



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. : MRA-1315		
Induced Voltage (IV) calculation for LILO of 220 kV D/C Eklahare- Navsari Transmission Line at proposed 220 kV Deosane S/s (Length: 5.851 km). -Reg		
S. No	Reference No.	Dated
(i)	MSETCL: MSETCL/CO/PS/PTCC/In/B-618	22.08.2025
(ii)	MSETCL: e-Mail	01.01.2025
(iii)	BSNL: IC/MBI/PTCC/MRA-2739/03	30.12.2025
(iv)	Central Railway: N.705/T/PTCC/220kV/MAH-969	11.11.2025
(v)	Defense: B/46937/Sigs-7(b)/5060	27.10.2025

The PTCC proposal submitted vide reference (i), (ii) have been examined. The LF induction on Block and Telecom circuits of Central Railway with respect to details furnished vide above reference (iv) 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. DGM Telecom, PTCC, WZ, BSNL, and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iii) and (v) respectively.

EPR zone for proposed S/s is mentioned below:

Name of the proposed Substation	Half diagonal distance, D/2 (mts)	Fault Current I (A)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7kV	d (mts) at 10kV
220 kV Deosane	123.4	28000	0.135	904	595	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (iii), no telephone exchange of BSNL is falling within the EPR zone of proposed Substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line may be taken under intimation to this office.

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	Principal Chief (S&T) CR	Pr. Chief Signal & Telecom Engineer's office S & T Department, 3 rd. Floor, Annexe Building, Chhatrapati Shivaji Maharaj Terminus, Mumbai-400001	Annexure-I
3.	chief Engineer (Projects)	Chief Engineer (Projects Schemes) Maharashtra State Electricity Transmission CO. Ltd. Plot No. C-19 EBlock, BKC, Bandra (E), Mumbai- 400 051	Copy for information

ANNEXURE-I

CEA Case No. : MRA-1315			Map Scale : 1 cm= 500 m		
Name of the Power line: Induced Voltage (IV) calculation for LILO of 220 kV D/C Eklahare- Navsari Transmission Line at proposed 220 kV Deosane S/s (Length: 5.85 km). -Reg			Total Length : 5.85 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.
Central Railway: N.705/T/PTCC/220kV/MAH-96 Dated 11.11.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	BSL-IGP LT (OD-NKRD)		Out of IV consideration zone		