



सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power Communication Development Division

CEA Case No. : MRA-1276		
Induced Voltage (IV) calculation for PTCC proposal of LILO of 220 kV Shendra - Chitepimpalgaon Transmission Line at 220 kV Shendra GIS S/s (U/G Cable) [Length – 6.0 km] – Regd.		
S. No	Reference No.	Dated
(i)	MSETCL: MSETCL/CO/PS/PTCC/In/B-604/No04333	08.07.2024
(ii)	MSETCL: SE/EHV/P.C.CSN/Tech/TG-265/No.01300	10.09.2024
(iii)	BSNL: IC/MBI/PTCC/MRA-2662/03	10.09.2024
(iv)	South Central Railway: SG.85/4/3/PTCC/2024-25/SCRMH4RTD	13.08.2024

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of South 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 South Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET-PTCC, BSNL WZ has issued No Objection Certificate (NOC) vide reference (iii).

EPR zone for 220 kV proposed S/S is mentioned below :

Name of the proposed Substation	Half diagonal distance, D/2 (mts)	Fault Current I (KA)	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 Shendra S/s	85	30	0.092	461	276	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 220 kV 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 (ii). Taking above into consideration, necessary action regarding issuance of provisional 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, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM (S&T)	South Central Railway Secunderabad	
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 (Proj. Scheme Dept.) MSETCL	O/o Chief Engineer MSETCL, Mumbai	Copy for information.

ANNEXURE-I

CEA Case No. : MRA-1276 Name of the Power line: LILO of 220 kV Shendra - Chitepimpalgaon Transmission Line at 220 kV Shendra GIS (U/G Cable)			Map Scale : 1 cm= 500 m Total Length : 6.15 km S.R. Value : 10000 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/2024-25/SCRMH4RTD Dated 13.08.2024					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Chikalthane R/s to Karmad R/s	5.0	0.0048	14400	70
2	Karmad R/s to Badnapur R/s	-Out of Parallelism-			