strengthening the 66 kV Links Rail pole structures by HPSEBL. Due to not getting timely and continuous shutdown on some lines                                                                                                                                                                                                                                                                                                             |
| Link-3: | 66 kV Sainj – Hulli Delay:<br>1537 days                            | Because of addition of new links as state required for expansion and redundancy network, the commissioning of the link got delayed.<br>HPSEBL had to strengthen the 66kV rail pole structures and carry out reconductoring work so that POWERGRID may carry out the work of laying OPGW simultaneously. HPSEBL requested not to delete the links (approx. 155KM) from the scope of the scheme.                                                                                                                                                                                                         |
| Link-4: | 66 kV Guuma - Sainj– Delay:<br>1632 days                           | The condition of conductor/earth wire was very poor. The work could not be carried out in these conditions. Accordingly, work had been stopped on these links., HPSEBL had to strengthen the 66kV rail pole structures and carry out reconductoring work so that POWERGRID may carry out the work of laying OPGW simultaneously. HPSEBL requested not to delete the links (approx. 155KM) from the scope of the scheme. TeST MOM 18 may also be referred to note that HPSEBL had to carry out works related to re-conductoring and tower strengthening before POWERGRID could lay OPGW on these links. |
| Link-5: | 66 kV Samauli – Andhra<br>Delay: 1509 days,                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Link-6  | 66 kV Nathpa – Ghanvi –<br>Delay: 1614 days Length–<br>23.631 km   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Link-7  | 66 kV Ghanvi - Jeori Delay:<br>1414 days – Length–3.727<br>km,     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Link-8  | 66 kV Kumarsain – Gumma<br>Delay: 1507 days – Length–<br>3.727 km, |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Link 9  | 132 kV Barthi - Kurthala<br>Delay: 1472 days Length—<br>47.217 km  | Regarding shutdown issues, he informed that the same was not allowed due to load pattern. In the Jeori-Nogli line, shutdown could not be provided due to non-availability of alternate source. He assured that shut down will be facilitated by mid-April as alternate generation will be available by then.                                                                                                                                                                                                                                                                                           |

133. We have considered the Petitioner's submissions and have gone through the documents submitted by the Petitioner. It has been observed that in 14<sup>th</sup> TeST meeting held on 17.12.2018, the Petitioner intimated that the change in the scope is a part of the



already awarded additional package for which the work is under progress. Further, the Petitioner has not submitted how this change in scope has hampered the progress of commissioning of the work of different links of the OPGW considered under Asset-13.

134. Further, it has been observed that the matter for strengthening of 66 kV links of rail pole structure by HPSEBL has been discussed in 18<sup>th</sup> TeST meeting held on 10.8.2021 in which the Petitioner has apprised that HPSEBL confirmation regarding the completion of the strengthening work for 93 km out of 155 km had been received. However, it has been observed that the Petitioner has failed to submit the documents to justify that the matter of early completion of the requisite strengthening work by HPSEBL has been effectively taken up and when the said strengthening work has been completed by HPSEBL.

135. Further, it has been observed that the matter of not getting the timely and continuous shutdown from HPSEBL has been discussed in 19<sup>th</sup> TeST meeting held on 7.3.2022. However, the Petitioner has not submitted any document in support of the matter/request for shutdown which was made by the Petitioner to HPSEBL earlier and later rejected/denied by HPSEBL.

**136. In view of the aforesaid mentioned reasons, we are not inclined to condone the time over-run of 1633 days as claimed by the Petitioner against Asset-13.**

**137. The Petitioner is granted liberty to submit the documents which justify how the change in scope has hampered the progress of commissioning work of different links of OPGW considered under Asset-13, that the matter for early completion of requisite strengthening work by HPSEBL has been effectively**



taken up and when the said strengthening work has been completed by the HPSEBL, request for shutdown which was made by the Petitioner to HPSEBL earlier and later rejected/denied by HPSEBL at the time of truing up.

138. The synopsis of the time over-run condoned/ not condoned is as under:

| Asset No. | Asset Description                                                                                                                  | Delay (in days) | Delay Condoned (in days) | Delay Not Condoned (in days) |
|-----------|------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|------------------------------|
| Asset-2   | Establishment of Fibre Optic Communication System in the Northern Region for Sewa-Hiranagar Link (77.58 km) (Central Sector)       | 493             | 0                        | 493                          |
| Asset-3   | Establishment of Fibre Optic Communication System in the Northern Region for 220 kV Bhakra-Jamalpur Link (88 km) (BBMB)            | 607             | 607                      | 0                            |
| Asset-4   | Establishment of Fibre Optic Communication System in the Northern Region for 220kV Dehar-Ganguwal BBMB Link (56 km) (State Sector) | 612             | 0                        | 612                          |
| Asset-5   | Establishment of Fibre Optic Communication System in the Northern Region for 8 nos. PSTCL links (162.52 km) (State Sector)         | 670             | 0                        | 670                          |
| Asset-6   | Establishment of Fibre Optic Communication System in the Northern Region for 2 nos. PSTCL links (113 km) (State Sector)            | 1036            | 0                        | 1036                         |
| Asset-7   | Establishment of Fibre Optic Communication System in the Northern Region for 6 nos. HPSEBL links (210.462 km) (State Sector)       | 1036            | 0                        | 1036                         |
| Asset-8   | Establishment of Fibre Optic Communication System in the Northern Region for 2 nos. links (192.555 km) (Central Sector)            | 1036            | 0                        | 1036                         |
| Asset-9   | Establishment of Fibre Optic Communication System (Additional Requirement) in Northern Region for 980.973 km of Central Sector     | 1120            | 821                      | 299                          |
| Asset-10  | Establishment of Fibre Optic Communication System in the Northern Region for 7 nos. PSTCL links (122.915 km) (State Sector)        | 1265            | 0                        | 1265                         |



| Asset No. | Asset Description                                                                                                            | Delay (in days) | Delay Condoned (in days) | Delay Not Condoned (in days) |
|-----------|------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|------------------------------|
| Asset-11  | Establishment of Fibre Optic Communication System in the Northern Region for 6 nos. PSTCL links (92.79 km) (State Sector)    | 1335            | 0                        | 1335                         |
| Asset-12  | Establishment of Fibre Optic Communication System in the Northern Region for 43 nos. PSTCL links (889.998 km) (State Sector) | 1519            | 0                        | 1519                         |
| Asset-13  | Establishment of Fibre Optic Communication System in the Northern Region for 9 nos. HPSEBL links (208.774 km) (State Sector) | 1633            | 0                        | 1633                         |

**Interest During Construction (IDC) / Incidental Expenditure During Construction (IEDC)**

139. The Petitioner has claimed the IDC of the communication assets and has submitted the statement showing IDC claimed, discharge of IDC liability as on the COD and, thereafter, as under:

| (₹ in lakh) |                                  |                         |                               |                               |                               |                               |                               |
|-------------|----------------------------------|-------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Assets      | IDC as per Auditor's Certificate | IDC Discharged upto COD | IDC discharged during 2019-20 | IDC discharged during 2020-21 | IDC discharged during 2021-22 | IDC discharged during 2022-23 | IDC discharged during 2023-24 |
| Asset-1     | 15.18                            | 14.81                   | 0.37                          | 0.00                          | 0.00                          | 0.00                          | 0.00                          |
| Asset-2     | 28.17                            | 18.01                   | 10.16                         | 0.00                          | 0.00                          | 0.00                          | 0.00                          |
| Asset-3     | 26.21                            | 18.89                   | 7.00                          | 0.32                          | 0.00                          | 0.00                          | 0.00                          |
| Asset-4     | 18.38                            | 13.43                   | 4.40                          | 0.55                          | 0.00                          | 0.00                          | 0.00                          |
| Asset-5     | 45.60                            | 39.32                   | 5.01                          | 1.27                          | 0.00                          | 0.00                          | 0.00                          |
| Asset-6     | 48.33                            | 43.22                   | 0.00                          | 2.80                          | 2.31                          | 0.00                          | 0.00                          |
| Asset-7     | 78.08                            | 74.19                   | 0.00                          | 0.02                          | 3.87                          | 0.00                          | 0.00                          |
| Asset-8     | 63.80                            | 63.18                   | 0.00                          | 0.03                          | 0.59                          | 0.00                          | 0.00                          |
| Asset-9     | 538.69                           | 465.39                  | 0.00                          | 0.00                          | 73.30                         | 0.00                          | 0.00                          |
| Asset-10    | 58.53                            | 57.44                   | 0.00                          | 0.00                          | 1.09                          | 0.00                          | 0.00                          |
| Asset-11    | 56.82                            | 55.34                   | 0.00                          | 0.00                          | 1.48                          | 0.00                          | 0.00                          |
| Asset-12    | 755.87                           | 696.04                  | 0.00                          | 0.00                          | 0.00                          | 59.83                         | 0.00                          |
| Asset-13    | 160.74                           | 140.49                  | 0.00                          | 0.00                          | 0.00                          | 20.12                         | 0.12                          |



140. We have considered the Petitioner's submissions. The IDC and IEDC for Asset-1 have been trued-up during the 2014-19 tariff period. As discussed above in this order, the time over-run in the commissioning of the communication assets except Asset-3 and Asset-9 has not been condoned. The time over-run in the commissioning of Asset-3 has been fully condoned, whereas, it has been partially condoned in case of Asset-9. Accordingly, the IDC on cash basis up to the COD has been worked out based on the loan details given in the statement showing the discharge of IDC and Form-9C for the communication assets. The IDC claimed and considered as on the COD and the summary of discharge of the IDC liability up to the COD and, thereafter, for the purpose of tariff determination subject to its revision at the time of truing up is as under:

(₹ in lakh)

| Assets   | IDC as per Auditor's Certificate (A) | IDC Disallowed due to time over-run not condoned (B) | IDC Allowed (C)=(A)-(B) | Undischarged IDC (D) | IDC allowed on COD (E)=(C)-(D) |
|----------|--------------------------------------|------------------------------------------------------|-------------------------|----------------------|--------------------------------|
| Asset-2  | 28.17                                | 17.84                                                | 10.33                   | 0.00                 | 10.33                          |
| Asset-3  | 26.21                                | 0.23                                                 | 25.98                   | 7.31                 | 18.67                          |
| Asset-4  | 18.38                                | 11.32                                                | 7.06                    | 0.00                 | 7.06                           |
| Asset-5  | 45.60                                | 41.33                                                | 4.27                    | 0.00                 | 4.27                           |
| Asset-6  | 48.33                                | 40.11                                                | 8.22                    | 0.00                 | 8.22                           |
| Asset-7  | 78.08                                | 64.00                                                | 14.08                   | 0.00                 | 14.08                          |
| Asset-8  | 63.80                                | 61.54                                                | 2.26                    | 0.00                 | 2.26                           |
| Asset-9  | 538.69                               | 120.01                                               | 418.68                  | 0.00                 | 418.68                         |
| Asset-10 | 58.53                                | 58.53                                                | 0.00                    | 0.00                 | 0.00                           |
| Asset-11 | 56.82                                | 56.82                                                | 0.00                    | 0.00                 | 0.00                           |
| Asset-12 | 755.87                               | 651.20                                               | 104.67                  | 0.00                 | 104.67                         |
| Asset-13 | 160.74                               | 139.50                                               | 21.24                   | 0.00                 | 21.24                          |

141. The Petitioner has claimed the IEDC for the communication asset as per the Auditor's Certificate. The Petitioner has submitted that the entire IEDC mentioned in the Auditor's Certificate is on cash basis and had been paid up to the COD. As the time



over-run for the instant communication asset has been partially condoned, there is disallowance of the IEDC on proportionate basis. The IEDC claimed as per the Auditor's Certificate, the IEDC considered and discharged up to the COD is as under:

(₹ in lakh)

| Assets   | IEDC<br>claimed as per<br>Auditor's Certificate<br>(A) | IEDC<br>disallowed due to time<br>over-run not condoned<br>(B) | IEDC<br>Allowed (A-B) |
|----------|--------------------------------------------------------|----------------------------------------------------------------|-----------------------|
| Asset-2  | 9.06                                                   | 2.81                                                           | 6.25                  |
| Asset-3  | 20.49                                                  | 0.00                                                           | 20.49                 |
| Asset-4  | 13.04                                                  | 4.68                                                           | 8.36                  |
| Asset-5  | 20.46                                                  | 7.77                                                           | 12.69                 |
| Asset-6  | 24.41                                                  | 11.87                                                          | 12.54                 |
| Asset-7  | 43.80                                                  | 21.29                                                          | 22.51                 |
| Asset-8  | 37.87                                                  | 18.41                                                          | 19.46                 |
| Asset-9  | 179.98                                                 | 24.30                                                          | 155.68                |
| Asset-10 | 44.81                                                  | 24.02                                                          | 20.79                 |
| Asset-11 | 41.86                                                  | 23.00                                                          | 18.86                 |
| Asset-12 | 423.85                                                 | 246.30                                                         | 177.55                |
| Asset-13 | 93.65                                                  | 56.06                                                          | 37.59                 |

### **Initial Spares**

142. Regulation 23(d) of the 2019 Tariff Regulations provides that the Initial Spares shall be capitalised as a percentage of the plant and machinery cost up to the cut-off date, subject to the following ceiling norms:

#### ***“(d) Transmission System***

- (i) *Transmission line- 1.00%*
- (ii) *Transmission sub-station*
  - *Green Field- 4.00%*
  - *Brown Field- 6.00%*
- (iii) *Series Compensation devices and HVDC Station- 4.00%*
- (iv) *Gas Insulated Sub-station (GIS)*
  - *Green Field- 5.00%*
  - *Brown Field- 7.00%*
- (v) *Communication System- 3.50%*
- (vi) *Static Synchronous Compensator- 6.00%”*

143. The Initial Spares as claimed by the Petitioner are as under:



(₹ in lakh)

| Assets   | Particulars | Capital Cost for calculation of Initial Spares | Initial Spares claimed | Ceiling limit as mentioned as per Regulation (in %) |
|----------|-------------|------------------------------------------------|------------------------|-----------------------------------------------------|
| Asset-2  | PLCC        | 417.46                                         | 8.67                   | 3.50                                                |
| Asset-3  | PLCC        | 291.23                                         | 9.06                   | 3.50                                                |
| Asset-4  | PLCC        | 185.32                                         | 5.76                   | 3.50                                                |
| Asset-5  | PLCC        | 573.22                                         | 2.95                   | 3.50                                                |
| Asset-6  | PLCC        | 336.47                                         | 7.07                   | 3.50                                                |
| Asset-7  | PLCC        | 583.12                                         | 11.55                  | 3.50                                                |
| Asset-8  | PLCC        | 486.62                                         | 9.72                   | 3.50                                                |
| Asset-9  | PLCC        | 3042.45                                        | 64.13                  | 3.50                                                |
| Asset-10 | PLCC        | 469.84                                         | 10.73                  | 3.50                                                |
| Asset-11 | PLCC        | 374.49                                         | 10.25                  | 3.50                                                |
| Asset-12 | PLCC        | 2887.63                                        | 71.18                  | 3.50                                                |
| Asset-13 | PLCC        | 723.49                                         | 11.08                  | 3.50                                                |

144. The Petitioner has claimed the Initial Spares in the instant Petition and has not indicated the amount in the Auditor's Certificate submitted. However, we have considered the Petitioner's submissions and based on the information available on record, the Initial Spares for the communication assets are allowed as per respective percentage of the Plant and Machinery Cost as on the cut-off date on individual basis.

The Initial Spares allowed for the communication assets are as under:

| Assets   | Particulars | Plant and Machinery cost (excluding IDC/IEDC, Land cost and Cost of Civil Works) (₹ in lakh) | Initial Spares claimed (₹ in lakh) | Norms as per 2019 Tariff Regulations (in %) | Initial Spares allowable (₹ in lakh) | Excess Initial Spares disallowed (₹ in lakh) | Initial Spares Allowed (₹ in lakh) |
|----------|-------------|----------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------|--------------------------------------|----------------------------------------------|------------------------------------|
|          |             | A                                                                                            | B                                  | C                                           | $D=(A-B)*C/(100-C)$                  | $E=B-D$                                      |                                    |
| Asset-2  | OPGW        | 417.46                                                                                       | 8.67                               | 3.50                                        | 14.83                                | 0.00                                         | 8.67                               |
| Asset-3  | OPGW        | 291.23                                                                                       | 9.06                               | 3.50                                        | 10.23                                | 0.00                                         | 9.06                               |
| Asset-4  | OPGW        | 185.32                                                                                       | 5.76                               | 3.50                                        | 6.51                                 | 0.00                                         | 5.76                               |
| Asset-5  | OPGW        | 573.22                                                                                       | 2.95                               | 3.50                                        | 20.68                                | 0.00                                         | 2.95                               |
| Asset-6  | OPGW        | 336.47                                                                                       | 7.07                               | 3.50                                        | 11.95                                | 0.00                                         | 7.07                               |
| Asset-7  | OPGW        | 583.12                                                                                       | 11.55                              | 3.50                                        | 20.73                                | 0.00                                         | 11.55                              |
| Asset-8  | OPGW        | 486.62                                                                                       | 9.72                               | 3.50                                        | 17.30                                | 0.00                                         | 9.72                               |
| Asset-9  | OPGW        | 3042.45                                                                                      | 64.13                              | 3.50                                        | 108.02                               | 0.00                                         | 64.13                              |
| Asset-10 | OPGW        | 469.84                                                                                       | 10.73                              | 3.50                                        | 16.65                                | 0.00                                         | 10.73                              |
| Asset-11 | OPGW        | 374.49                                                                                       | 10.25                              | 3.50                                        | 13.21                                | 0.00                                         | 10.25                              |
| Asset-12 | OPGW        | 2887.63                                                                                      | 71.18                              | 3.50                                        | 102.15                               | 0.00                                         | 71.18                              |
| Asset-13 | OPGW        | 723.49                                                                                       | 11.08                              | 3.50                                        | 25.84                                | 0.00                                         | 11.08                              |



145. In view of the above, the capital cost allowed as on the COD for the communication assets are as under:

(₹ in lakh)

| Assets   | Capital Cost<br>as on COD<br>as per<br>Auditor's<br>Certificate<br>(A) | IDC<br>disallowed<br>(B) | IDC<br>Undischarged<br>as on COD<br>(C) | IEDC<br>disallowed<br>(D) | Capital Cost<br>as on COD<br>(E=A-B-C-D) |
|----------|------------------------------------------------------------------------|--------------------------|-----------------------------------------|---------------------------|------------------------------------------|
| Asset-2  | 270.08                                                                 | 17.84                    | 0.00                                    | 2.81                      | 249.44                                   |
| Asset-3  | 218.87                                                                 | 0.23                     | 7.31                                    | 0.00                      | 211.33                                   |
| Asset-4  | 140.98                                                                 | 11.32                    | 0.00                                    | 4.68                      | 124.99                                   |
| Asset-5  | 427.99                                                                 | 41.33                    | 0.00                                    | 7.77                      | 378.89                                   |
| Asset-6  | 318.71                                                                 | 40.11                    | 0.00                                    | 11.87                     | 266.74                                   |
| Asset-7  | 559.92                                                                 | 64.00                    | 0.00                                    | 21.29                     | 474.63                                   |
| Asset-8  | 459.80                                                                 | 61.54                    | 0.00                                    | 18.41                     | 379.85                                   |
| Asset-9  | 3191.94                                                                | 120.01                   | 0.00                                    | 24.30                     | 3047.63                                  |
| Asset-10 | 476.12                                                                 | 58.53                    | 0.00                                    | 24.02                     | 393.56                                   |
| Asset-11 | 430.91                                                                 | 56.82                    | 0.00                                    | 23.00                     | 351.10                                   |
| Asset-12 | 3571.53                                                                | 651.20                   | 0.00                                    | 246.30                    | 2674.03                                  |
| Asset-13 | 815.10                                                                 | 139.50                   | 0.00                                    | 56.06                     | 619.54                                   |

#### **Additional Capital Expenditure (ACE)**

146. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as under:

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

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

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

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



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

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

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

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

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

- (a) *The useful life of the assets is not commensurate with the useful life of the project 54 and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) *The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) *The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- (d) *The replacement of such asset or equipment has otherwise been allowed by the Commission.”*

147. The Petitioner has submitted that the ACE is on account of the balance and retention payments/work deferred for execution, balance and retention payments due to undischarged liability for the works executed before the cut-off date in accordance with Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations and the details of the same are as under.



