



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

| CEA Case No.: MRA-1331 | | |
|---|---|--------------|
| Induced Voltage (IV) calculation in respect of PTCC proposal for 220 kV D/C line from 220 kV Additional Butibori MIDC SS to 220 kV Avaada Electro SS, Nagpur (Length: 0.212 km)- regd. | | |
| S. No | Reference No. | Dated |
| (i) | MSETCL: MSETCL/CO/PS/PTCC/In/B-625/08761 | 07.10.2025 |
| (ii) | MSETCL/CO/STU/EHV-C/ 370 (Intimation for Grid Connectivity to Avaada) | 10.01.2025 |
| (iii) | Avaada: Undertaking (AEPL/PTCC_BUTIBORI/CEA/01) | 27.11.2025 |
| (iv) | BSNL: IC/MBI/PTCC/MRA/03 | 17.11.2025 |
| (v) | Central Railway: N.705/T/PTCC/220kV/MAH-988 | 25.11.2025 |

The PTCC proposal submitted vide above references (i), (ii) and (iii) has been examined. The LF induction on Block and Telecom circuits of Central Railway with respect to details furnished vide above reference (v) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered.

In consideration of O/o Principal General Manager, BSNL, Nagpur letter no. MHNGP-17/18/2/2021-Planning-MH NGP dated 30.10.2025, DET (PTCC) letter vide above reference (iv) is taken as deemed NOC.

EPR Zones for proposed substation 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 Avaada Switchyard | 85.8 | 40 | 0.1 | 712 | 442 | NA | NA |

As per the details submitted by BSNL vide reference (iv) above, no telephone exchanges are falling in the EPR zone of the proposed substation.

Telecommunication details from Defense are pending and the power utility has shown urgency for charging of the line and requested for provisional PTCC approval vide above reference (iii). Taking above into consideration, necessary action for issuance of provisional 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 provisional RAC.

Encl.: As above

Chief Engineer,

To,

| | | | |
|----|--|--|---|
| 1. | Divisional Engineer (PTCC), Western Zone | QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Juhu Tara Road, Santacruz (West), Mumbai-400054 | |
| 2. | PCSTE (Central Railway) | O/o Principal Chief Signal & Telecom Engineer, S&T Department, 3rd Floor, Annexe Building Chhatrapati Shivaji Maharaj Terminus, Mumbai-400001 | |
| 3. | Director General of Signals | General Staff Branch, Integrated HQ, MoD (army), Sena Bhawan, DHQ, PO, New Delhi- 110 105 | With a request to provide details of Telecom assets/ NOC at the earliest for issuance of final RAC. |
| 4. | Chief Engineer (Projects Schemes Deptt.) | MahaTransco C.O., ‘Prakashganga’ Plot No C-19, E- Block, BKC, Bandra(E), Mumbai-400051 | Copy for Information |

ANNEXURE-I

| CEA Case No.: MRA-1331 Name of the Power line: 220 kV D/C line from 220 kV Additional Butibori MIDC SS to 220 kV Avaada Electro SS, Nagpur | | | Map Scale: 1 cm= 500 m Total Length: 0.212 km S.R. Value: 5000 Ohm-cm | | |
|--|-------------------------|-------------------------------------|--|---|----------------------|
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |

| | | | | | |
|--|----------------------|--------------------|----------|-------|---|
| Central Railway Letter No: N.705/T/PTCC/220kV/MAH-987 Dated 25.11.2025 | | | | | |
| 1 | Tuljapur – Sindi | Out of Parallelism | | | |
| 2 | Sindi – Borkhedi | 0.2 | 0.000034 | 14793 | 1 |
| 3 | Borkhedi – Buti Bori | Out of Parallelism | | | |