



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-988		
Induced Voltage (IV) Calculation for PTCC proposal for LILO (1200 sq mm. UG cable) of 220 kV Somanhalli – HSR layout DC line at proposed 220/66 kV Keonic City GIS SS, Electronic City, Ph-I, Bangalore (Length: 6.352 kms).		
S. No	Reference No.	Dated
(i)	CEE/SLDC/PTCC/F-3322/10292-10301	07.01.2022
(ii)	KPTCL E-mail	22.10.2024
(iii)	BSNL: SR-PTCC/SKT3814/2	02.03.2024
(iv)	South Western Railway: SG/SWR/PTCC/F-3322/2303	07.07.2022
(v)	Defense: B/46937/Sigs 7(b)/2736	22.10.2024

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 references (iii) and (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 and Annexure-II respectively. The screening factors as applicable have been considered.

DG Signals, MoD vide reference (v) have 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
220/66 kV Keonic City GIS SS, Electronic City, Ph-I, Bangalore	39.24	24	0.33	684	439	5	NA

As per the details submitted by BSNL, No Telephone exchange 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.

As per the decision taken in 111th and 112th CLPTCC meeting, necessary instructions for “*Deemed Energization approval*” shall be specified while issuing RAC.

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Southern Zone	O/o CGM, QA&I circle, 2 nd floor, Sanchar Complex, WMS Compound, Jayanagar, 5 th block, 9 th main, 47 th cross, Bengaluru- 560 041	
2.	GM (S&T), South Western Railway	South Western Railway Headquarter, Rail Soudha, Hubballi – 580 023	
3.	Chief Engineer, SLDC, KPTCL	State Load Despatch Centre, #28, Race Course Road, Bengaluru	Copy for information

ANNEXURE-I

CEA Case No.: KNK-988			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO (1200 sq mm. UG cable) of 220 kV Somanhalli – HSR layout DC line at proposed 220/66 kV Keonic City GIS SS, Electronic City, Ph-I, Bangalore			Total Length : 6.352 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/SKT3814/2 Date: 02.03.2024					
I	Hebbagodi Exchange (HBG)				
1	Exchange to Hebbagodi (HBG-H1)		IV less than 430 V		
2	Exchange to Huskur Cross (HBG-H2)		Out of parallelism		
3	Exchange to Srinidhi Hotel (HBG-H3)		IV less than 430 V		
4	Exchange to Chandapura (HBG-H4)		IV less than 430 V		
II	Jigani Exchange (JGN)				
1	Exchange to Haregadde (JGN-J1)		Out of parallelism		
2	Exchange to OTIS circle (JGN-J2)				
3	Exchange to Jigani Industrial Area (JGN-J3)				
4	Exchange to Omax circle (JGN-J4)				

ANNEXURE-II

CEA Case No.: KNK-988			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO (1200 sq mm. UG cable) of 220 kV Somanhalli – HSR layout DC line at proposed 220/66 kV Keonic City GIS SS, Electronic City, Ph-I, Bangalore			Total Length : 6.352 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: SG/SWR/PTCC/F-3322/2303 Date: 07.07.2024					
1	Baiyyappanahalli to Karmelaram	Out of parallelism			
2	Karmelaram to Heelige	3.8	0.0000982	20367	2
3	Heelige to Anekal Road	Out of parallelism			

Directorate General of Signals
Signals 7
General Staff Branch
integrated HQ of MoD, (Army)
DHQ PO, New Delhi – 110011

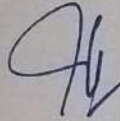
B/46937/Sigs 7(b)/2736

Oct 2024

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, 1200SQMM LILO UG
CABLE FROM EXISTING 220KV SOMANAHALLI-HSR LAYOUT DC LINE TO
PROPOSED 220/66KV KEONIC CITY GIS SUB-STATION, ELECTRONIC CITY,
PH-I, BANGALORE SOUTH TALUK, BANGALORE**

1. Refer your letter No CEE/SLDC/PTCC/F-3322/3225-27 dt 10 Sep 2024 (copy att).
2. **No Objection Certificate (NOC) is accorded** based on inputs provided as per Map sheet received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.



(Puneet Lakhanpal)
Lieutenant Colonel
General Staff Officer Grade 1 (Communication)
for Additional Director General (Telecommunication)

Enclosures : As above

Copy to :-

Chief Engineer, FSCD Division
Central Electricity Authority
Room No 702 (North Wing)
Sewa Bhawan, R.K. Puram, Sector-1
New Delhi-110066

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

- for information