(₹ in lakh)

| Asset    | Particulars      | 2019-20      | 2020-21      | 2021-22       | 2022-23       | 2023-24      |
|----------|------------------|--------------|--------------|---------------|---------------|--------------|
| Asset-1  | ACE              | 7.09         | 18.64        | 0.00          | 73.89         | 0.00         |
|          | Undischarged IDC | 0.37         | 0.00         | 0.00          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>7.46</b>  | <b>18.64</b> | <b>0.00</b>   | <b>73.89</b>  | <b>0.00</b>  |
| Asset-2  | ACE              | 1.20         | 19.97        | 5.30          | 158.12        | 0.00         |
|          | Undischarged IDC | 10.16        | 0.00         | 0.00          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>11.36</b> | <b>19.97</b> | <b>5.30</b>   | <b>158.12</b> | <b>0.00</b>  |
| Asset-3  | ACE              | 37.27        | 6.49         | 1.00          | 37.15         | 37.15        |
|          | Undischarged IDC | 7.00         | 0.32         | 0.00          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>44.27</b> | <b>6.81</b>  | <b>1.00</b>   | <b>37.15</b>  | <b>37.15</b> |
| Asset-4  | ACE              | 23.72        | 4.13         | 0.63          | 23.64         | 23.64        |
|          | Undischarged IDC | 4.40         | 0.55         | 0.00          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>28.12</b> | <b>4.68</b>  | <b>0.63</b>   | <b>23.64</b>  | <b>23.64</b> |
| Asset-5  | ACE              | 3.90         | 34.08        | 109.58        | 63.73         | 0.00         |
|          | Undischarged IDC | 5.01         | 1.27         | 0.00          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>8.91</b>  | <b>35.35</b> | <b>109.58</b> | <b>63.73</b>  | <b>0.00</b>  |
| Asset-6  | ACE              | 0.00         | 0.00         | 55.04         | 35.46         | 0.00         |
|          | Undischarged IDC | 0.00         | 2.80         | 2.31          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>0.00</b>  | <b>2.80</b>  | <b>57.35</b>  | <b>35.46</b>  | <b>0.00</b>  |
| Asset-7  | ACE              | 0.00         | 12.32        | 1.06          | 131.70        | 0.00         |
|          | Undischarged IDC | 0.00         | 0.02         | 3.87          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>0.00</b>  | <b>12.34</b> | <b>4.93</b>   | <b>131.70</b> | <b>0.00</b>  |
| Asset-8  | ACE              | 0.00         | 7.86         | 0.00          | 120.63        | 0.00         |
|          | Undischarged IDC | 0.00         | 0.03         | 0.59          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>0.00</b>  | <b>7.89</b>  | <b>0.59</b>   | <b>120.63</b> | <b>0.00</b>  |
| Asset-9  | ACE              | 0.00         | 0.00         | 569.18        | 0.00          | 0.00         |
|          | Undischarged IDC | 0.00         | 0.00         | 73.30         | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>0.00</b>  | <b>0.00</b>  | <b>642.48</b> | <b>0.00</b>   | <b>0.00</b>  |
| Asset-10 | ACE              | 0.00         | 0.00         | 8.80          | 44.13         | 44.13        |
|          | Undischarged IDC | 0.00         | 0.00         | 1.09          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>0.00</b>  | <b>0.00</b>  | <b>9.89</b>   | <b>44.13</b>  | <b>44.13</b> |
| Asset-11 | ACE              | 0.00         | 0.00         | 0.00          | 21.13         | 21.13        |
|          | Undischarged IDC | 0.00         | 0.00         | 1.48          | 0.00          | 0.00         |
|          | <b>Total</b>     | <b>0.00</b>  | <b>0.00</b>  | <b>1.48</b>   | <b>21.13</b>  | <b>21.13</b> |
| Asset-12 | ACE              | 0.00         | 0.00         | 0.00          | 297.49        | 198.33       |



| Asset           | Particulars      | 2019-20     | 2020-21     | 2021-22     | 2022-23       | 2023-24      |
|-----------------|------------------|-------------|-------------|-------------|---------------|--------------|
|                 | Undischarged IDC | 0.00        | 0.00        | 0.00        | 59.83         | 0.00         |
|                 | <b>Total</b>     | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>357.32</b> | 198.33       |
| <b>Asset-13</b> | ACE              | 0.00        | 0.00        | 0.00        | 65.12         | 97.68        |
|                 | Undischarged IDC | 0.00        | 0.00        | 0.00        | 20.12         | 0.12         |
|                 | <b>Total</b>     | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>85.24</b>  | <b>97.80</b> |

148. We have considered the Petitioner's submissions. The projected ACE to be incurred is mainly on account of the balance/retention payments and works deferred for execution. Hence, the same is allowed in accordance with Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The un-discharged IDC, as on COD, has been allowed as ACE in case of Asset-3 during the year of its discharge for the communication asset. **The ACE allowed with respect to the communication assets is as under:**

| Assets          | Admitted Projected ACE 2019-24 |                     |         |         |         |
|-----------------|--------------------------------|---------------------|---------|---------|---------|
|                 | 2019-20                        | 2020-21             | 2021-22 | 2022-23 | 2023-24 |
| <b>Asset-1</b>  | 7.09                           | 18.64               | 0.00    | 73.89   | 0.00    |
| <b>Asset-2</b>  | 1.20                           | 19.97               | 5.30    | 158.12  | 0.00    |
| <b>Asset-3</b>  | 44.27<br>(37.27+7.00)          | 6.80<br>(6.49+0.31) | 1.00    | 37.15   | 37.15   |
| <b>Asset-4</b>  | 23.72                          | 4.13                | 0.63    | 23.64   | 23.64   |
| <b>Asset-5</b>  | 3.90                           | 34.08               | 109.58  | 63.73   | 0.00    |
| <b>Asset-6</b>  |                                | 0.00                | 55.04   | 35.46   | 0.00    |
| <b>Asset-7</b>  |                                | 12.32               | 1.06    | 131.70  | 0.00    |
| <b>Asset-8</b>  |                                | 7.86                | 0.00    | 120.63  | 0.00    |
| <b>Asset-9</b>  |                                | 0.00                | 569.18  | 0.00    | 0.00    |
| <b>Asset-10</b> |                                |                     | 8.80    | 44.13   | 44.13   |
| <b>Asset-11</b> |                                |                     | 0.00    | 21.13   | 21.13   |
| <b>Asset-12</b> |                                |                     |         | 297.49  | 198.33  |
| <b>Asset-13</b> |                                |                     |         | 65.12   | 97.68   |

149. The capital cost considered for the communication assets for the 2019-24 tariff period are as under:



(₹ in lakh)

| Assets   | Capital Cost as on COD | Admitted Projected ACE 2019-24 |         |         |         |         | Capital Cost as on 31.3.2024 |
|----------|------------------------|--------------------------------|---------|---------|---------|---------|------------------------------|
|          |                        | 2019-20                        | 2020-21 | 2021-22 | 2022-23 | 2023-24 |                              |
| Asset-1  | 139.02                 | 7.09                           | 18.64   | 0.00    | 73.89   | 0.00    | 238.64                       |
| Asset-2  | 249.44                 | 1.20                           | 19.97   | 5.30    | 158.12  | 0.00    | 434.03                       |
| Asset-3  | 211.33                 | 44.27                          | 6.80    | 1.00    | 37.15   | 37.15   | 337.70                       |
| Asset-4  | 124.99                 | 23.72                          | 4.13    | 0.63    | 23.64   | 23.64   | 200.75                       |
| Asset-5  | 378.89                 | 3.90                           | 34.08   | 109.58  | 63.73   | 0.00    | 590.18                       |
| Asset-6  | 266.74                 |                                | 0.00    | 55.04   | 35.46   | 0.00    | 357.23                       |
| Asset-7  | 474.63                 |                                | 12.32   | 1.06    | 131.70  | 0.00    | 619.72                       |
| Asset-8  | 379.85                 |                                | 7.86    | 0.00    | 120.63  | 0.00    | 508.34                       |
| Asset-9  | 3047.63                |                                | 0.00    | 569.18  | 0.00    | 0.00    | 3616.81                      |
| Asset-10 | 393.56                 |                                |         | 8.80    | 44.13   | 44.13   | 490.62                       |
| Asset-11 | 351.10                 |                                |         | 0.00    | 21.13   | 21.13   | 393.36                       |
| Asset-12 | 2674.03                |                                |         |         | 297.49  | 198.33  | 3169.85                      |
| Asset-13 | 619.54                 |                                |         |         | 65.12   | 97.68   | 782.33                       |

### **Debt-Equity ratio**

150. Regulation 18 of the 2019 Tariff Regulations provides as under:

**“18. Debt-Equity Ratio:** (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

*Provided that:*

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

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

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



generating station or the transmission system including communication system, as the case may be.

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

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

151. The debt-equity ratio considered for the purpose of computation of tariff for the 2019-24 tariff period for the communication assets is as under:

**Asset-1**

| Funding      | Capital Cost as on 1.4.2019 (₹ in lakh) | (in %)        | ACE during 2019-24 (₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024 (₹ in lakh) | (in %)        |
|--------------|-----------------------------------------|---------------|--------------------------------|---------------|------------------------------------------|---------------|
| Debt         | 97.31                                   | 70.00         | 69.73                          | 70.00         | 167.04                                   | 70.00         |
| Equity       | 41.71                                   | 30.00         | 29.89                          | 30.00         | 71.60                                    | 30.00         |
| <b>Total</b> | <b>139.02</b>                           | <b>100.00</b> | <b>99.62</b>                   | <b>100.00</b> | <b>238.64</b>                            | <b>100.00</b> |



**Asset-2**

| Funding      | Capital Cost as on COD<br>(₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|---------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 174.61                                | 70.00         | 129.21                            | 70.00         | 303.82                                      | 70.00         |
| Equity       | 74.83                                 | 30.00         | 55.38                             | 30.00         | 130.21                                      | 30.00         |
| <b>Total</b> | <b>249.44</b>                         | <b>100.00</b> | <b>184.59</b>                     | <b>100.00</b> | <b>434.03</b>                               | <b>100.00</b> |

**Asset-3**

| Funding      | Capital Cost as on COD (₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 147.93                             | 70.00         | 88.46                             | 70.00         | 236.39                                      | 70.00         |
| Equity       | 63.40                              | 30.00         | 37.91                             | 30.00         | 101.31                                      | 30.00         |
| <b>Total</b> | <b>211.33</b>                      | <b>100.00</b> | <b>126.37</b>                     | <b>100.00</b> | <b>337.70</b>                               | <b>100.00</b> |

**Asset-4**

| Funding      | Capital Cost as on COD<br>(₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|---------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 87.49                                 | 70.00         | 53.03                             | 70.00         | 140.52                                      | 70.00         |
| Equity       | 37.50                                 | 30.00         | 22.73                             | 30.00         | 60.23                                       | 30.00         |
| <b>Total</b> | <b>124.99</b>                         | <b>100.00</b> | <b>75.76</b>                      | <b>100.00</b> | <b>200.75</b>                               | <b>100.00</b> |

**Asset-5**

| Funding      | Capital Cost as on COD (₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 265.22                             | 70.00         | 147.90                            | 70.00         | 413.12                                      | 70.00         |
| Equity       | 113.67                             | 30.00         | 63.39                             | 30.00         | 177.06                                      | 30.00         |
| <b>Total</b> | <b>378.89</b>                      | <b>100.00</b> | <b>211.29</b>                     | <b>100.00</b> | <b>590.18</b>                               | <b>100.00</b> |



**Asset-6**

| Funding      | Capital Cost as on COD<br>(₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|---------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 186.72                                | 70.00         | 63.34                             | 70.00         | 250.06                                      | 70.00         |
| Equity       | 80.02                                 | 30.00         | 27.15                             | 30.00         | 107.17                                      | 30.00         |
| <b>Total</b> | <b>266.74</b>                         | <b>100.00</b> | <b>90.49</b>                      | <b>100.00</b> | <b>357.23</b>                               | <b>100.00</b> |

**Asset-7**

| Funding      | Capital Cost as on COD<br>(₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|---------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 332.24                                | 70.00         | 101.56                            | 70.00         | 433.80                                      | 70.00         |
| Equity       | 142.39                                | 30.00         | 43.53                             | 30.00         | 185.92                                      | 30.00         |
| <b>Total</b> | <b>474.63</b>                         | <b>100.00</b> | <b>145.09</b>                     | <b>100.00</b> | <b>619.72</b>                               | <b>100.00</b> |

**Asset-8**

| Funding      | Capital Cost as on COD<br>(₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|---------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 265.90                                | 70.00         | 89.94                             | 70.00         | 355.84                                      | 70.00         |
| Equity       | 113.95                                | 30.00         | 38.55                             | 30.00         | 152.50                                      | 30.00         |
| <b>Total</b> | <b>379.85</b>                         | <b>100.00</b> | <b>128.49</b>                     | <b>100.00</b> | <b>508.34</b>                               | <b>100.00</b> |

**Asset-9**

| Funding      | Capital Cost as on COD<br>(₹ in lakh) | (in %)        | ACE during 2019-24<br>(₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %)        |
|--------------|---------------------------------------|---------------|-----------------------------------|---------------|---------------------------------------------|---------------|
| Debt         | 2133.34                               | 70.00         | 398.43                            | 70.00         | 2531.77                                     | 70.00         |
| Equity       | 914.29                                | 30.00         | 170.75                            | 30.00         | 1085.04                                     | 30.00         |
| <b>Total</b> | <b>3047.63</b>                        | <b>100.00</b> | <b>569.18</b>                     | <b>100.00</b> | <b>3616.81</b>                              | <b>100.00</b> |

**Asset-10**

| Funding | Capital Cost as on COD<br>(₹ in lakh) | (in %) | ACE during 2019-24<br>(₹ in lakh) | (in %) | Capital Cost as on 31.3.2024<br>(₹ in lakh) | (in %) |
|---------|---------------------------------------|--------|-----------------------------------|--------|---------------------------------------------|--------|
| Debt    | 275.49                                | 70.00  | 67.94                             | 70.00  | 343.43                                      | 70.00  |



| Funding      | Capital Cost as on COD (₹ in lakh) | (in %)        | ACE during 2019-24 (₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024 (₹ in lakh) | (in %)        |
|--------------|------------------------------------|---------------|--------------------------------|---------------|------------------------------------------|---------------|
| Equity       | 118.07                             | 30.00         | 29.12                          | 30.00         | 147.19                                   | 30.00         |
| <b>Total</b> | <b>393.56</b>                      | <b>100.00</b> | <b>97.06</b>                   | <b>100.00</b> | <b>490.62</b>                            | <b>100.00</b> |

#### Asset-11

| Funding      | Capital Cost as on COD (₹ in lakh) | (in %)        | ACE during 2019-24 (₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024 (₹ in lakh) | (in %)        |
|--------------|------------------------------------|---------------|--------------------------------|---------------|------------------------------------------|---------------|
| Debt         | 245.77                             | 70.00         | 29.58                          | 70.00         | 275.35                                   | 70.00         |
| Equity       | 105.33                             | 30.00         | 12.68                          | 30.00         | 118.01                                   | 30.00         |
| <b>Total</b> | <b>351.10</b>                      | <b>100.00</b> | <b>42.26</b>                   | <b>100.00</b> | <b>393.36</b>                            | <b>100.00</b> |

#### Asset-12

| Funding      | Capital Cost as on COD (₹ in lakh) | (in %)        | ACE during 2019-24 (₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024 (₹ in lakh) | (in %)        |
|--------------|------------------------------------|---------------|--------------------------------|---------------|------------------------------------------|---------------|
| Debt         | 1871.82                            | 70.00         | 347.07                         | 70.00         | 2218.89                                  | 70.00         |
| Equity       | 802.21                             | 30.00         | 148.75                         | 30.00         | 950.96                                   | 30.00         |
| <b>Total</b> | <b>2674.03</b>                     | <b>100.00</b> | <b>495.82</b>                  | <b>100.00</b> | <b>3169.85</b>                           | <b>100.00</b> |

#### Asset-13

| Funding      | Capital Cost as on COD (₹ in lakh) | (in %)        | ACE during 2019-24 (₹ in lakh) | (in %)        | Capital Cost as on 31.3.2024 (₹ in lakh) | (in %)        |
|--------------|------------------------------------|---------------|--------------------------------|---------------|------------------------------------------|---------------|
| Debt         | 433.68                             | 70.00         | 113.95                         | 70.00         | 547.63                                   | 70.00         |
| Equity       | 185.86                             | 30.00         | 48.84                          | 30.00         | 234.70                                   | 30.00         |
| <b>Total</b> | <b>619.54</b>                      | <b>100.00</b> | <b>162.79</b>                  | <b>100.00</b> | <b>782.33</b>                            | <b>100.00</b> |

#### Depreciation

152. Regulation 33 of the 2019 Tariff Regulations provides as under:

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



*the transmission system taking into consideration the depreciation of individual units:*

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

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

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

*Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;*

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

*Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or 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-I to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31<sup>st</sup> 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 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.*

*(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the*



depreciation on capital expenditure.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.

