



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**

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CEA Case No. : MRA-1234		
Induced Voltage (IV) calculation for PTCC proposal 220 kV D/C UG cable (2500 sqmm) (Length: 0.6 kms) and OH line (length: 0.068 Kms) for LILO of 220 kV D/C kalwa-Tiffil transmission line at proposed 220/11 kV GIS S/s of Nextra Data Limited at TCC Industrial area, Mahape, Navi Mumbai. - regd.		
S. No	Reference No.	Dated
(i)	NIL	NIL (received on 07.12.2023)
(ii)	BSNL: IC/MBI/PTCC/MRA-2608/03	18.01.2024
(iii)	Central Railway: N.153/PTCC/220kV/MAH-859	13.03.2024
(iv)	Defense: B/46937/Sigs 7(b)/3620	31.01.2024

The PTCC proposal submitted vide reference (i) has been examined.

The LF induction on communication circuits of MTNL and Central railway with respect to details furnished vide above reference (ii) and (iii) have been computed. The voltage likely to be induced on paralleling communication circuits of MTNL and 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 reference (iv) has issued their NOC for charging of the line.

EPR zone for the proposed substation 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
220/11 kV GIS Nextra Substation, Mahape, navi Mumbai	44.18	30	0.013	NA	NA	NA	NA

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

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

**Chief Engineer**

I/34486/2024

**To,**

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 <sup>st</sup> floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	PCSTE	Central Railway, S&T Department, 3 <sup>rd</sup> floor, Annexe Building, Chhatrapati Shivaji Maharaj Terminus, Mumbai – 400 001	
3.	M/s Nextra Data Limited	Nextra Data Limited, Airtel Center, Plot No. 16, udyog Vihar, Phase-IV, gurugram – 122 015	Copy for information

I/34486/2024

ANNEXURE-I

<b>CEA Case No.:</b> MRA-1234 <b>Name of the Power line:</b> 220 kV D/C UG cable (2500 sqmm) (Length: 0.6 kms) and OH line (length: 0.068 Kms) for LILO of 220 kV D/C kalwa-Tiffil transmission line at proposed 220/11 kV GIS S/s of Nextra Data Limited at TCC Industrial area, Mahape, Navi Mumbai			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 0.668 km <b>S.R. Value</b> : 2000 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-2608/03 Dated: 18.01.2024

1	EL Zone RSU		Out of parallelism		
2	KKR		Out of parallelism		
3	MBP		IV less than 430 V		
4	Rabale		Out of parallelism		
5	Airoli		Out of parallelism		
6	Vashi		Out of parallelism		
7	Sanpada		Out of parallelism		
8	Vashi Rly Stn		Out of parallelism		
9	VSI Sec 7		Out of parallelism		
10	Turbhe		Out of parallelism		
11	APMC		Out of parallelism		
12	Kausa		Out of parallelism		
13	NMUM		Out of parallelism		
14	Riverwood		Out of parallelism		
15	Nerul		Out of parallelism		
16	Kharghar		Out of parallelism		

I/34486/2024

ANNEXURE-II

<b>CEA Case No.:</b> MRA-1234 <b>Name of the Power line:</b> 220 kV D/C UG cable (2500 sqmm) (Length: 0.6 kms) and OH line (length: 0.068 Kms) for LILO of 220 kV D/C kalwa-Tiffil transmission line at proposed 220/11 kV GIS S/s of Nextra Data Limited at TCC Industrial area, Mahape, Navi Mumbai			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 0.668 km <b>S.R. Value</b> : 2000 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.153/PTCC/220kV/MAH-859 Dated: 13.03.2024					
1	AIRE-TUH				Out of IV consideration zone
2	TUH-JNJ				Out of parallelism
3	TUH-SNPD				Out of parallelism
4	SNPD-VSH				Out of parallelism