



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-1175		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220kV S/C U.G. cable from 220/66/11kV Exora GIS SS to 220/33kV BMRCL RSS-7A (Phase-II), Silk Board (9.31 km)- regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3806/7746-55	10.02.2025
(ii)	KPTCL: CEE/SLDC/PTCC/F-3806/1471-74	21.05.2025
(iii)	BSNL: SR-PTCC/F-3806/2	06.06.2025
(iv)	South Western Railway: SG/SWR/PTCC/Corres/E:2-12	18.03.2025
(v)	Defense: B/46937/Sigs(7b)/4509	19.06.2025

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).

Both substations are existing therefore EPR calculations are not warranted.

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-1175 Name of the Power line: 220kV S/C U.G. cable from 220/66/11kV Exora GIS SS to 220/33kV BMRCL RSS-7A (Phase-II), Silk Board			Map Scale : 1 cm= 500 m Total Length : 9.31 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/F-3806/2 Dated 06.06.2025

BSNL Letter No: SR-PTCC/F-3806/2 Dated 06.06.2025					
KOR Exchange					
KOR-K1	KOR Exchange to Venkatpura main road pillar 86	IV less than 430 V			
KOR-K2	KOR Exchange to Hsr 5 th sector – pillar 77A				
KOR-K3	KOR Exchange to Koramangala 1 st block pillar 58				
KOR-K4	KOR Exchange to Koramangala water tank pillar 46	0.6	0.0023	21685	50
NIFT Exchange					
NFT-N1	NFT Exchange to 27 Main Police Station	IV less than 430 V			
NFT-N2	NFT Exchange to Pillar 74				
NFT-N3	NFT Exchange to 24 th Main Pillar 42	0.3	0.0011	15219	17
HSR Exchange					
HSR-H1	HSR Exchange to 14 th Main Petrol Bunk	IV less than 430 V			
HSR-H2	HSR Exchange to 14 th Main Pillar 22				
HSR-H3	HSR Exchange to 5 th Main Pillar 37				
HSR-H4	HSR Exchange to HSR BDA Complex				
HSR-H5	HSR Exchange to Pillar 59	0.5	0.0006	22737	14
Shoba Quartz Exchange					
SHQ-SQ1	SHQ Exchange to Pillar P41	0.4	0.0032	9805	31
SHQ-SQ2	SHQ Exchange to Pillar P43	IV less than 430 V			

Shoba Club House Exchange					
SHC-SC1	SHC Exchange to Pillar P31	IV less than 430 V			
SHC-SC2	SHC Exchange to Pillar P25	0.4	0.0022	6196	14

ANNEXURE-II

CEA Case No.: KNK-1175		Map Scale : 1 cm= 500 m			
Name of the Power line: 220kV S/C U.G. cable from 220/66/11kV Exora GIS SS to 220/33kV BMRCL RSS-7A (Phase-II), Silk Board		Total Length : 9.31 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/Corres/E:2-12 Dated 18.03.2025					
1.	KSR Bengaluru - Nayandahalli	Out of Parallelism			
2.	KSR Bengaluru – Bengaluru Cantonment RS	Outside IV consideration zone			
3.	Baiyyappanahalli – Bengaluru East	0.3	0.000003	20782	0.1
4.	Baiyyappanahalli - Karmelaram	3.6	0.00026	21657	6
5.	Karmelaram - Heelalige	0.75	0.000011	16422	0.2
6.	Baiyyappanahalli – Krishnarajapuram	0.4	0.000005	4542	0.02
7.	Krishnarajapuram - whitefield	Outside IV consideration zone			
8.	Sir M Viswesarayya terminal - Baiyyappanahalli	1	0.000012	14068	0.2
9.	Banaswadi - Sir M Viswesarayya terminal	Outside IV consideration zone			
10.	Baiyyappanahalli A Panel - Bansawadi	0.8	0.00001	13552	0.13
11.	Baiyyappanahalli - Chennasandra	0.4	0.000005	4542	0.2

Directorate General of Signals (Signals-7)
General Staff Branch
Integrated HQ of MoD (Army)
DHQ PO, New Delhi -11

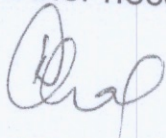
XNK-1175

B/46937/Sigs-7(b)/4509 dt 19 Jun 2025

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

**PTCC PROPOSAL FOR CONSTRUCTION OF PROPOSED 220KV SC
1000SQMM UG CABLE FROM EXISTING 220/66/11KV EXORA
(CESSNA BUSINESS PARK) GIS SUB-STATION TO THE PROPOSED
220/33KV BMRCL RSS-7A OF PH-II AT SILK BOARD, BENGALURU
EAST TALUK, BENGALURU DISTRICT ON SLEF EXECUTION BASIS
BY M/S BMRCL**

1. Ref your letter No CEE /SLDC/PTCC/F-3806/7746-55 dt 10 Feb 2025.
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.



(Karan Dhawan)
Colonel
Colonel Signals-7
for Additional Director General
(Telecommunication)



Encls: As above

Copy to:-

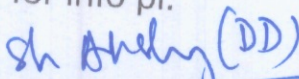
HQ Southern Comd (Sigs)

Chief Engineer, PSCD Division

Central Electricity Authority
Room No 702 (North Wing)

Sewa Bhawan, RK Puram, Sector-1
New Delhi-110 066

for info pl.

 (DD)

30/06

Authority Authority

PSCD Division

Diary No. 848

Date 27/06/25