(9) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of-

- a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or
- b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or
- c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

153. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and, thereafter, ACE upto 31.3.2024 in case of Asset-1 and admitted capital expenditure as on the COD and, thereafter, ACE upto 31.3.2024 in case of Asset-2 to Asset-13. The weighted average rate of depreciation (WAROD) has been worked as per the rates of depreciation specified in the 2019 Tariff Regulations. The depreciation allowed for the communication assets is as under:

**Asset-1**

| (₹ in lakh) |                     |         |         |         |         |         |
|-------------|---------------------|---------|---------|---------|---------|---------|
|             | Particulars         | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| A           | Opening Gross Block | 139.02  | 146.11  | 164.75  | 164.75  | 238.64  |
| B           | ACE                 | 7.09    | 18.64   | 0.00    | 73.89   | 0.00    |
| C           | Closing Gross Block | 146.11  | 164.75  | 164.75  | 238.64  | 238.64  |



|   | Particulars                                                          | 2019-20     | 2020-21     | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------|-------------|-------------|--------------|--------------|--------------|
| D | Average Gross Block $[(A+C)/2]$                                      | 142.57      | 155.43      | 164.75       | 201.70       | 238.64       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33        | 6.33        | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 15          | 14          | 13           | 12           | 11           |
| G | Balance useful life of the asset at the beginning of the year (Year) | 0           | 1           | 2            | 3            | 4            |
| H | Aggregate Depreciable Value                                          | 128.31      | 139.89      | 148.28       | 181.53       | 214.78       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>9.02</b> | <b>9.84</b> | <b>10.43</b> | <b>12.77</b> | <b>15.11</b> |
| J | Cumulative Depreciation at the end of the year                       | 11.23       | 21.07       | 31.50        | 44.27        | 59.37        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 117.08      | 118.82      | 116.78       | 137.26       | 155.40       |

## **Asset-2**

(₹ in lakh)

|   | Particulars                                                          | 2019-20<br>(pro rata<br>for 267<br>days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------|------------------------------------------|--------------|--------------|--------------|--------------|
| A | Opening Gross Block                                                  | 249.44                                   | 250.64       | 270.61       | 275.91       | 434.03       |
| B | ACE                                                                  | 1.20                                     | 19.97        | 5.30         | 158.12       | 0.00         |
| C | Closing Gross Block                                                  | 250.64                                   | 270.61       | 275.91       | 434.03       | 434.03       |
| D | Average Gross Block $[(A+C)/2]$                                      | 250.04                                   | 260.62       | 273.26       | 354.97       | 434.03       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                     | 6.33         | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                        | 0            | 1            | 2            | 3            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                       | 15           | 14           | 13           | 12           |
| H | Aggregate Depreciable Value                                          | 225.03                                   | 234.56       | 245.93       | 319.47       | 390.62       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>11.55</b>                             | <b>16.50</b> | <b>17.30</b> | <b>22.47</b> | <b>27.47</b> |
| J | Cumulative Depreciation at the end of the year                       | 11.55                                    | 28.04        | 45.34        | 67.81        | 95.28        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 213.49                                   | 206.52       | 200.59       | 251.66       | 295.34       |



**Asset-3**

(₹ in lakh)

|   | Particulars                                                          | 2019-20<br>(pro-rata<br>for 153<br>days) | 2020-<br>21  | 2021-<br>22  | 2022-<br>23  | 2023-<br>24  |
|---|----------------------------------------------------------------------|------------------------------------------|--------------|--------------|--------------|--------------|
| A | Opening Gross Block                                                  | 211.33                                   | 255.60       | 262.40       | 263.40       | 300.55       |
| B | ACE                                                                  | 44.27                                    | 6.80         | 1.00         | 37.15        | 37.15        |
| C | Closing Gross Block                                                  | 255.60                                   | 262.40       | 263.40       | 300.55       | 337.70       |
| D | Average Gross Block [(A+C)/2]                                        | 233.47                                   | 259.00       | 262.90       | 281.98       | 319.13       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                     | 6.33         | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                        | 0            | 1            | 2            | 3            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                       | 15           | 14           | 13           | 12           |
| H | Aggregate Depreciable Value                                          | 210.12                                   | 233.10       | 236.61       | 253.78       | 287.21       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>6.18</b>                              | <b>16.39</b> | <b>16.64</b> | <b>17.85</b> | <b>20.20</b> |
| J | Cumulative Depreciation at the end of the year                       | 6.18                                     | 22.57        | 39.21        | 57.06        | 77.26        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 203.94                                   | 210.53       | 197.40       | 196.71       | 209.95       |

**Asset-4**

(₹ in lakh)

|   | Particulars                                                          | 2019-20<br>(pro-rata<br>for 148<br>days) | 2020-<br>21 | 2021-<br>22 | 2022-23      | 2023-<br>24  |
|---|----------------------------------------------------------------------|------------------------------------------|-------------|-------------|--------------|--------------|
| A | Opening Gross Block                                                  | 124.99                                   | 148.71      | 152.84      | 153.47       | 177.11       |
| B | ACE                                                                  | 23.72                                    | 4.13        | 0.63        | 23.64        | 23.64        |
| C | Closing Gross Block                                                  | 148.71                                   | 152.84      | 153.47      | 177.11       | 200.75       |
| D | Average Gross Block [(A+C)/2]                                        | 136.85                                   | 150.77      | 153.15      | 165.29       | 188.93       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                     | 6.33        | 6.33        | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                        | 0           | 1           | 2            | 3            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                       | 15          | 14          | 13           | 12           |
| H | Aggregate Depreciable Value                                          | 123.16                                   | 135.69      | 137.84      | 148.76       | 170.03       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>3.50</b>                              | <b>9.54</b> | <b>9.69</b> | <b>10.46</b> | <b>11.96</b> |
| J | Cumulative Depreciation at the end of the year                       | 3.50                                     | 13.05       | 22.74       | 33.20        | 45.16        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 119.66                                   | 122.65      | 115.10      | 115.55       | 124.87       |



**Asset-5**

(₹ in lakh)

|   | Particulars                                                          | 2019-20<br>(pro-rata<br>for 90<br>days) | 2020-<br>21  | 2021-<br>22  | 2022-<br>23  | 2023-<br>24  |
|---|----------------------------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|--------------|
| A | Opening Gross Block                                                  | 378.89                                  | 382.79       | 416.87       | 526.45       | 590.18       |
| B | ACE                                                                  | 3.90                                    | 34.08        | 109.58       | 63.73        | 0.00         |
| C | Closing Gross Block                                                  | 382.79                                  | 416.87       | 526.45       | 590.18       | 590.18       |
| D | Average Gross Block $[(A+C)/2]$                                      | 380.84                                  | 399.83       | 471.66       | 558.32       | 590.18       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                    | 6.33         | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                       | 0            | 1            | 2            | 3            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                      | 15           | 14           | 13           | 12           |
| H | Aggregate Depreciable Value                                          | 342.76                                  | 359.85       | 424.50       | 502.49       | 531.16       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>5.93</b>                             | <b>25.31</b> | <b>29.86</b> | <b>35.34</b> | <b>37.36</b> |
| J | Cumulative Depreciation at the end of the year                       | 5.93                                    | 31.24        | 61.09        | 96.44        | 133.79       |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 336.83                                  | 328.61       | 363.40       | 406.05       | 397.37       |

**Asset-6**

(₹ in lakh)

|   | Particulars                                                          | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Opening Gross Block                                                  | 266.74                                  | 266.74       | 321.77       | 357.23       |
| B | ACE                                                                  | 0.00                                    | 55.03        | 35.46        | 0.00         |
| C | Closing Gross Block                                                  | 266.74                                  | 321.77       | 357.23       | 357.23       |
| D | Average Gross Block $[(A+C)/2]$                                      | 266.74                                  | 294.25       | 339.50       | 357.23       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                    | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                       | 0            | 1            | 2            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                      | 15           | 14           | 13           |
| H | Aggregate Depreciable Value                                          | 240.06                                  | 264.83       | 305.55       | 321.50       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>4.12</b>                             | <b>18.63</b> | <b>21.49</b> | <b>22.61</b> |
| J | Cumulative Depreciation at the end of the year                       | 4.12                                    | 22.74        | 44.23        | 66.85        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 235.95                                  | 242.08       | 261.31       | 254.66       |



**Asset-7**

(₹ in lakh)

|   | Particulars                                                          | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Opening Gross Block                                                  | 474.63                                  | 486.95       | 488.01       | 619.72       |
| B | ACE                                                                  | 12.32                                   | 1.06         | 131.71       | 0.00         |
| C | Closing Gross Block                                                  | 486.95                                  | 488.01       | 619.72       | 619.72       |
| D | Average Gross Block $[(A+C)/2]$                                      | 480.79                                  | 487.48       | 553.86       | 619.72       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                    | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                       | 0            | 1            | 2            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                      | 15           | 14           | 13           |
| H | Aggregate Depreciable Value                                          | 432.71                                  | 438.73       | 498.48       | 557.75       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>7.42</b>                             | <b>30.86</b> | <b>35.06</b> | <b>39.23</b> |
| J | Cumulative Depreciation at the end of the year                       | 7.42                                    | 38.28        | 73.34        | 112.57       |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 425.29                                  | 400.45       | 425.14       | 445.18       |

**Asset-8**

(₹ in lakh)

|   | Particulars                                                          | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Opening Gross Block                                                  | 379.85                                  | 387.71       | 387.71       | 508.34       |
| B | ACE                                                                  | 7.86                                    | 0.00         | 120.63       | 0.00         |
| C | Closing Gross Block                                                  | 387.71                                  | 387.71       | 508.34       | 508.34       |
| D | Average Gross Block $[(A+C)/2]$                                      | 383.78                                  | 387.71       | 448.02       | 508.34       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                    | 6.33         | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                       | 0            | 1            | 2            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                      | 15           | 14           | 13           |
| H | Aggregate Depreciable Value                                          | 345.40                                  | 348.94       | 403.22       | 457.50       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>5.92</b>                             | <b>24.54</b> | <b>28.36</b> | <b>32.18</b> |
| J | Cumulative Depreciation at the end of the year                       | 5.92                                    | 30.47        | 58.83        | 91.00        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 339.48                                  | 318.47       | 344.39       | 366.50       |



**Asset-9**

(₹ in lakh)

|   | Particulars                                                          | 2020-21<br>(pro-rata<br>for 5<br>days) | 2021-22       | 2022-23       | 2023-24       |
|---|----------------------------------------------------------------------|----------------------------------------|---------------|---------------|---------------|
| A | Opening Gross Block                                                  | 3047.63                                | 3047.63       | 3616.81       | 3616.81       |
| B | ACE                                                                  | 0.00                                   | 569.18        | 0.00          | 0.00          |
| C | Closing Gross Block                                                  | 3047.63                                | 3616.81       | 3616.81       | 3616.81       |
| D | Average Gross Block $[(A+C)/2]$                                      | 3047.63                                | 3332.22       | 3616.81       | 3616.81       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                   | 6.33          | 6.33          | 6.33          |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                      | 0             | 1             | 2             |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                     | 15            | 14            | 13            |
| H | Aggregate Depreciable Value                                          | 2742.87                                | 2999.00       | 3255.13       | 3255.13       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>2.64</b>                            | <b>210.93</b> | <b>228.94</b> | <b>228.94</b> |
| J | Cumulative Depreciation at the end of the year                       | 2.64                                   | 213.57        | 442.52        | 671.46        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 2740.23                                | 2785.43       | 2812.61       | 2583.67       |

**Asset-10**

(₹ in lakh)

|   | Particulars                                                          | 2021-22<br>(pro-rata for 225<br>days) | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------|---------------------------------------|--------------|--------------|
| A | Opening Gross Block                                                  | 393.56                                | 402.36       | 446.49       |
| B | ACE                                                                  | 8.80                                  | 44.13        | 44.13        |
| C | Closing Gross Block                                                  | 402.36                                | 446.49       | 490.62       |
| D | Average Gross Block $[(A+C)/2]$                                      | 397.96                                | 424.43       | 468.56       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                  | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                     | 0            | 1            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                    | 15           | 14           |
| H | Aggregate Depreciable Value                                          | 358.16                                | 381.98       | 421.70       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>15.53</b>                          | <b>26.87</b> | <b>29.66</b> |
| J | Cumulative Depreciation at the end of the year                       | 15.53                                 | 42.39        | 72.05        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 342.64                                | 339.59       | 349.65       |



**Asset-11**

(₹ in lakh)

|   | Particulars                                                          | 2021-22<br>(pro-rata for<br>155 days) | 2022-<br>23  | 2023-<br>24  |
|---|----------------------------------------------------------------------|---------------------------------------|--------------|--------------|
| A | Opening Gross Block                                                  | 351.10                                | 351.10       | 372.23       |
| B | ACE                                                                  | 0.00                                  | 21.13        | 21.13        |
| C | Closing Gross Block                                                  | 351.10                                | 372.23       | 393.36       |
| D | Average Gross Block $[(A+C)/2]$                                      | 351.10                                | 361.67       | 382.80       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                                  | 6.33         | 6.33         |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                     | 0            | 1            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                    | 15           | 14           |
| H | Aggregate Depreciable Value                                          | 315.99                                | 325.50       | 344.52       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>9.44</b>                           | <b>22.89</b> | <b>24.23</b> |
| J | Cumulative Depreciation at the end of the year                       | 9.44                                  | 32.33        | 56.56        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 306.55                                | 293.17       | 287.96       |

**Asset-12**

(₹ in lakh)

|   | Particulars                                                          | 2022-23<br>(pro-rata for 336 days) | 2023-24       |
|---|----------------------------------------------------------------------|------------------------------------|---------------|
| A | Opening Gross Block                                                  | 2674.03                            | 2971.52       |
| B | ACE                                                                  | 297.49                             | 198.33        |
| C | Closing Gross Block                                                  | 2971.52                            | 3169.85       |
| D | Average Gross Block $[(A+C)/2]$                                      | 2822.77                            | 3070.68       |
| E | Weighted average rate of Depreciation (WAROD) (in %)                 | 6.33                               | 6.33          |
| F | Lapsed life at the beginning of the year (Year)                      | 0                                  | 0             |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15                                 | 15            |
| H | Aggregate Depreciable Value                                          | 2540.50                            | 2763.61       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>164.48</b>                      | <b>194.37</b> |
| J | Cumulative Depreciation at the end of the year                       | 164.48                             | 358.86        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 2376.01                            | 2404.76       |

**Asset-13**

(₹ in lakh)

|   | Particulars                                          | 2022-23<br>(pro-rata for 222 days) | 2023-24 |
|---|------------------------------------------------------|------------------------------------|---------|
| A | Opening Gross Block                                  | 619.54                             | 684.66  |
| B | ACE                                                  | 65.12                              | 97.67   |
| C | Closing Gross Block                                  | 684.66                             | 782.33  |
| D | Average Gross Block $[(A+C)/2]$                      | 652.10                             | 733.49  |
| E | Weighted average rate of Depreciation (WAROD) (in %) | 6.33                               | 6.33    |



|   |                                                                      |              |              |
|---|----------------------------------------------------------------------|--------------|--------------|
| F | Lapsed life at the beginning of the year (Year)                      | 0            | 0            |
| G | Balance useful life of the asset at the beginning of the year (Year) | 15           | 15           |
| H | Aggregate Depreciable Value                                          | 586.89       | 660.14       |
| I | <b>Depreciation during the year (D*E)</b>                            | <b>25.11</b> | <b>46.43</b> |
| J | Cumulative Depreciation at the end of the year                       | 25.11        | 71.54        |
| K | Remaining Aggregate Depreciable Value at the end of the year (H-J)   | 561.78       | 588.61       |

### **Interest on Loan (IoL)**

154. Regulation 32 of the 2019 Tariff Regulations provides as under:

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

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

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

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

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

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*  
 (5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company as a whole shall be considered.



