



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.: KNK-997		
Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of 220 kV Mylasandra-Yaranadahalli DC line with UG cable at 220/66kV Keonics City GIS SS, Bangalore(3.44 km)- regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3340/12362-71	21.02.2021
(ii)	KPTCL: CEE/SLDC/PTCC/F-3340/458-60	03.05.2024
(iii)	BSNL:SR-PTCC/SKT 3849/2	02.03.2024
(iv)	South Western Railway: SG/SWR/PTCC/F-3340/2332	07.07.2022
(v)	Defense: B/46937/Sigs7(b)/2795	06.04.2022

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

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
220/66kV Keonics City GIS SS, Bangalore	39.24	28	0.33	804	519	13	NA

As per the details submitted by BSNL vide reference (iii) 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

To,

1.	Divisional Engineer Telecom (PTCC), Southern Zone	BSNL, Inspection Circle, 2nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5th Block, 9th Main, 47th Cross ,Bangalore-560041	
2.	PCSTE/SWR	Principal Chief Signal & Telecom Engineer, Rail Soudha, Gadag Road, Hubballi-580020	
2.	Member(Power), KPTCL	Chief Engineer Electricity, SLDC #28, Race Course Road, Bengaluru-560009	Copy for information

ANNEXURE-I

CEA Case No.: KNK-997		Map Scale : 1 cm= 500 m			
Name of the Power line: LILO of 220 kV Mylasandra-Yaranadahalli DC line with UG cable at 220/66 kV Keonics City GIS SS, Bangalore		Total Length : 3.44 km			
		S.R. Value : 30000 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 Letter No: SR-PTCC/SKT 3849/2		Dated 02.03.2024			
1.	HEBBAGODI EXCHANGE (HBG) (F-3340)				
HBG-H1	EXCHANGE to HEBBAGODI	IV less than 430V			
HBG-H2	EXCHANGE to HUSKUR CROSS				
HBG-H3	EXCHANGE to SRINIDHI HOTEL				
HBG-H4	EXCHANGE to CHANDAPURA				
2.	JIGANI EXCHANGE (JGN) (F-3340)				
JGN-J1	EXCHANGE to HAREGADDE	IV less than 430V			
JGN-J2	EXCHANGE to OTIS CIRCLE				
JGN-J3	EXCHANGE to JIGANI INDUSTRIAL AREA				
JGN-J4	EXCHANGE to OMAX CIRCLE				

ANNEXURE-II

CEA Case No.: KNK-997		Map Scale : 1 cm= 500 m			
Name of the Power line: LILO of 220 kV Mylasandra-Yaranadahalli DC line with UG cable at 220/66 kV Keonics City GIS SS, Bangalore		Total Length : 3.44 km			
		S.R. Value : 30000 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 Western Railway Letter No: SG/SWR/PTCC/F-3340/2332 Dated 07.07.2022					
1.	Baiyyappanahalli-Karmelaram	Outside IV consideration zone			
2.	Karmelaram-Heelalige	1.4	0.000045	23436	1
3.	Heelalige-Anekal Road	0.19	0.0000097	21958	0.21

Annexure III

Tele : 23019746

KNK-997
 Directorate General of Signals
 Signals - 7
 General Staff Branch
 Integrated HQ of MoD, (Army)
 DHQ PO, New Delhi - 110011


B/46937/Sigs 7(b)/2795

06 Apr 2022

Office of the Chief Engineer Electricity,
 Karnataka Power Transmission Corporation Limited
 State Load Despatch Centre,
 # 28, R.C. Cross Road,
 Bengaluru - 560 009

**PTCC PROPOSAL FOR CONSTRUCTION OF 220KV 1200SQ.MM LILO UG
 CABLE FROM PROPOSED 220KV MYLASANDRA-YARANADAHALLI DC LINE
 TO PROPOSED 220/66KV KEONICS CITY GIS SUB-STATION, ELECTONIC CITY
 PHASE-I, BANGALORE SOUTH TALUK, BANGALORE**

1. Refer your letter No CEE/SLDC/PTCC/F-3340/-12362-71 dt 21 Feb 2022 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheets received vide your above mentioned letter.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.


 (Suresh Pal Choyal)
 Lt Col
 GSO 1 (Coord)
 for SO-in-C

Enclosures : (As above)

Copy to :-

✓ The Director (PTCC), CEA
 Power Communication Development Division
 NRPC Complex, 18-A Shaheed Jeet Singh Marg
 Katwaria Sarai, New Delhi - 110016

- for information

The DET(PTCC), Northern Zone
 O/o PGM (North), QA & Inspection Circle,
 D-Tax Building, Eastern Court, Janpath
 New Delhi-110001

