



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

| | | |
|--|--|--------------|
| CEA Case No. : AND-766 | | |
| Induced Voltage (IV) Calculation for PTCC proposal of 220 kV S/C line on D/C towers from existing 220 kV S/s of UTCL at Bhogasamudram Village in Tadipatri Mandal, Anantpur to proposed 220 kV S/s at Petnikota village, Kolimigundla Mandal, Nandyala (Length: 13.61 km) | | |
| S. No | Reference No. | Dated |
| (i) | UTCL/PKCW/CEA/PTCC/16092024 | 16.09.2024 |
| (ii) | BSNL: SR-PTCC/SAP6588/6 | 05.02.2025 |
| (iii) | South Central Railway: SG.85/4/3/ PTCC/SCR/2024-25/AP 32 RTD | 25.02.2025 |
| (iv) | Defense: B/46937/Sigs7(b)/4291 | 13.01.2025 |

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL and South Central Railway with respect to details furnished vide above reference (ii) and (iii) have been computed. The voltages likely to be induced on paralleling communication cables of BSNL and South Central 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) has 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 S/s at Petnikota village, Kolimigundla Mandal, Nandyala | 56.6 | 24.45 | 0.4109 | 1266 | 818 | 25 | NA |

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. | Divisional Engineer (PTCC) | O/o CGM, QA & Inspection circle, 2 nd Floor, Sanchar complex, WMS compound, Jayanagar, 5 th block, 9 th main, 47 th cross, Bengaluru- 560 041 | |
| 2. | GM (S&T), South Central Railway | Zonal Headquarter Office, Secunderabad – 500 003 | |
| 3. | M/s Ultra Tech Cement Limited | Bhogasamudram, Tadipatri Mandal, Anantapuramu, Andhra Pradesh – 515 413 | Copy for information |

ANNEXURE-I

| CEA Case No.: AND-766 | | | Map Scale : 1 cm= 500 m | | |
|---|--|-------------------------------------|----------------------------------|---|----------------------|
| Name of the Power line: 220 kV S/C line on D/C towers from existing 220 kV S/s of UTCL at Bhogasamudram Village in Tadipatri Mandal, Anantpur to proposed 220 kV S/s at Petnikota village, Kolimigundla Mandal, Nandyala | | | Total Length : 13. 61 km | | |
| | | | S.R. Value : 50000 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: SR-PTCC/SAP6588/6 Date: 05.02.2025 | | | | | |
| I | Kolimigundla Telephone Exchange | | | | |
| 1 | Exchange to MRO Office (A-A1) | Out of parallelism | | | |
| 2 | Exchange to Bus stand pillar (A-A2) | | | | |
| 3 | Exchange to Bus stand pillar (A-A3) | | | | |
| 4 | Exchange to Bus stand pillar (A-A4) | | | | |
| 5 | Exchange to SBI (A-A5) | | | | |
| 6 | Exchange to Pentikota (A-A6) | | | | |

ANNEXURE-II

| CEA Case No.: AND-766 | | Map Scale : 1 cm= 500 m | | | |
|---|-------------------------|-------------------------------------|---------------------------------|---|----------------------|
| Name of the Power line: 220 kV S/C line on D/C towers from existing 220 kV S/s of UTCL at Bhogasamudram Village in Tadipatri Mandal, Anantpur to proposed 220 kV S/s at Petnikota village, Kolimigundla Mandal, Nandyala | | Total Length : 13. 61 km | | | |
| | | S.R. Value : 50000 Ohm-cm | | | |
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |
| South Central Railway: SG.85/4/3/ PTCC/SCR/2024-25/AP 32 RTD Date: 25.02.2025 | | | | | |
| 1 | Vemulapadu to Jutur | | Out of parallelism | | |
| 2 | Jutur to Komali | | Out of parallelism | | |
| 3 | Komali to Tadipatri | | Out of parallelism | | |