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

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

155. The Weighted Average Rate of Interest (WAROI) on loans has been considered on the basis of actual loan portfolio and rate of interest prevailed. The IoL has been calculated based on the actual interest rate submitted by the Petitioner in accordance with Regulation 32 of the 2019 Tariff Regulations. Therefore, the IoL has been allowed in respect of the communication assets as under:

**Asset-1**

| (₹ in lakh) |                                                  |             |             |             |             |             |
|-------------|--------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
|             | Particulars                                      | 2019-20     | 2020-21     | 2021-22     | 2022-23     | 2023-24     |
| A           | Gross Normative Loan                             | 97.31       | 102.27      | 115.32      | 115.32      | 167.04      |
| B           | Cumulative Repayments upto Previous Year         | 2.21        | 11.23       | 21.07       | 31.50       | 44.27       |
| C           | Net Loan-Opening (A-B)                           | 95.10       | 91.04       | 94.25       | 83.82       | 122.78      |
| D           | Additions                                        | 4.96        | 13.05       | 0.00        | 51.72       | 0.00        |
| E           | Repayment during the year                        | 9.02        | 9.84        | 10.43       | 12.77       | 15.11       |
| F           | Net Loan-Closing (C+D-E)                         | 91.04       | 94.25       | 83.82       | 122.78      | 107.67      |
| G           | Average Loan [(C+F)/2]                           | 93.07       | 92.64       | 89.04       | 103.30      | 115.22      |
| H           | Weighted Average Rate of Interest on Loan (in %) | 7.2610      | 7.2111      | 7.1399      | 7.1035      | 7.0980      |
| I           | <b>Interest on Loan (G*H)</b>                    | <b>6.76</b> | <b>6.68</b> | <b>6.36</b> | <b>7.34</b> | <b>8.18</b> |

**Asset-2**

| (₹ in lakh) |                                          |                                       |         |         |         |         |
|-------------|------------------------------------------|---------------------------------------|---------|---------|---------|---------|
|             | Particulars                              | 2019-20<br>(pro rata for<br>267 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| A           | Gross Normative Loan                     | 174.61                                | 175.45  | 189.43  | 193.14  | 303.82  |
| B           | Cumulative Repayments upto Previous Year | 0.00                                  | 11.55   | 28.04   | 45.34   | 67.81   |
| C           | Net Loan-Opening (A-B)                   | 174.61                                | 163.90  | 161.39  | 147.80  | 236.01  |
| D           | Additions                                | 0.84                                  | 13.98   | 3.71    | 110.68  | 0.00    |
| E           | Repayment during the year                | 11.55                                 | 16.50   | 17.30   | 22.47   | 27.47   |
| F           | Net Loan-Closing (C+D-E)                 | 163.90                                | 161.39  | 147.80  | 236.01  | 208.54  |
| G           | Average Loan [(C+F)/2]                   | 169.26                                | 162.64  | 154.59  | 191.91  | 222.28  |



|   | Particulars                                      | 2019-20<br>(pro rata for<br>267 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|---|--------------------------------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| H | Weighted Average Rate of Interest on Loan (in %) | 7.9392                                | 7.9431       | 7.9353       | 7.9299       | 7.9294       |
| I | <b>Interest on Loan (G*H)</b>                    | <b>9.80</b>                           | <b>12.92</b> | <b>12.27</b> | <b>15.22</b> | <b>17.63</b> |

### **Asset-3**

(₹ in lakh)

|   | Particulars                                      | 2019-20<br>(pro-rata<br>for 153<br>days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|---|--------------------------------------------------|------------------------------------------|--------------|--------------|--------------|--------------|
| A | Gross Normative Loan                             | 147.93                                   | 178.92       | 183.68       | 184.38       | 210.38       |
| B | Cumulative Repayments upto Previous Year         | 0.00                                     | 6.18         | 22.57        | 39.21        | 57.06        |
| C | Net Loan-Opening (A-B)                           | 147.93                                   | 172.74       | 161.10       | 145.16       | 153.32       |
| D | Additions                                        | 30.99                                    | 4.76         | 0.70         | 26.01        | 26.01        |
| E | Repayment during the year                        | 6.18                                     | 16.39        | 16.64        | 17.85        | 20.20        |
| F | Net Loan-Closing (C+D-E)                         | 172.74                                   | 161.10       | 145.16       | 153.32       | 159.12       |
| G | Average Loan [(C+F)/2]                           | 160.34                                   | 166.92       | 153.13       | 149.24       | 156.22       |
| H | Weighted Average Rate of Interest on Loan (in %) | 7.4242                                   | 7.4552       | 7.5171       | 7.7932       | 7.7895       |
| I | <b>Interest on Loan (G*H)</b>                    | <b>4.98</b>                              | <b>12.44</b> | <b>11.51</b> | <b>11.63</b> | <b>12.17</b> |

### **Asset-4**

(₹ in lakh)

|   | Particulars                                      | 2019-20<br>(pro-rata for<br>148 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|--------------------------------------------------|---------------------------------------|---------|---------|---------|---------|
| A | Gross Normative Loan                             | 87.49                                 | 104.09  | 106.99  | 107.43  | 123.97  |
| B | Cumulative Repayments upto Previous Year         | 0.00                                  | 3.50    | 13.05   | 22.74   | 33.20   |
| C | Net Loan-Opening (A-B)                           | 87.49                                 | 100.59  | 93.94   | 84.68   | 90.77   |
| D | Additions                                        | 16.60                                 | 2.89    | 0.44    | 16.55   | 16.55   |
| E | Repayment during the year                        | 3.50                                  | 9.54    | 9.69    | 10.46   | 11.96   |
| F | Net Loan-Closing (C+D-E)                         | 100.59                                | 93.94   | 84.68   | 90.77   | 95.36   |
| G | Average Loan [(C+F)/2]                           | 94.04                                 | 97.26   | 89.31   | 87.73   | 93.06   |
| H | Weighted Average Rate of Interest on Loan (in %) | 7.3409                                | 7.3825  | 7.4117  | 7.5607  | 7.5579  |



|   | Particulars            | 2019-20<br>(pro-rata for<br>148 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|------------------------|---------------------------------------|---------|---------|---------|---------|
| I | Interest on Loan (G*H) | 2.79                                  | 7.18    | 6.62    | 6.63    | 7.03    |

#### **Asset-5**

(₹ in lakh)

|   | Particulars                                         | 2019-20<br>(pro-rata<br>for 90<br>days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|-----------------------------------------------------|-----------------------------------------|---------|---------|---------|---------|
| A | Gross Normative Loan                                | 265.22                                  | 267.95  | 291.81  | 368.51  | 413.12  |
| B | Cumulative Repayments<br>upto Previous Year         | 0.00                                    | 5.93    | 31.24   | 61.09   | 96.44   |
| C | Net Loan-Opening (A-B)                              | 265.22                                  | 262.02  | 260.57  | 307.42  | 316.69  |
| D | Additions                                           | 2.73                                    | 23.86   | 76.71   | 44.61   | 0.00    |
| E | Repayment during the<br>year                        | 5.93                                    | 25.31   | 29.86   | 35.34   | 37.36   |
| F | Net Loan-Closing (C+D-E)                            | 262.02                                  | 260.57  | 307.42  | 316.69  | 279.33  |
| G | Average Loan [(C+F)/2]                              | 263.62                                  | 261.30  | 283.99  | 312.05  | 298.01  |
| H | Weighted Average Rate of<br>Interest on Loan (in %) | 7.8511                                  | 7.7808  | 7.6472  | 7.5848  | 7.5848  |
| I | Interest on Loan (G*H)                              | 5.09                                    | 20.33   | 21.72   | 23.67   | 22.60   |

#### **Asset-6**

(₹ in lakh)

|   | Particulars                                         | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22 | 2022-23 | 2023-24 |
|---|-----------------------------------------------------|-----------------------------------------|---------|---------|---------|
| A | Gross Normative Loan                                | 186.72                                  | 186.72  | 225.24  | 250.06  |
| B | Cumulative Repayments<br>upto Previous Year         | 0.00                                    | 4.12    | 22.74   | 44.23   |
| C | Net Loan-Opening (A-B)                              | 186.72                                  | 182.60  | 202.50  | 205.83  |
| D | Additions                                           | 0.00                                    | 38.52   | 24.82   | 0.00    |
| E | Repayment during the year                           | 4.12                                    | 18.63   | 21.49   | 22.61   |
| F | Net Loan-Closing (C+D-E)                            | 182.60                                  | 202.50  | 205.83  | 183.22  |
| G | Average Loan [(C+F)/2]                              | 184.66                                  | 192.55  | 204.16  | 194.52  |
| H | Weighted Average Rate of<br>Interest on Loan (in %) | 7.5897                                  | 7.5641  | 7.5444  | 7.5444  |
| I | Interest on Loan (G*H)                              | 3.42                                    | 14.56   | 15.40   | 14.68   |



**Asset-7**

(₹ in lakh)

|   | Particulars                                         | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|-----------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Gross Normative Loan                                | 332.24                                  | 340.86       | 341.61       | 433.80       |
| B | Cumulative Repayments<br>upto Previous Year         | 0.00                                    | 7.42         | 38.28        | 73.34        |
| C | Net Loan-Opening (A-B)                              | 332.24                                  | 333.44       | 303.33       | 360.47       |
| D | Additions                                           | 8.62                                    | 0.74         | 92.20        | 0.00         |
| E | Repayment during the year                           | 7.42                                    | 30.86        | 35.06        | 39.23        |
| F | Net Loan-Closing (C+D-E)                            | 333.44                                  | 303.33       | 360.47       | 321.24       |
| G | Average Loan [(C+F)/2]                              | 332.84                                  | 318.39       | 331.90       | 340.85       |
| H | Weighted Average Rate of<br>Interest on Loan (in %) | 6.9942                                  | 6.9940       | 7.0083       | 7.0113       |
| I | <b>Interest on Loan (G*H)</b>                       | <b>5.68</b>                             | <b>22.27</b> | <b>23.26</b> | <b>23.90</b> |

**Asset-8**

(₹ in lakh)

|   | Particulars                                         | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|-----------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Gross Normative Loan                                | 265.90                                  | 271.40       | 271.40       | 355.84       |
| B | Cumulative Repayments<br>upto Previous Year         | 0.00                                    | 5.92         | 30.47        | 58.83        |
| C | Net Loan-Opening (A-B)                              | 265.90                                  | 265.48       | 240.94       | 297.02       |
| D | Additions                                           | 5.50                                    | 0.00         | 84.44        | 0.00         |
| E | Repayment during the year                           | 5.92                                    | 24.54        | 28.36        | 32.18        |
| F | Net Loan-Closing (C+D-E)                            | 265.48                                  | 240.94       | 297.02       | 264.84       |
| G | Average Loan [(C+F)/2]                              | 265.69                                  | 253.21       | 268.98       | 280.93       |
| H | Weighted Average Rate of<br>Interest on Loan (in %) | 6.8285                                  | 6.8389       | 6.8654       | 6.9005       |
| I | <b>Interest on Loan (G*H)</b>                       | <b>4.42</b>                             | <b>17.32</b> | <b>18.47</b> | <b>19.39</b> |

**Asset-9**

(₹ in lakh)

|   | Particulars                                 | 2020-21<br>(pro-rata<br>for 5 days) | 2021-22 | 2022-23 | 2023-24 |
|---|---------------------------------------------|-------------------------------------|---------|---------|---------|
| A | Gross Normative Loan                        | 2133.34                             | 2133.34 | 2531.77 | 2531.77 |
| B | Cumulative Repayments upto<br>Previous Year | 0.00                                | 2.64    | 213.57  | 442.52  |
| C | Net Loan-Opening (A-B)                      | 2133.34                             | 2130.70 | 2318.19 | 2089.25 |



|   | Particulars                                      | 2020-21<br>(pro-rata<br>for 5 days) | 2021-22       | 2022-23       | 2023-24       |
|---|--------------------------------------------------|-------------------------------------|---------------|---------------|---------------|
| D | Additions                                        | 0.00                                | 398.43        | 0.00          | 0.00          |
| E | Repayment during the year                        | 2.64                                | 210.93        | 228.94        | 228.94        |
| F | Net Loan-Closing (C+D-E)                         | 2130.70                             | 2318.19       | 2089.25       | 1860.31       |
| G | Average Loan $[(C+F)/2]$                         | 2132.02                             | 2224.45       | 2203.72       | 1974.78       |
| H | Weighted Average Rate of Interest on Loan (in %) | 7.3549                              | 7.3352        | 7.3172        | 7.3255        |
| I | <b>Interest on Loan (G*H)</b>                    | <b>2.15</b>                         | <b>163.17</b> | <b>161.25</b> | <b>144.66</b> |

#### Asset-10

(₹ in lakh)

|   | Particulars                                      | 2021-22<br>(pro-rata for<br>225 days) | 2022-23      | 2023-24      |
|---|--------------------------------------------------|---------------------------------------|--------------|--------------|
| A | Gross Normative Loan                             | 275.49                                | 281.65       | 312.54       |
| B | Cumulative Repayments upto Previous Year         | 0.00                                  | 15.53        | 42.39        |
| C | Net Loan-Opening (A-B)                           | 275.49                                | 266.12       | 270.15       |
| D | Additions                                        | 6.16                                  | 30.89        | 30.89        |
| E | Repayment during the year                        | 15.53                                 | 26.87        | 29.66        |
| F | Net Loan-Closing (C+D-E)                         | 266.12                                | 270.15       | 271.38       |
| G | Average Loan $[(C+F)/2]$                         | 270.81                                | 268.13       | 270.76       |
| H | Weighted Average Rate of Interest on Loan (in %) | 6.6439                                | 6.6380       | 6.6377       |
| I | <b>Interest on Loan (G*H)</b>                    | <b>11.09</b>                          | <b>17.80</b> | <b>17.97</b> |

#### Asset-11

(₹ in lakh)

|   | Particulars                                      | 2021-22<br>(pro-rata for<br>155 days) | 2022-23      | 2023-24      |
|---|--------------------------------------------------|---------------------------------------|--------------|--------------|
| A | Gross Normative Loan                             | 245.77                                | 245.77       | 260.56       |
| B | Cumulative Repayments upto Previous Year         | 0.00                                  | 9.44         | 32.33        |
| C | Net Loan-Opening (A-B)                           | 245.77                                | 236.33       | 228.23       |
| D | Additions                                        | 0.00                                  | 14.79        | 14.79        |
| E | Repayment during the year                        | 9.44                                  | 22.89        | 24.23        |
| F | Net Loan-Closing (C+D-E)                         | 236.33                                | 228.23       | 218.79       |
| G | Average Loan $[(C+F)/2]$                         | 241.05                                | 232.28       | 223.51       |
| H | Weighted Average Rate of Interest on Loan (in %) | 6.6500                                | 6.6500       | 6.6500       |
| I | <b>Interest on Loan (G*H)</b>                    | <b>6.81</b>                           | <b>15.45</b> | <b>14.86</b> |

#### Asset-12

(₹ in lakh)

|   | Particulars                              | 2022-23<br>(pro-rata for<br>336 days) | 2023-24 |
|---|------------------------------------------|---------------------------------------|---------|
| A | Gross Normative Loan                     | 1871.82                               | 2080.06 |
| B | Cumulative Repayments upto Previous Year | 0.00                                  | 164.48  |
| C | Net Loan-Opening (A-B)                   | 1871.82                               | 1915.58 |



|   | Particulars                                      | 2022-23<br>(pro-rata for 336 days) | 2023-24       |
|---|--------------------------------------------------|------------------------------------|---------------|
| D | Additions                                        | 208.24                             | 138.83        |
| E | Repayment during the year                        | 164.48                             | 194.37        |
| F | Net Loan-Closing (C+D-E)                         | 1915.58                            | 1860.03       |
| G | Average Loan [(C+F)/2]                           | 1893.70                            | 1887.81       |
| H | Weighted Average Rate of Interest on Loan (in %) | 7.3812                             | 7.3905        |
| I | <b>Interest on Loan (G*H)</b>                    | <b>128.67</b>                      | <b>139.52</b> |

### **Asset-13**

(₹ in lakh)

|   | Particulars                                      | 2022-23<br>(pro-rata for 222 days) | 2023-24      |
|---|--------------------------------------------------|------------------------------------|--------------|
| A | Gross Normative Loan                             | 433.68                             | 479.26       |
| B | Cumulative Repayments upto Previous Year         | 0.00                               | 25.11        |
| C | Net Loan-Opening (A-B)                           | 433.68                             | 454.16       |
| D | Additions                                        | 45.58                              | 68.37        |
| E | Repayment during the year                        | 25.11                              | 46.43        |
| F | Net Loan-Closing (C+D-E)                         | 454.16                             | 476.10       |
| G | Average Loan [(C+F)/2]                           | 443.92                             | 465.13       |
| H | Weighted Average Rate of Interest on Loan (in %) | 7.5343                             | 7.5292       |
| I | <b>Interest on Loan (G*H)</b>                    | <b>20.34</b>                       | <b>35.02</b> |

### **Return on Equity (RoE)**

156. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as under:

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

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

*Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*



*Provided further that:*

- i. *In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
- ii. *in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
- iii. *in case of a thermal generating station, with effect from 1.4.2020:*
  - a) *rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
  - b) *an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%;*

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

*(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODE) occurs plus 350 basis point, subject to ceiling of 14%;*”

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

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

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

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



paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

**Illustration-**

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

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

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

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is ₹ 1,000 crore;
- (b) Estimated Advance Tax for the year on above is ₹ 240 crore;
- (c) Effective Tax Rate for the year 2019-20 = ₹ 240 Crore/₹ 1000 Crore = 24%;
- (d) Rate of return on equity =  $15.50/(1-0.24) = 20.395\%$ .

