



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

CEA Case No. : KNK-1172		
Induced Voltage (IV) calculation in respect of PTCC proposal for UG LILO of 220 kV SC Vrushubhavati – Somanahalli line at 220/66 kV Banashankari 6th Stage SS, Bangalore (3.71 km)- regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3792/5483-91	07.12.2024
(ii)	KPTCL: Email	15.09.2025
(iii)	BSNL: SR-PTCC/SKT 6686/6	11.03.2025
(iv)	South Western Railway: SG/SWR/PTCC/F-3792/2847	05.02.2025
(v)	Defense: B/46937/Sigs 7(b)/4330	06.02.2025

The PTCC proposal submitted vide above references (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL and South Western Railway with respect to details furnished vide above reference (iii) and (iv) respectively has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits 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.

ADG (Telecommunications) has issued No Objection Certificate (NOC) vide reference (v) above (attached as Annexure –III).

EPR Zones for proposed substation 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 S/S Banashankari 6th Stage,	99.68	30	0.45	3030	1971	93	35

As per the details submitted by BSNL vide reference (iii) above, Hosakerehalli telephone exchanges is falling in the EPR zone of the 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.

Encl.: As above

Chief Engineer,

To,

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

ANNEXURE-I

CEA Case No.: KNK-1172 Name of the Power line: UG LILO of 220 kV SC Vrushubhavati – Somanahalli line at 220/66 kV Banashankari 6th Stage SS			Map Scale : 1 cm= 500 m Total Length : 3.71 km S.R. Value : 25000 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 6686/6 Dated 11.03.2025

Hosakerehalli TE

A-A1	Channasandra Exchange to Pillar No 79	IV less than 430V
A-A2	Channasandra Exchange to Pillar No 83	

ANNEXURE-II

CEA Case No.: KNK-1172 Name of the Power line: UG LILO of 220 kV SC Vrushubhavati – Somanahalli line at 220/66 kV Banashankari 6th Stage SS			Map Scale : 1 cm= 500 m Total Length : 3.71 km S.R. Value : 25000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

SWR Letter No: SG/SWR/PTCC/F-3792/2847			Dated 05.02.2025		
1.	KSR Bengaluru city - Nayandahalli	0.3	0.000008	21592	0.2
2.	Nayandahalli - Kengeri	1.35	0.00004	22387	0.9
3.	Kengeri - Hejjala	0.85	0.000013	23769	0.3

Annexure III

Directorate General of Signals
(Signals 7)
General Staff Branch
Integrated HQ of MoD (Army)
Room No
DHQ PO, New Delhi - 110011

B/46937/Sigs-7(b)/4330

06 Feb 2025

Office of the Chief Engineer Electricity
Karnataka Power Transmission Corporation Ltd
State Load Dispatch Centre,
28, Race Course Cross Road,
Bengaluru-560 009

**PTCC PROPOSAL FOR THE PROPOSED 220KV 1200SQMM LILO UG
CABLE ROUTE FROM EXISTING 220KV VRUSHUBHAVATHI-
SOMANAHALLI SC LINE TO THE PROPOSED 220/66KV BANASHANKARI
6TH STAGE SUB-STATION, KENGERI HOBLI,
BANGALORE SOUTH TALUK, BENGALURU**

1. Ref your letter No CEE/SLDC/PTCC/F-3792/5483-91(A) dt 07 Dec 2024.
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.



(Handwritten signature)

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

Enclosures: As above

Internal:-

HQ Southern Comd (Sigs) - for info pl.