



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**

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|---|--|--------------|
| <b>CEA Case No.: AND-809</b>  |  |              |
| <b>Induced Voltage (IV) calculation for PTCC proposal of 400 kV D/c Transmission Line from PSS1 Bethapalli, Anantapur of M/s Renew Vikram Shakti Private Limited to ISTS PGCIL Anantapur PS. (31.244 km)- regd.</b> |  |              |
| <b>S.No.</b>  | <b>Reference</b>   | <b>Dated</b> |
| (i)   | ReNew : RVSPL/CEA/PTCC-01                                      | 24.11.2025   |
| (ii)  | BSNL: SR-PTCC/AND200220260017/2025-26                          | 24.02.2026   |
| (iii)   | South Central Railway: SG.85/4/3/PTCC/SCR/2025-26/SCRAP 46 RTD | 26.12.2025   |
| (iv)  | Defense: B/46937/Sigs 7(b)/5396                                | 09.03.2026   |

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

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 |
|-------------------------|-----------------------------------|-----------------------|----------------------------------|------------------|------------------|-----------------|------------------|
| 400 kV PSS-1            | 167                               | 37.8                  | 0.3                              | 4255             | 2758             | 103             | N.A.             |

As per the details submitted by BSNL vide reference (ii) above, no telephone exchanges are falling in the EPR zone of the 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 111th and 112th CLPTCC meeting, necessary instructions for "Deemed Energization approval" shall be specified while issuing RAC

Encl.: As above

**Chief Engineer****To,**

|    |  |  |                         |
|----|--|--|-------------------------|
| 1. | DET (PTCC),<br>Southern Zone               | QA & INSPECTION CIRCLE, Vijayawada Unit,<br>O/o Divisional Engineer (QA & 1), 2nd floor, CTX<br>building, Kaleswara Rao Market Road, Vijayawada<br>- 1 |                         |
| 2. | GM (S&T)<br>(South Central<br>Railway)     | O/o Principal Chief Signal & Telecom Engineer ,7th<br>Floor, Rail Nilayam, Secunderabad-500025   |                         |
| 3. | M/s Renew Vikram<br>Shakti Private Limited | ReNew. Hub, Commercial Block-1, Zone-6, Golf<br>Course Road, DLF City Phase-V, Gurugram-122009   | Copy for<br>information |

**ANNEXURE-I**

| CEA Case No.: AND-809  |   | Map Scale : 1 cm= 500 m       |                          |                                  |               |
|--|---|-------------------------------|--------------------------|----------------------------------|---------------|
| Induced Voltage (IV) calculation for PTCC proposal of 400 kV D/C Transmission Line from PSS1 Bethapalli , Anantapur of M/s Renew Vikram Shakti Private Limited to ISTS PGCIL Anantapur PS. (31.244 km)-regd. |   | Total Length : 31.244 km      |                          |                                  |               |
|  |   | S.R. Value : 15000 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>South Central Railway Letter No: SG.85/4/3/PTCC/SCR/2025-26/SCRAP 46 RTD Dated 26.12.2025</b>   |   |                               |                          |                                  |               |
| 1.   | Guntakal Jn (GTL) - Nacherla (NLA)            | Outside IV consideration zone |                          |                                  |               |
| 2.   | Guntakal Jn - Maddikera (MKR)                 | Outside IV consideration zone |                          |                                  |               |
| 3.   | Guntakal Jn- Guntakal West (GTL W)            | Outside IV consideration zone |                          |                                  |               |
| 4.   | Guntakal West - Bantahal (BLL)                | Out of Parallelism            |                          |                                  |               |
| 5.   | Guntakal Jn - Gulapalayam (GPU)               | 0.115                         | 0.00002                  | 37500                            | 0.74          |
| 6.   | Gulapalayam - Venkatampalle (VPL)             | Outside IV consideration zone |                          |                                  |               |
| 7.   | Guntakal Jn - Timmancheruvu (TIM)             | Out of Parallelism            |                          |                                  |               |
| 8.   | Timmancheruvu - Nakkanadoddi                  | 9                             | 0.00396                  | 17800                            | 70            |
| 9.   | Nakkanadoddi (NKDO) - Patakotha cheruvu (PLU) | 4.6                           | 0.00287                  | 24000                            | 68            |
| 10.  | Patakotha cheruvu (PLU) - Gooty Jn (GY)       | 8.05                          | 0.0040                   | 21000                            | 85            |
| 11.  | Gooty Jn (GY) -Jakkalacheruvu (JKO)           | 0.7                           | 0.00009                  | 32760                            | 3             |
| 12.  | Gooty Jn (GY) -Pagadirai (PGRI)               | 6.1                           | 0.00194                  | 28100                            | 54            |
| 13.  | Pagadirai (PGRI) - Ramalingayapalli (RMPL)    | Outside IV consideration zone |                          |                                  |               |
| 14.  | Gooty Jn (GY) -Turkapalli (TKPY)              | 0.4                           | 0.00156                  | 31500                            | 49            |