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

157. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, the MAT rate applicable in the 2019-24 period for the respective financial years has been considered for the purpose of the RoE, which will be trued-up with the actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed for the communication assets has been worked out and allowed as under:

**Asset-1**

| (₹ in lakh) |                      |         |         |         |         |         |
|-------------|----------------------|---------|---------|---------|---------|---------|
|             | Particulars          | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| A           | Opening Equity       | 41.71   | 43.84   | 49.43   | 49.43   | 71.60   |
| B           | Additions            | 2.13    | 5.59    | 0.00    | 22.17   | 0.00    |
| C           | Closing Equity (A+B) | 43.84   | 49.43   | 49.43   | 71.60   | 71.60   |



|   | Particulars                            | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|----------------------------------------|---------|---------|---------|---------|---------|
| D | Average Equity (A+C)/2                 | 42.77   | 46.63   | 49.43   | 60.51   | 71.60   |
| E | Return on Equity (Base Rate)<br>(in %) | 15.500  | 15.500  | 15.500  | 15.500  | 15.500  |
| F | MAT Rate for respective year<br>(in %) | 17.472  | 17.472  | 17.472  | 17.472  | 17.472  |
| G | Rate of Return on Equity (in<br>)      | 18.782  | 18.782  | 18.782  | 18.782  | 18.782  |
| H | Return on Equity (D*G)                 | 8.03    | 8.76    | 9.28    | 11.37   | 13.45   |

### Asset-2

| (₹ in lakh) |                                        |                                       |         |         |         |         |
|-------------|----------------------------------------|---------------------------------------|---------|---------|---------|---------|
|             | Particulars                            | 2019-20<br>(pro rata for<br>267 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| A           | Opening Equity                         | 74.83                                 | 75.19   | 81.18   | 82.77   | 130.21  |
| B           | Additions                              | 0.36                                  | 5.99    | 1.59    | 47.44   | 0.00    |
| C           | Closing Equity (A+B)                   | 75.19                                 | 81.18   | 82.77   | 130.21  | 130.21  |
| D           | Average Equity (A+C)/2                 | 75.01                                 | 78.19   | 81.98   | 106.49  | 130.21  |
| E           | Return on Equity (Base<br>Rate) (in %) | 15.500                                | 15.500  | 15.500  | 15.500  | 15.500  |
| F           | MAT Rate for respective<br>year (in %) | 17.472                                | 17.472  | 17.472  | 17.472  | 17.472  |
| G           | Rate of Return on Equity<br>(in %)     | 18.782                                | 18.782  | 18.782  | 18.782  | 18.782  |
| H           | Return on Equity (D*G)                 | 10.28                                 | 14.68   | 15.40   | 20.00   | 24.46   |

### Asset-3

| (₹ in lakh) |                                        |                                       |         |         |         |         |
|-------------|----------------------------------------|---------------------------------------|---------|---------|---------|---------|
|             | Particulars                            | 2019-20<br>(pro-rata for<br>153 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| A           | Opening Equity                         | 63.40                                 | 76.68   | 78.72   | 79.02   | 90.17   |
| B           | Additions                              | 13.28                                 | 2.04    | 0.30    | 11.15   | 11.15   |
| C           | Closing Equity (A+B)                   | 76.68                                 | 78.72   | 79.02   | 90.17   | 101.31  |
| D           | Average Equity (A+C)/2                 | 70.04                                 | 77.70   | 78.87   | 84.59   | 95.74   |
| E           | Return on Equity (Base<br>Rate) (in %) | 15.500                                | 15.500  | 15.500  | 15.500  | 15.500  |
| F           | MAT Rate for respective<br>year (in %) | 17.472                                | 17.472  | 17.472  | 17.472  | 17.472  |
| G           | Rate of Return on Equity<br>(in %)     | 18.782                                | 18.782  | 18.782  | 18.782  | 18.782  |
| H           | Return on Equity (D*G)                 | 5.50                                  | 14.59   | 14.81   | 15.89   | 17.98   |



**Asset-4**

(₹ in lakh)

|   | Particulars                         | 2019-20<br>(pro-rata for<br>148 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|-------------------------------------|---------------------------------------|---------|---------|---------|---------|
| A | Opening Equity                      | 37.50                                 | 44.62   | 45.86   | 46.04   | 53.14   |
| B | Additions                           | 7.12                                  | 1.24    | 0.19    | 7.09    | 7.09    |
| C | Closing Equity (A+B)                | 44.62                                 | 45.86   | 46.04   | 53.14   | 60.23   |
| D | Average Equity (A+C)/2              | 41.06                                 | 45.24   | 45.95   | 49.59   | 56.68   |
| E | Return on Equity (Base Rate) (in %) | 15.500                                | 15.500  | 15.500  | 15.500  | 15.500  |
| F | MAT Rate for respective year (in %) | 17.472                                | 17.472  | 17.472  | 17.472  | 17.472  |
| G | Rate of Return on Equity (in %)     | 18.782                                | 18.782  | 18.782  | 18.782  | 18.782  |
| H | Return on Equity (D*G)              | 3.12                                  | 8.50    | 8.63    | 9.31    | 10.65   |

**Asset-5**

(₹ in lakh)

|   | Particulars                         | 2019-20<br>(pro-rata for<br>90 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|-------------------------------------|--------------------------------------|---------|---------|---------|---------|
| A | Opening Equity                      | 113.67                               | 114.84  | 125.06  | 157.94  | 177.06  |
| B | Additions                           | 1.17                                 | 10.22   | 32.87   | 19.12   | 0.00    |
| C | Closing Equity (A+B)                | 114.84                               | 125.06  | 157.94  | 177.06  | 177.06  |
| D | Average Equity (A+C)/2              | 114.26                               | 119.95  | 141.50  | 167.50  | 177.06  |
| E | Return on Equity (Base Rate) (in %) | 15.500                               | 15.500  | 15.500  | 15.500  | 15.500  |
| F | MAT Rate for respective year (in %) | 17.472                               | 17.472  | 17.472  | 17.472  | 17.472  |
| G | Rate of Return on Equity (in %)     | 18.782                               | 18.782  | 18.782  | 18.782  | 18.782  |
| H | Return on Equity (D*G)              | 5.28                                 | 22.53   | 26.58   | 31.46   | 33.25   |



**Asset-6**

(₹ in lakh)

|   | Particulars                         | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|-------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Opening Equity                      | 80.02                                   | 80.02        | 96.53        | 107.17       |
| B | Additions                           | 0.00                                    | 16.51        | 10.64        | 0.00         |
| C | Closing Equity (A+B)                | 80.02                                   | 96.53        | 107.17       | 107.17       |
| D | Average Equity (A+C)/2              | 80.02                                   | 88.27        | 101.85       | 107.17       |
| E | Return on Equity (Base Rate) (in %) | 15.500                                  | 15.500       | 15.500       | 15.500       |
| F | MAT Rate for respective year (in %) | 17.472                                  | 17.472       | 17.472       | 17.472       |
| G | Rate of Return on Equity (in %)     | 18.782                                  | 18.782       | 18.782       | 18.782       |
| H | <b>Return on Equity (D*G)</b>       | <b>3.66</b>                             | <b>16.58</b> | <b>19.13</b> | <b>20.13</b> |

**Asset-7**

(₹ in lakh)

|   | Particulars                         | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---|-------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| A | Opening Equity                      | 142.39                                  | 146.09       | 146.40       | 185.92       |
| B | Additions                           | 3.70                                    | 0.32         | 39.51        | 0.00         |
| C | Closing Equity (A+B)                | 146.09                                  | 146.40       | 185.92       | 185.92       |
| D | Average Equity (A+C)/2              | 144.24                                  | 146.25       | 166.16       | 185.92       |
| E | Return on Equity (Base Rate) (in %) | 15.500                                  | 15.500       | 15.500       | 15.500       |
| F | MAT Rate for respective year (in %) | 17.472                                  | 17.472       | 17.472       | 17.472       |
| G | Rate of Return on Equity (in %)     | 18.782                                  | 18.782       | 18.782       | 18.782       |
| H | <b>Return on Equity (D*G)</b>       | <b>6.61</b>                             | <b>27.47</b> | <b>31.21</b> | <b>34.92</b> |



**Asset-8**

(₹ in lakh)

|   | Particulars                         | 2020-21<br>(pro-rata for<br>89 days) | 2021-22 | 2022-23 | 2023-24 |
|---|-------------------------------------|--------------------------------------|---------|---------|---------|
| A | Opening Equity                      | 113.95                               | 116.31  | 116.31  | 152.50  |
| B | Additions                           | 2.36                                 | 0.00    | 36.19   | 0.00    |
| C | Closing Equity (A+B)                | 116.31                               | 116.31  | 152.50  | 152.50  |
| D | Average Equity (A+C)/2              | 115.13                               | 116.31  | 134.40  | 152.50  |
| E | Return on Equity (Base Rate) (in %) | 15.500                               | 15.500  | 15.500  | 15.500  |
| F | MAT Rate for respective year (in %) | 17.472                               | 17.472  | 17.472  | 17.472  |
| G | Rate of Return on Equity (in %)     | 18.782                               | 18.782  | 18.782  | 18.782  |
| H | Return on Equity (D*G)              | 5.27                                 | 21.84   | 25.24   | 28.64   |

**Asset-9**

(₹ in lakh)

|   | Particulars                         | 2020-21<br>(pro-rata for<br>5 days) | 2021-22 | 2022-23 | 2023-24 |
|---|-------------------------------------|-------------------------------------|---------|---------|---------|
| A | Opening Equity                      | 914.29                              | 914.29  | 1085.04 | 1085.04 |
| B | Additions                           | 0.00                                | 170.75  | 0.00    | 0.00    |
| C | Closing Equity (A+B)                | 914.29                              | 1085.04 | 1085.04 | 1085.04 |
| D | Average Equity (A+C)/2              | 914.29                              | 999.67  | 1085.04 | 1085.04 |
| E | Return on Equity (Base Rate) (in %) | 15.500                              | 15.500  | 15.500  | 15.500  |
| F | MAT Rate for respective year (in %) | 17.472                              | 17.472  | 17.472  | 17.472  |
| G | Rate of Return on Equity (in %)     | 18.782                              | 18.782  | 18.782  | 18.782  |
| H | Return on Equity (D*G)              | 2.35                                | 187.76  | 203.79  | 203.79  |

**Asset-10**

(₹ in lakh)

|   | Particulars    | 2021-22<br>(pro-rata for<br>225 days) | 2022-23 | 2023-24 |
|---|----------------|---------------------------------------|---------|---------|
| A | Opening Equity | 118.07                                | 120.71  | 133.95  |



|   | Particulars                         | 2021-22<br>(pro-rata for<br>225 days) | 2022-23      | 2023-24      |
|---|-------------------------------------|---------------------------------------|--------------|--------------|
| B | Additions                           | 2.64                                  | 13.24        | 13.24        |
| C | Closing Equity (A+B)                | 120.71                                | 133.95       | 147.19       |
| D | Average Equity (A+C)/2              | 119.39                                | 127.33       | 140.57       |
| E | Return on Equity (Base Rate) (in %) | 15.500                                | 15.500       | 15.500       |
| F | MAT Rate for respective year (in %) | 17.472                                | 17.472       | 17.472       |
| G | Rate of Return on Equity (in %)     | 18.782                                | 18.782       | 18.782       |
| H | <b>Return on Equity (D*G)</b>       | <b>13.82</b>                          | <b>23.92</b> | <b>26.40</b> |

#### **Asset-11**

(₹ in lakh)

|   | Particulars                         | 2021-22<br>(pro-rata for<br>155 days) | 2022-23      | 2023-24      |
|---|-------------------------------------|---------------------------------------|--------------|--------------|
| A | Opening Equity                      | 105.33                                | 105.33       | 111.67       |
| B | Additions                           | 0.00                                  | 6.34         | 6.34         |
| C | Closing Equity (A+B)                | 105.33                                | 111.67       | 118.01       |
| D | Average Equity (A+C)/2              | 105.33                                | 108.50       | 114.84       |
| E | Return on Equity (Base Rate) (in %) | 15.500                                | 15.500       | 15.500       |
| F | MAT Rate for respective year (in %) | 17.472                                | 17.472       | 17.472       |
| G | Rate of Return on Equity (in %)     | 18.782                                | 18.782       | 18.782       |
| H | <b>Return on Equity (D*G)</b>       | <b>8.40</b>                           | <b>20.38</b> | <b>21.57</b> |

#### **Asset-12**

(₹ in lakh)

|   | Particulars                         | 2022-23<br>(pro-rata for 336<br>days) | 2023-24       |
|---|-------------------------------------|---------------------------------------|---------------|
| A | Opening Equity                      | 802.21                                | 891.46        |
| B | Additions                           | 89.25                                 | 59.50         |
| C | Closing Equity (A+B)                | 891.46                                | 950.96        |
| D | Average Equity (A+C)/2              | 846.83                                | 921.21        |
| E | Return on Equity (Base Rate) (in %) | 15.500                                | 15.500        |
| F | MAT Rate for respective year (in %) | 17.472                                | 17.472        |
| G | Rate of Return on Equity (in %)     | 18.782                                | 18.782        |
| H | <b>Return on Equity (D*G)</b>       | <b>146.42</b>                         | <b>173.02</b> |



**Asset-13**

(₹ in lakh)

|   | Particulars                         | 2022-23<br>(pro-rata for 222 days) | 2023-24 |
|---|-------------------------------------|------------------------------------|---------|
| A | Opening Equity                      | 185.86                             | 205.40  |
| B | Additions                           | 19.54                              | 29.30   |
| C | Closing Equity (A+B)                | 205.40                             | 234.70  |
| D | Average Equity (A+C)/2              | 195.63                             | 220.05  |
| E | Return on Equity (Base Rate) (in %) | 15.500                             | 15.500  |
| F | MAT Rate for respective year (in %) | 17.472                             | 17.472  |
| G | Rate of Return on Equity (in %)     | 18.782                             | 18.782  |
| H | Return on Equity (D*G)              | 22.35                              | 41.33   |

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

158. The Petitioner has not claimed any O&M Expenses for Asset-3, Asset-4, Asset-5, Asset-6, Asset-7, Asset-10, Asset-11, Asset-12 and Asset-13, as the said communication assets belong to the State sector. The O&M Expenses claimed by the Petitioner for the Asset-1, Asset-2, Asset-8, Asset-9 for the 2019-24 tariff period are as under.

**Asset-1**

(₹ in lakh)

| Particulars                   | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------------------------|---------|---------|---------|---------|---------|
| Communication System          | 5.09    | 5.09    | 5.09    | 5.09    | 5.09    |
| <b>Total O&amp;M Expenses</b> | 5.09    | 5.09    | 5.09    | 5.09    | 5.09    |

**Asset-2**

(₹ in lakh)

| Particulars                   | 2019-20<br>(pro rata for 267 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------------------------|------------------------------------|---------|---------|---------|---------|
| Communication System          | 6.63                               | 9.09    | 9.09    | 9.09    | 9.09    |
| <b>Total O&amp;M Expenses</b> | 6.63                               | 9.09    | 9.09    | 9.09    | 9.09    |



**Asset-8**

| (₹ in lakh)                   |         |         |         |         |
|-------------------------------|---------|---------|---------|---------|
| Particulars                   | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Communication System          | 2.87    | 11.77   | 11.77   | 11.77   |
| <b>Total O&amp;M Expenses</b> | 2.87    | 11.77   | 11.77   | 11.77   |

**Asset-9**

| (₹ in lakh)                   |         |         |         |         |
|-------------------------------|---------|---------|---------|---------|
| Particulars                   | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Communication System          | 1.03    | 75.22   | 75.22   | 75.22   |
| <b>Total O&amp;M Expenses</b> | 1.03    | 75.22   | 75.22   | 75.22   |

159. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

**“35. Operation and Maintenance Expenses:**

**(3) Transmission system:** (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

| Particulars                                                        | 2019-20 | 2020-21 | 2021-22<br>(pro-rata 47 days) | 2022-23 | 2023-24 |
|--------------------------------------------------------------------|---------|---------|-------------------------------|---------|---------|
| <b>Norms for sub-station Bays (₹ Lakh per bay)</b>                 |         |         |                               |         |         |
| 765 kV                                                             | 45.01   | 46.60   | 48.23                         | 49.93   | 51.68   |
| 400 kV                                                             | 32.15   | 33.28   | 34.45                         | 35.66   | 36.91   |
| 220 kV                                                             | 22.51   | 23.30   | 24.12                         | 24.96   | 25.84   |
| 132 kV and below                                                   | 16.08   | 16.64   | 17.23                         | 17.83   | 18.46   |
| <b>Norms for Transformers (₹ Lakh per MVA)</b>                     |         |         |                               |         |         |
| 765 kV                                                             | 0.491   | 0.508   | 0.526                         | 0.545   | 0.564   |
| 400 kV                                                             | 0.358   | 0.371   | 0.384                         | 0.398   | 0.411   |
| 220 kV                                                             | 0.245   | 0.254   | 0.263                         | 0.272   | 0.282   |
| 132 kV and below                                                   | 0.245   | 0.254   | 0.263                         | 0.272   | 0.282   |
| <b>Norms for AC and HVDC lines (₹ Lakh per km)</b>                 |         |         |                               |         |         |
| Single Circuit (Bundled Conductor with six or more sub-conductors) | 0.881   | 0.912   | 0.944                         | 0.977   | 1.011   |
| Single Circuit (Bundled conductor with four sub-conductors)        | 0.755   | 0.781   | 0.809                         | 0.837   | 0.867   |
| Single Circuit (Twin & Triple Conductor)                           | 0.503   | 0.521   | 0.539                         | 0.558   | 0.578   |
| Single Circuit (Single Conductor)                                  | 0.252   | 0.260   | 0.270                         | 0.279   | 0.289   |



| <b>Particulars</b>                                                          | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22<br/>(pro-rata 47 days)</b> | <b>2022-23</b> | <b>2023-24</b> |
|-----------------------------------------------------------------------------|----------------|----------------|---------------------------------------|----------------|----------------|
| <i>Double Circuit (Bundled conductor with four or more sub-conductors)</i>  | 1.322          | 1.368          | 1.416                                 | 1.466          | 1.517          |
| <i>Double Circuit (Twin &amp; Triple Conductor)</i>                         | 0.881          | 0.912          | 0.944                                 | 0.977          | 1.011          |
| <i>Double Circuit (Single Conductor)</i>                                    | 0.377          | 0.391          | 0.404                                 | 0.419          | 0.433          |
| <i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>    | 2.319          | 2.401          | 2.485                                 | 2.572          | 2.662          |
| <i>Multi Circuit (Twin &amp; Triple Conductor)</i>                          | 1.544          | 1.598          | 1.654                                 | 1.713          | 1.773          |
| <b>Norms for HVDC stations</b>                                              |                |                |                                       |                |                |
| <i>HVDC Back-to-Back stations (₹ Lakh per 500 MW) (Except Gazuwaka BTB)</i> | 834            | 864            | 894                                   | 925            | 958            |
| <i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>               | 1,666          | 1,725          | 1,785                                 | 1,848          | 1,913          |
| <i>500 kV Rihand-Dadri HVDC bipole scheme (₹ Lakh) (1500 MW)</i>            | 2,252          | 2,331          | 2,413                                 | 2,498          | 2,586          |
| <i>±500 kV Talcher- Kolar HVDC bipole scheme (₹ Lakh) (2000 MW)</i>         | 2,468          | 2,555          | 2,645                                 | 2,738          | 2,834          |
| <i>±500 kV Bhiwadi-Balia HVDC bipole scheme (₹ Lakh) (2500 MW)</i>          | 1,696          | 1,756          | 1,817                                 | 1,881          | 1,947          |
| <i>±800 kV, Bishwanath-Agra HVDC bipole scheme (₹ Lakh)(3000 MW)</i>        | 2,563          | 2,653          | 2,746                                 | 2,842          | 2,942          |

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

*Provided further that:*

- (i) the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- (ii) the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- (iii) the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme*



(2000 MW);

