



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-1285		
Induced Voltage (IV) calculation for PTCC proposal of LILO of one circuit of 220 kV M/C Kharghar-Sonkhar Transmission Line at proposed 220 kV NPLPL GIS S/s [Length – 100 m] – Regd.		
S. No	Reference No.	Dated
(i)	MSETCL: MSETCL/CO/PS/PTCC/In/B-607/No07564	28.10.2024
(ii)	MSETCL: e-Mail	19.03.2025
(iii)	BSNL: IC/MBI/PTCC/MRA-2688/03	10.12.2024
(iv)	Central Railway: N.705/T//PTCC/220kV/MAH-925	01.01.2025
(v)	Defense: B/46937/Sigs-7(b)/4289 (Received via e-Mail dated: 04.03.2025)	31.01.2025

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

EPR Zones for proposed substation is 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 NPLPL GIS S/s	59	32.3	0.20	827	527	NA	NA

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 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.

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)	Central Railway CST Terminus, Mumbai	
3.	Chief Engineer (Proj. Scheme Dept.) MSETCL	O/o Chief Engineer MSETCL, Mumbai	Copy for information.

ANNEXURE-I

CEA Case No.: MRA-1285			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of one circuit of 220 kV M/C Kharghar-Sonkhar Transmission Line at proposed 220 kV NPLPL GIS S/s.			Total Length : 0.10 km		
			S.R. Value : 3000 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 IC/MBI/PTCC/MRA-2688/03			Dated 10.12.2024		
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	AM (Vashi) Zone-5	-Out of Parallelism-			
2.	AM (Belapur) Zone-5				

ANNEXURE-II

CEA Case No.: MRA-1285			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of one circuit of 220 kV M/C Kharghar-Sonkhar Transmission Line at proposed 220 kV NPLPL GIS S/s.			Total Length : 0.10 km		
			S.R. Value : 3000 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-925			Dated 01.01.2025		
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Ghansoli R/s – Kobarkairane R/s				-Out of Parallelism-
2	Kobarkairane R/s - Turbhe R/s				-Out of Parallelism-
3	Turbhe R/s – Sanpade R/s				-Out of Parallelism-
4	Sanpade R/s – Vashi R/s				-Out of Parallelism-
5	Vashi R/s – Nerul R/s				-Out of Parallelism-
6	Nerul R/s - Belapur R/s				-Out of Parallelism-
7	Belapur R/s – Kharghar R/s				-Out of Parallelism-