



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-1182		
Induced Voltage (IV) calculation for PTCC proposal of 765 kV D/C Transmission Line from existing Raichur S/s to proposed 765kV Koppal II S/s. [Length- 146.60km]– Regd.		
S. No	Reference No.	Dated
(i)	PKGTL: SR-I/Manvi CAO/PTCC/01	04.02.2025
(ii)	BSNL: R-PTCC/Power Grid/SKT150420256829/2025-26/3	04.11.2025
(iii)	SOUTH CENTRAL RAILWAY No.SG.85/4/3/PTCC/2025-26/SCRKS 01	23.04.2025
(iv)	Defense: B/46937/Sigs-7(b)/4569	19.06.2025

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and Telecom circuits of South Central Railway with respect to details furnished vide above reference (iii) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of South Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DGM Telecom, PTCC SR, BSNL, and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (ii) and (iv) 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
765kV Koppal II S/s	550	50000	0.025	1049	508	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (ii), 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

Digitally signed by
Suman Kumar Maharana
Date: 31-12-2025
17:00:47

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)	South Central Railway, Office of the Principal Chief Signal & Telecom Engineer 7th Floor, Rail Nilayam Secunderabad - 500003	Annexure-I
3.	PKGTL	Manager, POWERGRID, Manvi CAO, Jayanagar, Rao's Colony, Behind Laksmi Temple, Manvi Raichur - 584123	Copy for information.

ANNEXURE-I

CEA Case No. : KNK-1182			Map Scale : 1 cm= 500 m		
Name of the Power line: Induced Voltage (IV) calculation for PTCC proposal of 765kV D/C Transmission Line from existing Raichur S/s to proposed 765kV Koppal II S/s. [Length- 146.60km]– Regd.			Total Length : 146.60 km		
			S.R. Value : 100000 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 Central Railway : SG.85/4/3/PTCC/2025-26/SCRKS 01 Dated 23-04-2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Raichur (RC) - Marichetal (MRC)	1.8	0.000645	49870	69.60
2.	Yermarus (YS) - Raichur (RC)	0.2	0.000133	49318	14.24