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

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

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

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

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

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

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

160. The O&M Expenses worked out for the various elements of the communication assets as per the norms specified in the 2019 Tariff Regulations and the same are as under:

**Asset-1**

| (₹ in lakh)                                                           |             |             |             |             |             |
|-----------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Particulars                                                           | 2019-20     | 2020-21     | 2021-22     | 2022-23     | 2023-24     |
| O&M Expenses claimed by the Petitioner                                | 5.09        | 5.09        | 5.09        | 5.09        | 5.09        |
| Project cost related to Communication system allowed in instant order | 238.67      | 238.67      | 238.67      | 238.67      | 238.67      |
| Norms as per the 2019 Tariff Regulations, (% of Project cost)         | 2.0         | 2.0         | 2.0         | 2.0         | 2.0         |
| <b>Total O&amp;M Expenses Allowed</b>                                 | <b>4.77</b> | <b>4.77</b> | <b>4.77</b> | <b>4.77</b> | <b>4.77</b> |



**Asset-2**

(₹ in lakh)

| Particulars                                                            | 2019-20<br>(pro rata<br>for 267<br>days) | 2020-<br>21 | 2021-<br>22 | 2022-<br>23 | 2023-<br>24 |
|------------------------------------------------------------------------|------------------------------------------|-------------|-------------|-------------|-------------|
| O&M Expenses claimed by the Petitioner                                 | 6.63                                     | 9.09        | 9.09        | 9.09        | 9.09        |
| Project Cost related to communication system allowed in instant order  | 434.06                                   | 434.06      | 434.06      | 434.06      | 434.06      |
| Norms as per the 2019 Tariff Regulations, (% of Original Project Cost) | 2.0                                      | 2.0         | 2.0         | 2.0         | 2.0         |
| <b>Total O&amp;M Expenses Allowed</b>                                  | <b>6.33</b>                              | <b>8.68</b> | <b>8.68</b> | <b>8.68</b> | <b>8.68</b> |

**Asset-8**

(₹ in lakh)

| Particulars                                                   | 2020-21<br>(pro-rata<br>for 89<br>days) | 2021-22      | 2022-23      | 2023-24      |
|---------------------------------------------------------------|-----------------------------------------|--------------|--------------|--------------|
| O&M Expenses claimed by the Petitioner                        | 2.87                                    | 11.77        | 11.77        | 11.77        |
| Project cost related to communication system in instant order | 508.38                                  | 508.38       | 508.38       | 508.38       |
| Norms as per the 2019 Tariff Regulations, (% of Project Cost) | 2.0                                     | 2.0          | 2.0          | 2.0          |
| <b>Total O&amp;M Expenses Allowed</b>                         | <b>2.48</b>                             | <b>10.17</b> | <b>10.17</b> | <b>10.17</b> |

**Asset-9**

(₹ in lakh)

| Particulars                                                           | 2020-21<br>(pro-rata for<br>5 days) | 2021-<br>22  | 2022-<br>23  | 2023-<br>24  |
|-----------------------------------------------------------------------|-------------------------------------|--------------|--------------|--------------|
| O&M Expenses claimed by the Petitioner                                | 1.03                                | 75.22        | 75.22        | 75.22        |
| Project Cost related to Communication system allowed in instant order | 3218.41                             | 3218.41      | 3218.41      | 3218.41      |
| Norms as per the 2019 Tariff Regulations, (% of Project Cost)         | 2.0                                 | 2.0          | 2.0          | 2.0          |
| <b>Total O&amp;M Expenses Allowed</b>                                 | <b>0.88</b>                         | <b>64.37</b> | <b>64.37</b> | <b>64.37</b> |

161. The Petitioner is directed to submit the actual O&M Expenses in case of Asset-1, Asset-2, Asset-8 and Asset-9 at the time of truing-up.

**Interest on Working Capital (IWC)**

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



**“34. Interest on Working Capital:** (1) The working capital shall cover:

.....

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

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

.....

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1<sup>st</sup> April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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

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

**“3. Definitions.** - In these regulations, unless the context otherwise requires:-

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

163. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the bank rate as on 1.4.2019 or as on 1<sup>st</sup> April of the year during the 2019-24 tariff period in which the communication assets has been commissioned, whichever is later. The Petitioner has considered the rate of IWC as 12.05%. The IWC has been worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for FY 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for FY 2020-21, 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for the FYs 2021-22 and FY



2022-23 and 12.00% (SBI 1 year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for the FY 2023-24. The components of the working capital and interest allowed thereon for the communication assets are as under:

**Asset-1**

(₹ in lakh)

|   | Particulars                                                                            | 2019-20     | 2020-21     | 2021-22     | 2022-23     | 2023-24     |
|---|----------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month)                          | 0.40        | 0.40        | 0.40        | 0.40        | 0.40        |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)                           | 0.72        | 0.72        | 0.72        | 0.72        | 0.72        |
| C | Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 3.58        | 3.77        | 3.87        | 4.54        | 5.20        |
| D | Total Working Capital (A+B+C)                                                          | <b>4.70</b> | <b>4.89</b> | <b>4.98</b> | <b>5.66</b> | <b>6.31</b> |
| E | Rate of Interest (in %)                                                                | 12.05       | 11.25       | 10.50       | 10.50       | 12.00       |
| F | Interest on Working Capital (D*E)                                                      | <b>0.57</b> | <b>0.55</b> | <b>0.52</b> | <b>0.59</b> | <b>0.76</b> |

**Asset-2**

(₹ in lakh)

|   | Particulars                                                                            | 2019-20<br>(pro rata for 267 days) | 2020-21     | 2021-22     | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------------------------|------------------------------------|-------------|-------------|--------------|--------------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month)                          | 0.72                               | 0.72        | 0.72        | 0.72         | 0.72         |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)                           | 1.30                               | 1.30        | 1.30        | 1.30         | 1.30         |
| C | Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 6.52                               | 6.63        | 6.73        | 8.32         | 9.79         |
| D | Total Working Capital (A+B+C)                                                          | <b>8.55</b>                        | <b>8.65</b> | <b>8.75</b> | <b>10.34</b> | <b>11.82</b> |
| E | Rate of Interest (in %)                                                                | 12.05                              | 11.25       | 10.50       | 10.50        | 12.00        |
| F | Interest on Working Capital (D*E)                                                      | <b>0.75</b>                        | <b>0.97</b> | <b>0.92</b> | <b>1.09</b>  | <b>1.42</b>  |

**Asset-3**

(₹ in lakh)

|   | Particulars                                                   | 2019-20<br>(pro-rata for 153 days) | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---------------------------------------------------------------|------------------------------------|---------|---------|---------|---------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month) | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)  | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    |



|   | Particulars                                                                                  | 2019-20<br>(pro-rata for<br>153 days) | 2020-<br>21 | 2021-<br>22 | 2022-<br>23 | 2023-<br>24 |
|---|----------------------------------------------------------------------------------------------|---------------------------------------|-------------|-------------|-------------|-------------|
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 4.97                                  | 5.43        | 5.37        | 5.67        | 6.28        |
| D | Total Working Capital (A+B+C)                                                                | <b>4.97</b>                           | <b>5.43</b> | <b>5.37</b> | <b>5.67</b> | <b>6.28</b> |
| E | Rate of Interest (in %)                                                                      | 12.05                                 | 11.25       | 10.50       | 10.50       | 12.00       |
| F | <b>Interest on Working Capital (D*E)</b>                                                     | <b>0.25</b>                           | <b>0.61</b> | <b>0.56</b> | <b>0.59</b> | <b>0.75</b> |

#### Asset-4

(₹ in lakh)

|   | Particulars                                                                                  | 2019-20<br>(pro-rata for<br>148 days) | 2020-<br>21 | 2021-<br>22 | 2022-<br>23 | 2023-<br>24 |
|---|----------------------------------------------------------------------------------------------|---------------------------------------|-------------|-------------|-------------|-------------|
| A | Working Capital for O&M Expenses<br>(O&M Expenses for one month)                             | 0.00                                  | 0.00        | 0.00        | 0.00        | 0.00        |
| B | Working Capital for Maintenance<br>Spares (15% of O&M Expenses)                              | 0.00                                  | 0.00        | 0.00        | 0.00        | 0.00        |
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 2.91                                  | 3.15        | 3.12        | 3.30        | 3.70        |
| D | Total Working Capital (A+B+C)                                                                | <b>2.91</b>                           | <b>3.15</b> | <b>3.12</b> | <b>3.30</b> | <b>3.70</b> |
| E | Rate of Interest (in %)                                                                      | 12.05                                 | 11.25       | 10.50       | 10.50       | 12.00       |
| F | <b>Interest on Working Capital (D*E)</b>                                                     | <b>0.14</b>                           | <b>0.35</b> | <b>0.33</b> | <b>0.35</b> | <b>0.44</b> |

#### Asset-5

(₹ in lakh)

|   | Particulars                                                                                  | 2019-20<br>(pro-rata for<br>90 days) | 2020-<br>21 | 2021-<br>22 | 2022-<br>23  | 2023-<br>24  |
|---|----------------------------------------------------------------------------------------------|--------------------------------------|-------------|-------------|--------------|--------------|
| A | Working Capital for O&M Expenses<br>(O&M Expenses for one month)                             | 0.00                                 | 0.00        | 0.00        | 0.00         | 0.00         |
| B | Working Capital for Maintenance<br>Spares (15% of O&M Expenses)                              | 0.00                                 | 0.00        | 0.00        | 0.00         | 0.00         |
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 8.27                                 | 8.52        | 9.76        | 11.30        | 11.63        |
| D | Total Working Capital (A+B+C)                                                                | <b>8.27</b>                          | <b>8.52</b> | <b>9.76</b> | <b>11.30</b> | <b>11.63</b> |
| E | Rate of Interest (in %)                                                                      | 12.05                                | 11.25       | 10.50       | 10.50        | 12.00        |
| F | <b>Interest on Working Capital (D*E)</b>                                                     | <b>0.25</b>                          | <b>0.96</b> | <b>1.02</b> | <b>1.19</b>  | <b>1.40</b>  |

#### Asset-6

(₹ in lakh)

|   | Particulars                                                      | 2020-21<br>(pro-rata for<br>89 days) | 2021-22 | 2022-23 | 2023-24 |
|---|------------------------------------------------------------------|--------------------------------------|---------|---------|---------|
| A | Working Capital for O&M Expenses<br>(O&M Expenses for one month) | 0.00                                 | 0.00    | 0.00    | 0.00    |
| B | Working Capital for Maintenance<br>Spares (15% of O&M Expenses)  | 0.00                                 | 0.00    | 0.00    | 0.00    |



|   |                                                                                              |             |             |             |             |
|---|----------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 5.74        | 6.22        | 7.00        | 7.17        |
| D | Total Working Capital (A+B+C)                                                                | <b>5.74</b> | <b>6.22</b> | <b>7.00</b> | <b>7.17</b> |
| E | Rate of Interest (in %)                                                                      | 11.25       | 10.50       | 10.50       | 12.00       |
| F | Interest on Working Capital (D*E)                                                            | <b>0.16</b> | <b>0.65</b> | <b>0.73</b> | <b>0.86</b> |

#### **Asset-7**

(₹ in lakh)

|   | Particulars                                                                                  | 2020-21<br>(pro-rata for<br>89 days) | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------------------------------|--------------------------------------|--------------|--------------|--------------|
| A | Working Capital for O&M Expenses<br>(O&M Expenses for one month)                             | 0.00                                 | 0.00         | 0.00         | 0.00         |
| B | Working Capital for Maintenance<br>Spares (15% of O&M Expenses)                              | 0.00                                 | 0.00         | 0.00         | 0.00         |
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 10.10                                | 10.07        | 11.18        | 12.24        |
| D | Total Working Capital (A+B+C)                                                                | <b>10.10</b>                         | <b>10.07</b> | <b>11.18</b> | <b>12.24</b> |
| E | Rate of Interest (in %)                                                                      | 11.25                                | 10.50        | 10.50        | 12.00        |
| F | Interest on Working Capital (D*E)                                                            | <b>0.28</b>                          | <b>1.06</b>  | <b>1.17</b>  | <b>1.47</b>  |

#### **Asset-8**

(₹ in lakh)

|   | Particulars                                                                                  | 2020-21<br>(pro-rata for<br>89 days) | 2021-22      | 2022-23      | 2023-24      |
|---|----------------------------------------------------------------------------------------------|--------------------------------------|--------------|--------------|--------------|
| A | Working Capital for O&M Expenses<br>(O&M Expenses for one month)                             | 0.85                                 | 0.85         | 0.85         | 0.85         |
| B | Working Capital for Maintenance<br>Spares (15% of O&M Expenses)                              | 1.53                                 | 1.53         | 1.53         | 1.53         |
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 9.31                                 | 9.26         | 10.30        | 11.31        |
| D | Total Working Capital (A+B+C)                                                                | <b>11.69</b>                         | <b>11.63</b> | <b>12.68</b> | <b>13.69</b> |
| E | Rate of Interest (in %)                                                                      | 11.25                                | 10.50        | 10.50        | 12.00        |
| F | Interest on Working Capital (D*E)                                                            | <b>0.32</b>                          | <b>1.22</b>  | <b>1.33</b>  | <b>1.64</b>  |

#### **Asset-9**

(₹ in lakh)

|   | Particulars                                                                                  | 2020-21<br>(pro-rata for 5<br>days) | 2021-22 | 2022-23 | 2023-24 |
|---|----------------------------------------------------------------------------------------------|-------------------------------------|---------|---------|---------|
| A | Working Capital for O&M Expenses<br>(O&M Expenses for one month)                             | 6.03                                | 6.03    | 6.03    | 6.03    |
| B | Working Capital for Maintenance<br>Spares (15% of O&M Expenses)                              | 10.85                               | 10.85   | 10.85   | 10.85   |
| C | Working Capital for Receivables<br>(Equivalent to 45 days of annual<br>transmission charges) | 74.47                               | 79.43   | 83.45   | 81.33   |



|   | Particulars                       | 2020-21<br>(pro-rata for 5 days) | 2021-22 | 2022-23 | 2023-24 |
|---|-----------------------------------|----------------------------------|---------|---------|---------|
| D | Total Working Capital (A+B+C)     | 91.35                            | 96.31   | 100.33  | 98.21   |
| E | Rate of Interest (in %)           | 11.25                            | 10.50   | 10.50   | 12.00   |
| F | Interest on Working Capital (D*E) | 0.14                             | 10.11   | 10.53   | 11.79   |

#### Asset-10

(₹ in lakh)

|   | Particulars                                                                            | 2021-22<br>(pro-rata for 225 days) | 2022-23 | 2023-24 |
|---|----------------------------------------------------------------------------------------|------------------------------------|---------|---------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month)                          | 0.00                               | 0.00    | 0.00    |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)                           | 0.00                               | 0.00    | 0.00    |
| C | Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 5.03                               | 8.57    | 9.24    |
| D | Total Working Capital (A+B+C)                                                          | 5.03                               | 8.57    | 9.24    |
| E | Rate of Interest (in %)                                                                | 10.50                              | 10.50   | 12.00   |
| F | Interest on Working Capital (D*E)                                                      | 0.33                               | 0.90    | 1.11    |

#### Asset-11

(₹ in lakh)

|   | Particulars                                                                            | 2021-22<br>(pro-rata for 155 days) | 2022-23 | 2023-24 |
|---|----------------------------------------------------------------------------------------|------------------------------------|---------|---------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month)                          | 0.00                               | 0.00    | 0.00    |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)                           | 0.00                               | 0.00    | 0.00    |
| C | Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 7.25                               | 7.33    | 7.57    |
| D | Total Working Capital (A+B+C)                                                          | 7.25                               | 7.33    | 7.57    |
| E | Rate of Interest (in %)                                                                | 10.50                              | 10.50   | 12.00   |
| F | Interest on Working Capital (D*E)                                                      | 0.32                               | 0.77    | 0.91    |

#### Asset-12

(₹ in lakh)

|   | Particulars                                                                            | 2022-23<br>(pro-rata for 336 days) | 2023-24 |
|---|----------------------------------------------------------------------------------------|------------------------------------|---------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month)                          | 0.00                               | 0.00    |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)                           | 0.00                               | 0.00    |
| C | Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 59.64                              | 63.26   |
| D | Total Working Capital (A+B+C)                                                          | 59.64                              | 63.26   |
| E | Rate of Interest (in %)                                                                | 10.50                              | 12.00   |



|   | Particulars                       | 2022-23<br>(pro-rata for 336 days) | 2023-24 |
|---|-----------------------------------|------------------------------------|---------|
| F | Interest on Working Capital (D*E) | 5.76                               | 7.59    |

### **Asset-13**

(₹ in lakh)

|   | Particulars                                                                            | 2022-23<br>(pro-rata for 222 days) | 2023-24 |
|---|----------------------------------------------------------------------------------------|------------------------------------|---------|
| A | Working Capital for O&M Expenses (O&M Expenses for one month)                          | 0.00                               | 0.00    |
| B | Working Capital for Maintenance Spares (15% of O&M Expenses)                           | 0.00                               | 0.00    |
| C | Working Capital for Receivables (Equivalent to 45 days of annual transmission charges) | 13.92                              | 15.32   |
| D | Total Working Capital (A+B+C)                                                          | 13.92                              | 15.32   |
| E | Rate of Interest (in %)                                                                | 10.50                              | 12.00   |
| F | Interest on Working Capital (D*E)                                                      | 0.89                               | 1.84    |

### **Annual Fixed Charges for the 2019-24 Tariff Period**

164. The transmission charges allowed for the communication assets for the 2019-24 tariff period are as under:

#### **Asset-1 (Central Sector)**

(₹ in lakh)

| Particulars                 | 2019-20      | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| Depreciation                | 9.02         | 9.84         | 10.43        | 12.77        | 15.11        |
| Interest on Loan            | 6.76         | 6.68         | 6.36         | 7.34         | 8.18         |
| Return on Equity            | 8.03         | 8.76         | 9.28         | 11.37        | 13.45        |
| O&M Expenses                | 4.77         | 4.77         | 4.77         | 4.77         | 4.77         |
| Interest on Working Capital | 0.57         | 0.55         | 0.52         | 0.59         | 0.76         |
| <b>Total</b>                | <b>29.16</b> | <b>30.60</b> | <b>31.37</b> | <b>36.84</b> | <b>42.26</b> |

