



सत्यमेव जयते

**भारत सरकार**  
**Government of India**  
**विद्युत मंत्रालय**  
**Ministry of Power**  
**केन्द्रीय विद्युत प्राधिकरण**  
**Central Electricity Authority**  
**विद्युत प्रणाली संचार विकास प्रभाग**  
**Power System Communication Development Division**  
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|  |                                    |              |
|--|------------------------------------|--------------|
| <b>CEA Case No. : GUJ-900</b>  |                                    |              |
| <b>Induced Voltage (IV) Calculation for PTCC proposal of 220 kV S/C line on D/C and M/C towers from 400/220 kV Jam Khambhaliya S/s to proposed 220 kV PSS of M/s Mounting Renewable Power Limited at Village Tebhada, Lalpur, Jamnagar (Length: 31.9 km)</b> |                                    |              |
| <b>S. No</b>   | <b>Reference No.</b>               | <b>Dated</b> |
| (i)  | MRPL/Solar Line/PTCC/2024-25/001   | 14.08.2024   |
| (ii)   | BSNL: IC/MBI/PTCC/GUJ-2978         | 03.09.2024   |
| (iii)  | Western Railway: SG.158/28/12/1413 | 21.08.2024   |
| (iv)   | Defense: B/46937/Sigs7(b)/4124     | 09.12.2024   |

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL and Western Railway with respect to details furnished vide above references (ii) and (iii) have been computed. The voltage likely to be induced on paralleling communication cables of BSNL and Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I and Annexure-II respectively. The screening factors as applicable have been considered. DG Signals, MoD vide above reference (iv) have issued their No Objection Certificate (NOC) for charging of the line.

EPR Zones for proposed substations are mentioned below:

| Name of the proposed SS   | Half Diagonal Distance, D/2 (mts) | Fault Current, I (kA) | Resistance of earthmat, R (Ohms) | d (mts) at 430 V | d (mts) at 650 V | d (mts) at 7 kV | d (mts) at 10 kV |
|---|-----------------------------------|-----------------------|----------------------------------|------------------|------------------|-----------------|------------------|
| 220 kV PSS of M/s Mounting Renewable Power Limited at Village Tebhada, Lalpur, Jamnagar | 84.85                             | 30                    | 0.28                             | 1573             | 1012             | 17              | NA               |

As per the details submitted by BSNL, No Telephone exchange is falling within the EPR zone of proposed substation

Taking above into consideration, necessary action for issuance of PTCC route approval (RAC) shall be taken under intimation to this office in the stipulated period as specified in PTCC Manual and subsequent CLPTCC meetings.

As per the decision taken in 111<sup>th</sup> and 112<sup>th</sup> CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing RAC.

Encl.: As above

**Chief Engineer**

**To,**

|    |   |  |
|----|---|--|
| 1. | Divisional Engineer<br>(PTCC), Western Zone | QA & Inspection circle, 1st floor, D- wing, BSNL Admin Bldg.,<br>Junu Tara Road, Santacruz (West), Mumbai-400054 |
| 2. | GM (S&T), Western<br>Railway                | S&T Department, 5 <sup>th</sup> Floor, Station Building, Church Gate, Mumbai<br>– 400 020                        |
| 3. | M/s Mounting<br>Renewable Power<br>Limited  | 910/19, Suryakiran, Kasturba Gandhi Marg, New Delhi – 110 001  |

**ANNEXURE-I**

|   |                     |                              |                          |                                  |               |
|---|---------------------|------------------------------|--------------------------|----------------------------------|---------------|
| CEA Case No.: GUJ-900   |                     |                              | Map Scale : 1 cm= 500 m  |                                  |               |
| Name of the Power line: 220 kV S/C line on D/C and M/C towers from 400/220 kV Jam Khambhaliya S/s to proposed 220 kV PSS of M/s Mounting Renewable Power Limited at Village Tebhada, Lalpur, Jamnagar |                     |                              | Total Length : 31.9 km   |                                  |               |
|   |                     |                              | S.R. Value : 3000 Ohm-cm |                                  |               |
| S.No.   | Telecom. Details    | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |
| BSNL Letter No IC/MBI/PTCC/GUJ-2978 Date: 03.09.2024  |                     |                              |                          |                                  |               |
|   | Khabhaliya Exchange |                              |                          |                                  |               |
| 1   | Cable 1A            | Out of parallelism           |                          |                                  |               |
| 2   | Cable 2A            |                              |                          |                                  |               |
| 3   | Cable 3A            |                              |                          |                                  |               |
| 4   | Cable 4A            |                              |                          |                                  |               |
| 5   | Cable 5A            |                              |                          |                                  |               |
| 6   | Cable 6A            |                              |                          |                                  |               |
|   | Lalpur Exchange     |                              |                          |                                  |               |
| 1   | Cable 1B            | IV less than 430 V           |                          |                                  |               |
| 2   | Cable 2B            |                              |                          |                                  |               |
| 3   | Cable 3B            |                              |                          |                                  |               |

**ANNEXURE-II**

| <b>CEA Case No.: GUJ-900</b><br><br><b>Name of the Power line:</b> 220 kV S/C line on D/C and M/C towers from 400/220 kV Jam Khambhaliya S/s to proposed 220 kV PSS of M/s Mounting Renewable Power Limited at Village Tebhada, Lalpur, Jamnagar |                       |                              | <b>Map Scale</b> : 1 cm= 500 m<br><br><b>Total Length</b> : 31.9 km<br><br><b>S.R. Value</b> : 3000 Ohm-cm |                                  |               |
|--|-----------------------|------------------------------|--|----------------------------------|---------------|
| S.No.  | Telecom. Details      | Length of Parallelism in Km. | Mutual Coupling in Ohms.   | Effective Fault current in Amps. | I.V in Volts. |
| <b>Western Railway: SG.158/28/12/1413 Date: 21.08.2024</b>   |                       |                              |  |                                  |               |
| 1  | Modpur to Khambhaliya | Out of IV consideration zone |  |                                  |               |
| 2  | Khambhaliya to Bhatel | Out of IV consideration zone |  |                                  |               |
| 3  | Bhatel to Bhopalka    | Out of IV consideration zone |  |                                  |               |
| 4  | Bhanvad to Gop Jam    | Out of IV consideration zone |  |                                  |               |
| 5  | Gop Jam to Lalpur Jam | 2.2                          | 0.0055   | 24909                            | 137           |
| 6  | Lalpur Jam to Kanalus | Out of IV consideration zone |  |                                  |               |