



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-1284		
Induced Voltage (IV) Calculation for LILO of 220 kV D/C Kalwa-Bapgaon transmission line at proposed 220 kV GIS of M/s Datascape Realty Private Limited at TCC Industrial area, Dighe, Thane, Navi Mumbai (Length: 0.25 km UG cable + 0.35 km OH =0.6 km)		
S. No	Reference No.	Dated
(i)	Datascape/220kV GIS/23-24	26.09.2024
(ii)	MTNL: DGM(PLG)/PTCC-DATASCAPE/220KV DC UG&OH/Datascape GIS/2024-25	28.10.2024
(iii)	Central Railway: N.705/T/PTCC/220kV/MAH-923	17.12.2024
(iv)	Defense: B/46937/Sigs 7(b)/4234	08.01.2025

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 references (ii) and (iii) respectively have been computed. The voltages likely to be induced on paralleling communication cables 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 given their NOC for charging the line.

EPR Zones for proposed substations 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 GIS of M/s Datascape Realty Private Limited at TCC Industrial area, Dighe, Thane, Navi Mumbai	31.1	39.563	0.242	661	427	11	NA

As per the details submitted by MTNL, No Telephone Exchange of MTNL 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.	M/s Datascape Realty Private Limited	Plot No Kalwa K-14/2,15,37 TTC Industrial Area MIDC , Thane, Maharashtra, India – 400708

ANNEXURE-I

CEA Case No.: MRA-1284 Name of the Power line: LILO of 220 kV D/C Kalwa-Bapgaon transmission line at proposed 220 kV GIS of M/s Datascape Realty Private Limited at TCC Industrial area, Dighe, Thane, Navi Mumbai			Map Scale : 1 cm= 500 m Total Length : 0.25 km UG cable + 0.35 km OH =0.6 km S.R. Value : 7500 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
MTNL: DGM(PLG)/PTCC-DATASCAPE/220KV DC UG&OH/Datascape GIS/2024-25 Date: 28.10.2024					
1	EL Zone RSU	Out of parallelism			
2	KKR	Out of parallelism			
3	MBP	Out of parallelism			
4	Rabale	Out of parallelism			
5	Airoli	IV less than 430 V			
6	Kausa	Out of parallelism			
7	NMUM	Out of parallelism			
8	Riverwood	Out of parallelism			
9	Diva Rly Stn	Out of parallelism			
10	Kalwa	Out of parallelism			
11	Kopri Balkum	Out of parallelism			
12	Panch Pakhadi	Out of parallelism			
13	Vasant Vihar	Out of parallelism			
14	Sahyog	Out of parallelism			
15	Charai	Out of parallelism			
16	Mulund	Out of parallelism			
17	Govind Udyog	Out of parallelism			
18	Wagle Estate	Out of parallelism			
19	Lokmanya	Out of parallelism			
20	Bhandup BTM	Out of parallelism			
21	Manisha Tower Mulund East	Out of parallelism			

ANNEXURE-II

CEA Case No.: MRA-1284 Name of the Power line: LILO of 220 kV D/C Kalwa-Bapgaon transmission line at proposed 220 kV GIS of M/s Datascape Realty Private Limited at TCC Industrial area, Dighe, Thane, Navi Mumbai			Map Scale : 1 cm= 500 m Total Length : 0.25 km UG cable + 0.35 km OH =0.6 km S.R. Value : 7500 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-923 RTD Date: 17.12.2024					
1	TNA-GNSL	0.6	0.000201	29851	6
2	BND-DCC	Out of parallelism			