#### **Asset-2 (Central Sector)**

(₹ in lakh)

| Particulars                 | 2019-20<br>(pro rata for 267 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|------------------------------------|--------------|--------------|--------------|--------------|
| Depreciation                | 11.55                              | 16.50        | 17.30        | 22.47        | 27.47        |
| Interest on Loan            | 9.80                               | 12.92        | 12.27        | 15.22        | 17.63        |
| Return on Equity            | 10.28                              | 14.68        | 15.40        | 20.00        | 24.46        |
| O&M Expenses                | 6.33                               | 8.68         | 8.68         | 8.68         | 8.68         |
| Interest on Working Capital | 0.75                               | 0.97         | 0.92         | 1.09         | 1.42         |
| <b>Total</b>                | <b>38.71</b>                       | <b>53.76</b> | <b>54.56</b> | <b>67.45</b> | <b>79.65</b> |



**Asset-3 (BBMB)**

(₹ in lakh)

| Particulars                 | 2019-20<br>(pro-rata<br>for 153<br>days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|------------------------------------------|--------------|--------------|--------------|--------------|
| Depreciation                | 6.18                                     | 16.39        | 16.64        | 17.85        | 20.20        |
| Interest on Loan            | 4.98                                     | 12.44        | 11.51        | 11.63        | 12.17        |
| Return on Equity            | 5.50                                     | 14.59        | 14.81        | 15.89        | 17.98        |
| O&M Expenses                | 0.00                                     | 0.00         | 0.00         | 0.00         | 0.00         |
| Interest on Working Capital | 0.25                                     | 0.61         | 0.56         | 0.59         | 0.75         |
| <b>Total</b>                | <b>16.90</b>                             | <b>44.04</b> | <b>43.53</b> | <b>45.96</b> | <b>51.10</b> |

**Asset-4 (State Sector)**

(₹ in lakh)

| Particulars                 | 2019-20<br>(pro-rata for<br>148 days) | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|---------------------------------------|--------------|--------------|--------------|--------------|
| Depreciation                | 3.50                                  | 9.54         | 9.69         | 10.46        | 11.96        |
| Interest on Loan            | 2.79                                  | 7.18         | 6.62         | 6.63         | 7.03         |
| Return on Equity            | 3.12                                  | 8.50         | 8.63         | 9.31         | 10.65        |
| O&M Expenses                | 0.00                                  | 0.00         | 0.00         | 0.00         | 0.00         |
| Interest on Working Capital | 0.14                                  | 0.35         | 0.33         | 0.35         | 0.44         |
| <b>Total</b>                | <b>9.55</b>                           | <b>25.58</b> | <b>25.27</b> | <b>26.76</b> | <b>30.08</b> |

**Asset-5 (State Sector)**

(₹ in lakh)

| Particulars                 | 2019-20<br>(pro-rata for 90<br>days) | 2020-<br>21  | 2021-<br>22  | 2022-23      | 2023-24      |
|-----------------------------|--------------------------------------|--------------|--------------|--------------|--------------|
| Depreciation                | 5.93                                 | 25.31        | 29.86        | 35.34        | 37.36        |
| Interest on Loan            | 5.09                                 | 20.33        | 21.72        | 23.67        | 22.60        |
| Return on Equity            | 5.28                                 | 22.53        | 26.58        | 31.46        | 33.25        |
| O&M Expenses                | 0.00                                 | 0.00         | 0.00         | 0.00         | 0.00         |
| Interest on Working Capital | 0.25                                 | 0.96         | 1.02         | 1.19         | 1.40         |
| <b>Total</b>                | <b>16.54</b>                         | <b>69.13</b> | <b>79.18</b> | <b>91.66</b> | <b>94.61</b> |

**Asset-6 (State Sector)**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 89 days) | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|-----------------------------------|--------------|--------------|--------------|
| Depreciation                | 4.12                              | 18.63        | 21.49        | 22.61        |
| Interest on Loan            | 3.42                              | 14.56        | 15.40        | 14.68        |
| Return on Equity            | 3.66                              | 16.58        | 19.13        | 20.13        |
| O&M Expenses                | 0.00                              | 0.00         | 0.00         | 0.00         |
| Interest on Working Capital | 0.16                              | 0.65         | 0.73         | 0.86         |
| <b>Total</b>                | <b>11.36</b>                      | <b>50.42</b> | <b>56.76</b> | <b>58.28</b> |



**Asset-7 (State Sector)**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 89 days) | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|-----------------------------------|--------------|--------------|--------------|
| Depreciation                | 7.42                              | 30.86        | 35.06        | 39.23        |
| Interest on Loan            | 5.68                              | 22.27        | 23.26        | 23.90        |
| Return on Equity            | 6.61                              | 27.47        | 31.21        | 34.92        |
| O&M Expenses                | 0.00                              | 0.00         | 0.00         | 0.00         |
| Interest on Working Capital | 0.28                              | 1.06         | 1.17         | 1.47         |
| <b>Total</b>                | <b>19.98</b>                      | <b>81.65</b> | <b>90.70</b> | <b>99.51</b> |

**Asset-8 (Central Sector)**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 89 days) | 2021-22      | 2022-23      | 2023-24      |
|-----------------------------|-----------------------------------|--------------|--------------|--------------|
| Depreciation                | 5.92                              | 24.54        | 28.36        | 32.18        |
| Interest on Loan            | 4.42                              | 17.32        | 18.47        | 19.39        |
| Return on Equity            | 5.27                              | 21.84        | 25.24        | 28.64        |
| O&M Expenses                | 2.48                              | 10.17        | 10.17        | 10.17        |
| Interest on Working Capital | 0.32                              | 1.22         | 1.33         | 1.64         |
| <b>Total</b>                | <b>18.42</b>                      | <b>75.09</b> | <b>83.57</b> | <b>92.01</b> |

**Asset-9 (Central Sector)**

(₹ in lakh)

| Particulars                 | 2020-21<br>(pro-rata for 5 days) | 2021-22       | 2022-23       | 2023-24       |
|-----------------------------|----------------------------------|---------------|---------------|---------------|
| Depreciation                | 2.64                             | 210.93        | 228.94        | 228.94        |
| Interest on Loan            | 2.15                             | 163.17        | 161.25        | 144.66        |
| Return on Equity            | 2.35                             | 187.76        | 203.79        | 203.79        |
| O&M Expenses                | 0.99                             | 72.34         | 72.34         | 72.34         |
| Interest on Working Capital | 0.14                             | 10.11         | 10.53         | 11.79         |
| <b>Total</b>                | <b>8.27</b>                      | <b>644.30</b> | <b>676.86</b> | <b>661.52</b> |

**Asset-10 (State Sector)**

(₹ in lakh)

| Particulars                 | 2021-22<br>(Pro-rata for 225 days) | 2022-23      | 2023-24      |
|-----------------------------|------------------------------------|--------------|--------------|
| Depreciation                | 15.53                              | 26.87        | 29.66        |
| Interest on Loan            | 11.09                              | 17.80        | 17.97        |
| Return on Equity            | 13.82                              | 23.92        | 26.40        |
| O&M Expenses                | 0.00                               | 0.00         | 0.00         |
| Interest on Working Capital | 0.33                               | 0.90         | 1.11         |
| <b>Total</b>                | <b>40.77</b>                       | <b>69.48</b> | <b>75.14</b> |

**Asset-11 (State Sector)**

(₹ in lakh)

| Particulars      | 2021-22<br>(pro-rata for 155 days) | 2022-23 | 2023-24 |
|------------------|------------------------------------|---------|---------|
| Depreciation     | 9.44                               | 22.89   | 24.23   |
| Interest on Loan | 6.81                               | 15.45   | 14.86   |



|                             |              |              |              |
|-----------------------------|--------------|--------------|--------------|
| Return on Equity            | 8.40         | 20.38        | 21.57        |
| O&M Expenses                | 0.00         | 0.00         | 0.00         |
| Interest on Working Capital | 0.32         | 0.77         | 0.91         |
| <b>Total</b>                | <b>24.97</b> | <b>59.49</b> | <b>61.57</b> |

#### **Asset-12 (State Sector)**

(₹ in lakh)

| Particulars                 | 2022-23<br>(Pro-rata for 336 days) | 2023-24       |
|-----------------------------|------------------------------------|---------------|
| Depreciation                | 164.48                             | 194.37        |
| Interest on Loan            | 128.67                             | 139.52        |
| Return on Equity            | 146.42                             | 173.02        |
| O&M Expenses                | 0.00                               | 0.00          |
| Interest on Working Capital | 5.76                               | 7.59          |
| <b>Total</b>                | <b>445.34</b>                      | <b>514.50</b> |

#### **Asset-13 (State Sector)**

(₹ in lakh)

| Particulars                 | 2022-23<br>(Pro-rata for 222 days) | 2023-24       |
|-----------------------------|------------------------------------|---------------|
| Depreciation                | 25.11                              | 46.43         |
| Interest on Loan            | 20.34                              | 35.02         |
| Return on Equity            | 22.35                              | 41.33         |
| O&M Expenses                | 0.00                               | 0.00          |
| Interest on Working Capital | 0.89                               | 1.84          |
| <b>Total</b>                | <b>68.69</b>                       | <b>124.62</b> |

#### **Filing Fee and the Publication Expenses**

165. The Petitioner has sought reimbursement of fee paid by it for filing the Petition and publication expenses. The Petitioner shall be entitled to reimbursement of the filing fees and publication expenses in connection with the present Petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

#### **Licence Fee & RLDC Fees and Charges**

166. The Petitioner shall be entitled to reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The



Petitioner shall also be entitled to recovery of RLDC fee and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

### **Goods and Services Tax**

167. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

169. The Petitioner has submitted that security expenses in respect of communication assets are not claimed in the instant Petition, and it would file a separate Petition for claiming the overall security expenses and consequential IWC.

170. We have considered the Petitioner's submissions. The Petitioner has claimed the actual Security Expense for FY 2018-19 after escalating the same at 3.5% per annum and estimated additional Security Expenses for new substations to be commissioned in future, for arriving at the Estimated Security Expenses for the year 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24. Therefore, the Petitioner's prayer in the instant Petition



for allowing it to file a separate Petition for claiming the overall security expenses and consequential IWC is infructuous.

### **Capital Spares**

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

### **Sharing of Transmission Charges**

#### **Central Sector**

172. With effect from 1.7.2011, the sharing of the transmission charges for the inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, the sharing of the transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (2020 Sharing Regulations). Accordingly, the billing, collection and disbursement of transmission charges shall be recovered in terms of the provisions of the 2010 Sharing Regulations and 2020 Sharing Regulations as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations.

173. The billing, collection, and disbursement of transmission charges approved in this order for Assets-1, Asset-2, Asset-8 & Asset-9 under the Central Sector shall be governed by the provisions of the 2020 Sharing Regulations as provided in terms of Regulation 57 of the 2019 Tariff Regulations.



174. Assets-1, Asset-2, Asset-8 and Asset-9 are part of the Central Sector and implemented under Fibre Optic Communication System in the Northern Region under “Fibre Optic Expansion Project (Additional Requirement)”. Accordingly, the communication system charges in case of Assets-1, Asset-2, Asset-8 and Asset-9 shall be part of the regional component and shall be shared by the beneficiaries of the Northern Region.

**State Portion (BBMB, PSTCL & HPSEBL)**

175. The communication charges for Asset-3 and Asset-4 are to be borne by BBMB, for Asset-5, Asset-6, Asset-10, Asset-11 and Asset-12 are to borne by PSTCL and for Asset-7 and Asset-13 are to be borne by in proportion to the capital cost of the respective States.

176. To summarise:

- a. The determined-cum-trued-up Annual Fixed Charges (AFC) claimed and allowed for the 2014-19 tariff period in respect of Asset-1 are as under:

**Asset-1**

| (₹ in lakh) |         |
|-------------|---------|
| Particulars | 2014-19 |
| AFC Claimed | 8.08    |
| AFC allowed | 7.38    |

- b. AFC claimed and allowed with respect to the communication assets for the 2019-24 tariff period in this order are as under:

**Asset-1**

| (₹ in lakh) |         |         |         |         |         |
|-------------|---------|---------|---------|---------|---------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| AFC Claimed | 32.18   | 33.60   | 34.33   | 39.73   | 45.00   |
| AFC Allowed | 29.16   | 30.60   | 31.37   | 36.84   | 42.26   |



**Asset-2**

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|---------|
| AFC Claimed | 41.02   | 57.81   | 58.58   | 71.40   | 83.33   |
| AFC Allowed | 38.71   | 53.76   | 54.56   | 67.45   | 79.65   |

**Asset-3**

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|---------|
| AFC Claimed | 16.92   | 44.13   | 43.65   | 46.08   | 51.15   |
| AFC Allowed | 16.90   | 44.04   | 43.53   | 45.96   | 51.10   |

**Asset-4**

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|---------|
| AFC Claimed | 10.47   | 28.27   | 27.97   | 29.40   | 32.59   |
| AFC Allowed | 9.55    | 25.58   | 25.27   | 26.76   | 30.08   |

**Asset-5**

(₹ in lakh)

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|---------|
| AFC Claimed | 18.50   | 77.59   | 87.54   | 99.79   | 102.35  |
| AFC Allowed | 16.54   | 69.13   | 79.18   | 91.66   | 94.61   |

**Asset-6**

(₹ in lakh)

| Particulars | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|
| AFC Claimed | 13.42   | 59.18   | 65.48   | 66.63   |
| AFC Allowed | 11.36   | 50.42   | 56.76   | 58.28   |

**Asset-7**

(₹ in lakh)

| Particulars | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|
| AFC Claimed | 23.36   | 95.70   | 104.72  | 112.97  |
| AFC Allowed | 19.98   | 81.65   | 90.70   | 99.51   |

**Asset-8**

(₹ in lakh)

| Particulars | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|
| AFC Claimed | 22.10   | 90.11   | 98.31   | 106.23  |
| AFC Allowed | 18.42   | 75.09   | 83.57   | 92.01   |

**Asset-9**

(₹ in lakh)

| Particulars | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|---------|
| AFC Claimed | 8.48    | 666.44  | 704.78  | 687.26  |
| AFC Allowed | 8.27    | 644.30  | 676.86  | 661.52  |



**Asset-10**

(₹ in lakh)

| Particulars | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|
| AFC Claimed | 49.42   | 82.98   | 88.16   |
| AFC Allowed | 40.77   | 69.48   | 75.14   |

**Asset-11**

(₹ in lakh)

| Particulars | 2021-22 | 2022-23 | 2023-24 |
|-------------|---------|---------|---------|
| AFC Claimed | 30.58   | 72.61   | 74.24   |
| AFC Allowed | 24.97   | 59.49   | 61.57   |

**Asset-12**

(₹ in lakh)

| Particulars | 2022-23 | 2023-24 |
|-------------|---------|---------|
| AFC Claimed | 582.22  | 663.45  |
| AFC Allowed | 445.34  | 514.50  |

**Asset-13**

(₹ in lakh)

| Particulars | 2022-23 | 2023-24 |
|-------------|---------|---------|
| AFC Claimed | 88.20   | 157.50  |
| AFC Allowed | 68.69   | 124.62  |

177. Annexure(s) to this order form part of the order.

178. This order disposes of Petition No. 391/TT/2023 in terms of the above findings and discussions.

sd/-  
(Harish Dudani)  
Member

sd/-  
(Ramesh Babu V.)  
Member

sd/-  
(Jishnu Barua)  
Chairperson



**ANNEXURE-I**

| 2014-19                                      | Admitted Capital Cost as on 1.4.2014/COD<br>(₹ in lakh) | ACE<br>(₹ in lakh) |             | Admitted Capital Cost as on 31.3.2019<br>(₹ in lakh) | Rate of Depreciation as per Regulations<br>(in %) | Annual Depreciation as per Regulations<br>(₹ in lakh) |
|----------------------------------------------|---------------------------------------------------------|--------------------|-------------|------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| Capital Expenditure<br>(Asset-1)             |                                                         | 2018-19            | Total       |                                                      |                                                   | 2018-19                                               |
| PLCC                                         | 134.83                                                  | 4.19               | 4.19        | 139.02                                               | 6.33                                              | 8.67                                                  |
| <b>Total</b>                                 | <b>134.83</b>                                           | <b>4.19</b>        | <b>4.19</b> | <b>139.02</b>                                        |                                                   | <b>8.67</b>                                           |
| Average Gross Block<br>(₹ in lakh)           |                                                         |                    |             |                                                      |                                                   | 136.93                                                |
| Weighted Average Rate of Depreciation (in %) |                                                         |                    |             |                                                      |                                                   | 6.33                                                  |

**ANNEXURE-II**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019<br>(₹ in lakh) | Projected ACE<br>(₹ in lakh) |              |             |              |             |              | Admitted Capital Cost as on 31.3.2024<br>(₹ in lakh) | Rate of Depreciation as per Regulations<br>(in %) | Annual Depreciation as per Regulations<br>(₹ in lakh) |             |              |              |              |
|----------------------------------------------|-----------------------------------------------------|------------------------------|--------------|-------------|--------------|-------------|--------------|------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|-------------|--------------|--------------|--------------|
| Capital Expenditure<br>(Asset-1)             |                                                     | 2019-20                      | 2020-21      | 2021-22     | 2022-23      | 2023-24     | Total        |                                                      |                                                   | 2019-20                                               | 2020-21     | 2021-22      | 2022-23      | 2023-24      |
| PLCC                                         | 139.02                                              | 7.09                         | 18.64        | 0.00        | 73.89        | 0.00        | 99.62        | 238.64                                               | 6.33                                              | 9.02                                                  | 9.84        | 10.43        | 12.77        | 15.11        |
| <b>Total</b>                                 | <b>139.02</b>                                       | <b>7.09</b>                  | <b>18.64</b> | <b>0.00</b> | <b>73.89</b> | <b>0.00</b> | <b>99.62</b> | <b>238.64</b>                                        |                                                   | <b>9.02</b>                                           | <b>9.84</b> | <b>10.43</b> | <b>12.77</b> | <b>15.11</b> |
| Average Gross Block<br>(₹ in lakh)           |                                                     |                              |              |             |              |             |              |                                                      |                                                   | 142.57                                                | 155.43      | 164.75       | 201.70       | 238.64       |
| Weighted Average Rate of Depreciation (in %) |                                                     |                              |              |             |              |             |              |                                                      |                                                   | 6.33                                                  | 6.33        | 6.33         | 6.33         | 6.33         |



