



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-1019		
Induced Voltage (IV) calculation for PTCC proposal for LILO of 220 kV D/C Doni-Ron Transmission line on M/c Towers at proposed 220/110 kV S/s Yelburga.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3486/6428-37	05.11.2022
(ii)	KPTCL: e-Mail	28.01.2026
(iii)	BSNL: SR-PTCC/SKT4574/5	31.12.2025
(iv)	South Western Railway: SG/SWR/PTCC/F-3486/2456	30.12.2022
(v)	Defense: B/46937/Sigs 7(b)/3106	03.01.2023

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

EPR zone for proposed S/s is mentioned below:

Name of the proposed Substation	Half diagonal distance, D/2 (mts)	Fault Current I (A)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7kV	d (mts) at 10kV
220 kV Yelburga	131	28000	0.13	979	603	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (iii), no telephone exchange of BSNL is falling within the EPR zone of proposed Substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line may be taken under intimation to this office.

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Southern Zone	O/o Divisional Engineer Telecom (PTCC) QA & Inspection circle, 2 nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5 th Block, 9 th main, 47 th Cross, Bengaluru - 560041	
2.	Principal Chief (S&T) SWR	South Western Railway, Principal Chief Signal & Telecom Engineer, Rail Soudha, Gadag Road, Hubballi-20	Annexure-I
3.	KPTCL	O/o Chief Engineer Electricity, State Load Dispatch Centre, #28, Race Course Cross Road, Bangaluru-560009	Copy for information.

ANNEXURE-I

CEA Case No. : KNK-1019			Map Scale : 1 cm= 500 m		
Name of the Power line: Induced Voltage (IV) calculation for PTCC proposal of LILO of 220 kV D/C Transmission line Doni-Ron on M/c at proposed 220/110kV Yelburga S/s.			Total Length : 18.524 km		
			S.R. Value : 20000 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: South Western Railway: SG/SWR/PTCC/F-3486/2456 Dated 30.12.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	KANR-SGNL				Out of IV consideration zone

