



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-1055		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220kV S/C U.G. cable from 220/66/11kV Vrushubhavati SS to 220/66/11kV Banashankari SS(3.515 km)- regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3649/6340-49	02.11.2023
(ii)	KPTCL: Email	12.06.2025
(iii)	BSNL: SR-PTCC/SKT 6459/6	03.01.2025
(iv)	South Western Railway: SG/SWR/PTCC/F-3649/2619	19.12.2023
(v)	Defense: B/46937/Sigs 7(b)/3600	31.01.2024

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 3rd Stage,	80.62	37.5	0.44	3013	1966	109	52

As per the details submitted by BSNL vide reference (iii) above, both Raja Rajeshwari Nagar and Hosakerehalli telephone exchanges are 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-1055 Name of the Power line: 220kV S/C U.G. cable from 220/66/11kV Vrushbhavati SS to 220/66/11kV Banashankari SS			Map Scale : 1 cm= 500 m Total Length : 3.515 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 6459/6 Dated 03.01.2025					
Raja Rajeshwari Nagar TE(C)					
A-A1	RRN Exge to HP Petrol Pump	1.4	0.0047	18539	87
A-A2	RRN Exge to Bullet Show Room	IV less than 430V			
A-A3	RRN Exge to SK Gym				
A-A4	RRN Exge to Govt School				
A-A5	RRN Exge to Church				
Hosakerehalli TE(N)					
B-B1	HSK Exge to Panthara Palya	0.95	0.0067	8086	54
B-B2	HSK Exge to Panthara Palya	IV less than 430V			
B-B3	HSK Exge to Opp Bescom				
B-B4	HSK Exge to Shaneshwara temple				
B-B5	HSK Exge to Shaneshwara temple				
B-B6	HSK Exge to paramount road				
B-B7	HSK Exge to kalikamba temple				
B-B8	HSK Exge to V.N. Signal				

ANNEXURE-II

CEA Case No.: KNK-1055 Name of the Power line: 220kV S/C U.G. cable from 220/66/11kV Vrushubhavati SS to 220/66/11kV Banashankari SS			Map Scale : 1 cm= 500 m Total Length : 3.515 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.

SWR Letter No: SG/SWR/PTCC/F-3649/2619 Dated 19.12.2023					
1.	KSR Bengaluru - Nayandahalli	2.1	0.0014	15132	21
2.	Nayandahalli - Kengeri	0.3	0.00022	25611	5
3.	Kengeri - Hejjala	1	0.00002	8086	0.2
4.	KSR Bengaluru – Bengaluru Cantonment RS	Out of Parallelism			
5.	KSR Bengaluru - Yesvantpur	1.3	0.00004	11967	0.5
6.	Yesvantpur - Lottegolahalli	Outside IV consideration zone			
7.	Lottegolahalli - Yelahanka	Outside IV consideration zone			
8.	Lottegolahalli - Hebbal	Outside IV consideration zone			
9.	Hebbal - Banaswadi	Outside IV consideration zone			
10.	Yesvantpur- Chikka Banawara	Outside IV consideration zone			

E-mail: webstar@nic.in

Annexure III

Directorate General of Signals
 Signals - 7
 General Staff Branch
 Integrated HQ of MCD, (Army)
 DHO HQ, New Delhi - 110011

KNK-1055

B/40937/Sigs 7(b)/3600

9/ Jan 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 PROPOSED 220KV 1200SQMM SC UG CABLE ROUTE
 FROM EXISTING 220/66/11KV VRUSHUBHAVATI VALLEY SS TO PROPOSED
 220/66/11KV BANASHANKARI 3RD STAGE GIS SS IN BENGALURU URBAN
 DISTRICT**

1. Refer your letter No CEE/SLDC/PTCC/F-3649/6340-49 dt 02 Nov 2023 (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 Lakhnpal)
 Lieutenant Colonel
 General Staff Officer Grade 1 (Communication)
 for Additional Director General (Telecommunication)

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

Electricity Authority
 Central Electricity Authority
 PCD-Division
 No. 171
 2025-24

Sh. Akheya (DD)
 1/12