**ANNEXURE-III**

| 2019-24                       | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |              |             |               |             |               | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |              |              |              |              |
|-------------------------------|--------------------------------------------------|---------------------------|--------------|-------------|---------------|-------------|---------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------|--------------|--------------|--------------|
| Capital Expenditure (Asset-2) |                                                  | 2019-20                   | 2020-21      | 2021-22     | 2022-23       | 2023-24     | Total         |                                                   |                                                | 2019-20                                            | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
| PLCC                          | 249.44                                           | 1.20                      | 19.97        | 5.30        | 158.12        | 0.00        | 184.59        | 434.03                                            | 6.33                                           | 15.83                                              | 16.50        | 17.30        | 22.47        | 27.47        |
| <b>Total</b>                  | <b>249.44</b>                                    | <b>1.20</b>               | <b>19.97</b> | <b>5.30</b> | <b>158.12</b> | <b>0.00</b> | <b>184.59</b> | <b>434.03</b>                                     | <b>6.33</b>                                    | <b>15.83</b>                                       | <b>16.50</b> | <b>17.30</b> | <b>22.47</b> | <b>27.47</b> |
|                               |                                                  |                           |              |             |               |             |               |                                                   | Average Gross Block (₹ in lakh)                | 250.04                                             | 260.62       | 273.26       | 354.97       | 434.03       |
|                               |                                                  |                           |              |             |               |             |               |                                                   | Weighted Average Rate of Depreciation (in %)   | 6.33                                               | 6.33         | 6.33         | 6.33         | 6.33         |

**ANNEXURE-IV**

| 2019-24                       | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |             |             |              |              |               | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |              |              |              |              |
|-------------------------------|--------------------------------------------------|---------------------------|-------------|-------------|--------------|--------------|---------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------|--------------|--------------|--------------|
| Capital Expenditure (Asset-3) |                                                  | 2019-20                   | 2020-21     | 2021-22     | 2022-23      | 2023-24      | Total         |                                                   |                                                | 2019-20                                            | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
| PLCC                          | 211.33                                           | 44.27                     | 6.80        | 1.00        | 37.15        | 37.15        | 126.37        | 337.68                                            | 6.33                                           | 14.78                                              | 16.39        | 16.64        | 17.85        | 20.20        |
| <b>Total</b>                  | <b>211.33</b>                                    | <b>44.27</b>              | <b>6.80</b> | <b>1.00</b> | <b>37.15</b> | <b>37.15</b> | <b>126.37</b> | <b>337.68</b>                                     |                                                | <b>14.78</b>                                       | <b>16.39</b> | <b>16.64</b> | <b>17.85</b> | <b>20.20</b> |
|                               |                                                  |                           |             |             |              |              |               |                                                   | Average Gross Block (₹ in lakh)                | 233.45                                             | 259.00       | 262.90       | 281.98       | 319.13       |
|                               |                                                  |                           |             |             |              |              |               |                                                   | Weighted Average Rate of Depreciation (in %)   | 6.33                                               | 6.33         | 6.33         | 6.33         | 6.33         |



**ANNEXURE-V**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |             |             |              |              |              | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |         |         |         |         |
|----------------------------------------------|--------------------------------------------------|---------------------------|-------------|-------------|--------------|--------------|--------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|---------|---------|---------|---------|
| Capital Expenditure (Asset-4)                |                                                  | 2019-20                   | 2020-21     | 2021-22     | 2022-23      | 2023-24      | Total        |                                                   |                                                | 2019-20                                            | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| PLCC                                         | 124.99                                           | 23.72                     | 4.13        | 0.63        | 23.64        | 23.64        | 75.76        | 200.75                                            | 6.33                                           | 8.66                                               | 9.54    | 9.69    | 10.46   | 11.96   |
| <b>Total</b>                                 | <b>124.99</b>                                    | <b>23.72</b>              | <b>4.13</b> | <b>0.63</b> | <b>23.64</b> | <b>23.64</b> | <b>75.76</b> | <b>200.75</b>                                     |                                                | 8.66                                               | 9.54    | 9.69    | 10.46   | 11.96   |
| Average Gross Block (₹ in lakh)              |                                                  |                           |             |             |              |              |              |                                                   |                                                | 136.85                                             | 150.77  | 153.15  | 165.29  | 188.93  |
| Weighted Average Rate of Depreciation (in %) |                                                  |                           |             |             |              |              |              |                                                   |                                                | 6.33                                               | 6.33    | 6.33    | 6.33    | 6.33    |

**ANNEXURE-VI**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |              |               |              |          |               | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |              |              |              |              |
|----------------------------------------------|--------------------------------------------------|---------------------------|--------------|---------------|--------------|----------|---------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------|--------------|--------------|--------------|
| Capital Expenditure (Asset-5)                |                                                  | 2019-20                   | 2020-21      | 2021-22       | 2022-23      | 2023-24  | Total         |                                                   |                                                | 2019-20                                            | 2020-21      | 2021-22      | 2022-23      | 2023-24      |
| PLCC                                         | 378.89                                           | 3.90                      | 34.08        | 109.58        | 63.73        | -        | 211.29        | 590.18                                            | 6.33                                           | 24.11                                              | 25.31        | 29.86        | 35.35        | 37.36        |
| <b>Total</b>                                 | <b>378.89</b>                                    | <b>3.90</b>               | <b>34.08</b> | <b>109.58</b> | <b>63.73</b> | <b>-</b> | <b>211.29</b> | <b>590.18</b>                                     |                                                | <b>24.11</b>                                       | <b>25.31</b> | <b>29.86</b> | <b>35.35</b> | <b>37.36</b> |
| Average Gross Block (₹ in lakh)              |                                                  |                           |              |               |              |          |               |                                                   |                                                | 380.84                                             | 399.83       | 471.66       | 558.32       | 590.18       |
| Weighted Average Rate of Depreciation (in %) |                                                  |                           |              |               |              |          |               |                                                   |                                                | 6.33                                               | 6.33         | 6.33         | 6.33         | 6.33         |



**ANNEXURE-VII**

| 2019-24<br>Capital<br>Expenditure<br>(Asset-6)  | Admitted<br>Capital<br>Cost as on<br>1.4.2019<br>(₹ in lakh) | Projected ACE<br>(₹ in lakh) |          |              |              |             |              | Admitted<br>Capital<br>Cost as on<br>31.3.2024<br>(₹ in lakh) | Rate of<br>Depreciation<br>as per<br>Regulations<br>(in %) | Annual Depreciation as per Regulations<br>(₹ in lakh) |              |              |              |
|-------------------------------------------------|--------------------------------------------------------------|------------------------------|----------|--------------|--------------|-------------|--------------|---------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|--------------|--------------|--------------|
|                                                 |                                                              | 2019-<br>20                  | 2020-21  | 2021-22      | 2022-23      | 2023-<br>24 | Total        |                                                               |                                                            | 2020-21                                               | 2021-22      | 2022-23      | 2023-24      |
| PLCC                                            | 266.74                                                       | -                            | -        | 55.03        | 35.46        | 0.00        | 90.49        | 357.23                                                        | 6.33                                                       | 16.88                                                 | 18.63        | 21.49        | 22.61        |
| <b>Total</b>                                    | <b>266.74</b>                                                | <b>-</b>                     | <b>-</b> | <b>55.03</b> | <b>35.46</b> | <b>0.00</b> | <b>90.49</b> | <b>357.23</b>                                                 |                                                            | <b>16.88</b>                                          | <b>18.63</b> | <b>21.49</b> | <b>22.61</b> |
| Average Gross Block<br>(₹ in lakh)              |                                                              |                              |          |              |              |             |              |                                                               |                                                            | 266.74                                                | 294.25       | 339.50       | 357.23       |
| Weighted Average Rate<br>of Depreciation (in %) |                                                              |                              |          |              |              |             |              |                                                               |                                                            | 6.33                                                  | 6.33         | 6.33         | 6.33         |

**ANNEXURE-VIII**

| 2019-24<br>Capital<br>Expenditure<br>(Asset-7)  | Admitted<br>Capital<br>Cost as on<br>1.4.2019<br>(₹ in lakh) | Projected ACE<br>(₹ in lakh) |              |             |               |             |               | Admitted<br>Capital Cost<br>as on<br>31.3.2024<br>(₹ in lakh) | Rate of<br>Depreciation<br>as per<br>Regulations<br>(in %) | Annual Depreciation as per Regulations<br>(₹ in lakh) |              |              |              |
|-------------------------------------------------|--------------------------------------------------------------|------------------------------|--------------|-------------|---------------|-------------|---------------|---------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|--------------|--------------|--------------|
|                                                 |                                                              | 2019<br>-20                  | 2020-<br>21  | 2021-<br>22 | 2022-<br>23   | 2023-<br>24 | Total         |                                                               |                                                            | 2020-21                                               | 2021-22      | 2022-23      | 2023-24      |
| PLCC                                            | 474.63                                                       | -                            | 12.32        | 1.06        | 131.71        | 0.00        | 145.09        | 619.72                                                        | 6.33                                                       | 30.43                                                 | 30.86        | 35.06        | 39.23        |
| <b>Total</b>                                    | <b>474.63</b>                                                | <b>-</b>                     | <b>12.32</b> | <b>1.06</b> | <b>131.71</b> | <b>0.00</b> | <b>145.09</b> | <b>619.72</b>                                                 |                                                            | <b>30.43</b>                                          | <b>30.86</b> | <b>35.06</b> | <b>39.23</b> |
| Average Gross Block<br>(₹ in lakh)              |                                                              |                              |              |             |               |             |               |                                                               |                                                            | 480.79                                                | 487.48       | 553.86       | 619.72       |
| Weighted Average Rate<br>of Depreciation (in %) |                                                              |                              |              |             |               |             |               |                                                               |                                                            | 6.33                                                  | 6.33         | 6.33         | 6.33         |



**ANNEXURE-IX**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |             |             |               |             |               | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |              |              |              |
|----------------------------------------------|--------------------------------------------------|---------------------------|-------------|-------------|---------------|-------------|---------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------|--------------|--------------|
| Capital Expenditure (Asset-8)                |                                                  | 2019-20                   | 2020-21     | 2021-22     | 2022-23       | 2023-24     | Total         |                                                   |                                                | 2020-21                                            | 2021-22      | 2022-23      | 2023-24      |
| PLCC                                         | 379.85                                           | -                         | 7.86        | 0.00        | 120.63        | 0.00        | 128.49        | 508.34                                            | 6.33                                           | 24.29                                              | 24.54        | 28.36        | 32.18        |
| <b>Total</b>                                 | <b>379.85</b>                                    | <b>-</b>                  | <b>7.86</b> | <b>0.00</b> | <b>120.63</b> | <b>0.00</b> | <b>128.49</b> | <b>508.34</b>                                     |                                                | <b>24.29</b>                                       | <b>24.54</b> | <b>28.36</b> | <b>32.18</b> |
| Average Gross Block (₹ in lakh)              |                                                  |                           |             |             |               |             |               |                                                   |                                                | 383.78                                             | 387.71       | 448.02       | 508.34       |
| Weighted Average Rate of Depreciation (in %) |                                                  |                           |             |             |               |             |               |                                                   |                                                | 6.33                                               | 6.33         | 6.33         | 6.33         |

**ANNEXURE-X**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |          |               |          |          |               | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |               |               |               |
|----------------------------------------------|--------------------------------------------------|---------------------------|----------|---------------|----------|----------|---------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|---------------|---------------|---------------|
| Capital Expenditure (Asset-9)                |                                                  | 2019-20                   | 2020-21  | 2021-22       | 2022-23  | 2023-24  | Total         |                                                   |                                                | 2020-21                                            | 2021-22       | 2022-23       | 2023-24       |
| PLCC                                         | 3047.63                                          | -                         | -        | 569.18        | -        | -        | 569.18        | 3616.81                                           | 6.33                                           | 192.92                                             | 210.93        | 228.94        | 228.94        |
| <b>Total</b>                                 | <b>3047.63</b>                                   | <b>-</b>                  | <b>-</b> | <b>569.18</b> | <b>-</b> | <b>-</b> | <b>569.18</b> | <b>3616.81</b>                                    |                                                | <b>192.92</b>                                      | <b>210.93</b> | <b>228.94</b> | <b>228.94</b> |
| Average Gross Block (₹ in lakh)              |                                                  |                           |          |               |          |          |               |                                                   |                                                | 3047.63                                            | 3332.22       | 3616.81       | 3616.81       |
| Weighted Average Rate of Depreciation (in %) |                                                  |                           |          |               |          |          |               |                                                   |                                                | 6.33                                               | 6.33          | 6.33          | 6.33          |



**ANNEXURE-XI**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |             |              |              |              | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |              |              |              |
|----------------------------------------------|--------------------------------------------------|---------------------------|-------------|--------------|--------------|--------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------|--------------|--------------|
| Capital Expenditure (Asset-10)               |                                                  | 2020-21                   | 2021-22     | 2022-23      | 2023-24      | Total        |                                                   |                                                | 2020-21                                            | 2021-22      | 2022-23      | 2023-24      |
| PLCC                                         | 393.56                                           | 0.00                      | 8.80        | 44.13        | 44.13        | 97.06        | 490.62                                            | 6.33                                           | 0.00                                               | 25.19        | 26.67        | 29.66        |
| <b>Total</b>                                 | <b>393.56</b>                                    | <b>0.00</b>               | <b>8.80</b> | <b>44.13</b> | <b>44.13</b> | <b>97.06</b> | <b>490.62</b>                                     |                                                | <b>0.00</b>                                        | <b>25.19</b> | <b>26.67</b> | <b>29.66</b> |
| Average Gross Block (₹ in lakh)              |                                                  |                           |             |              |              |              |                                                   |                                                | 0.00                                               | 397.96       | 424.43       | 468.56       |
| Weighted Average Rate of Depreciation (in %) |                                                  |                           |             |              |              |              |                                                   |                                                | 6.33                                               | 6.33         | 6.33         | 6.33         |

**ANNEXURE-XII**

| 2019-24                                      | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) |              |              | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations (in %) | Annual Depreciation as per Regulations (₹ in lakh) |              |              |
|----------------------------------------------|--------------------------------------------------|---------------------------|--------------|--------------|---------------------------------------------------|------------------------------------------------|----------------------------------------------------|--------------|--------------|
| Capital Expenditure (Asset-11)               |                                                  | 2022-23                   | 2023-24      | Total        |                                                   |                                                | 2021-22                                            | 2022-23      | 2023-24      |
| PLCC                                         | 351.10                                           | 21.13                     | 21.13        | 42.26        | 393.36                                            | 6.33                                           | 22.22                                              | 22.89        | 24.23        |
| <b>Total</b>                                 | <b>351.10</b>                                    | <b>21.13</b>              | <b>21.13</b> | <b>42.26</b> | <b>393.36</b>                                     |                                                | <b>22.22</b>                                       | <b>22.89</b> | <b>24.23</b> |
| Average Gross Block (₹ in lakh)              |                                                  |                           |              |              |                                                   |                                                | 351.10                                             | 361.67       | 382.80       |
| Weighted Average Rate of Depreciation (in %) |                                                  |                           |              |              |                                                   |                                                | 6.33                                               | 6.33         | 6.33         |



**ANNEXURE-XIII**

| 2019-24                                         | Admitted Capital Cost as on 1.4.2019<br>(₹ in lakh) | Projected ACE<br>(₹ in lakh) |               |               | Admitted Capital Cost as on 31.3.2024<br>(₹ in lakh) | Rate of Depreciation as per Regulations<br>(in %) | Annual Depreciation as per Regulations<br>(₹ in lakh) |               |
|-------------------------------------------------|-----------------------------------------------------|------------------------------|---------------|---------------|------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|---------------|
| Capital Expenditure<br>(Asset-12)               |                                                     | 2022-23                      | 2023-24       | Total         |                                                      |                                                   | 2022-23                                               | 2023-24       |
| PLCC                                            | 2674.03                                             | 297.49                       | 198.33        | 495.82        | 3169.85                                              | 6.33                                              | 178.68                                                | 194.37        |
| <b>Total</b>                                    | <b>2674.03</b>                                      | <b>297.49</b>                | <b>198.33</b> | <b>495.82</b> | <b>3169.85</b>                                       |                                                   | <b>178.68</b>                                         | <b>194.37</b> |
| Average Gross Block<br>(₹ in lakh)              |                                                     |                              |               |               |                                                      |                                                   | 2822.77                                               | 3070.68       |
| Weighted Average Rate<br>of Depreciation (in %) |                                                     |                              |               |               |                                                      |                                                   | 6.33                                                  | 6.33          |

**ANNEXURE-XIV**

| 2019-24                                         | Admitted Capital Cost as on 1.4.2019<br>(₹ in lakh) | Projected ACE<br>(₹ in lakh) |              |               | Admitted Capital Cost as on 31.3.2024<br>(₹ in lakh) | Rate of Depreciation as per Regulations<br>(in %) | Annual Depreciation as per Regulations<br>(₹ in lakh) |              |
|-------------------------------------------------|-----------------------------------------------------|------------------------------|--------------|---------------|------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|--------------|
| Capital Expenditure<br>(Asset-13)               |                                                     | 2022-23                      | 2023-24      | Total         |                                                      |                                                   | 2022-23                                               | 2023-24      |
| PLCC                                            | 619.54                                              | 65.12                        | 97.67        | 162.79        | 782.33                                               | 6.33                                              | 41.28                                                 | 46.43        |
| <b>Total</b>                                    | <b>619.54</b>                                       | <b>65.12</b>                 | <b>97.67</b> | <b>162.79</b> | <b>782.33</b>                                        |                                                   | <b>41.28</b>                                          | <b>46.43</b> |
| Average Gross Block<br>(₹ in lakh)              |                                                     |                              |              |               |                                                      |                                                   | 652.10                                                | 733.49       |
| Weighted Average Rate<br>of Depreciation (in %) |                                                     |                              |              |               |                                                      |                                                   | 6.33                                                  | 6.33         |

