



सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power Communication Development Division

CEA Case No. : AND-714		
Induced Voltage (IV) calculation for PTCC approval for 220 kV D/C Transmission Line form PSS III & IV to 400 kV Jammalamadugu S/s in Kadapa District [Length – 5.358 + 1.396 km]-Regd.		
S. No	Reference No.	Dated
(i)	APTRANSCO: CEZ/SEZ/ EEConst/DEE-I/PS-3Mylavaram/PTCC/D.No205/2022	29.03.2022
(ii)	APTRANSCO: CE/Proj/SE/Proj(220&132kV)/EE-1/Dy.EE-3/F.PTCC/D.No132/2024Z/SEZ/ EEConst/DEE-I/PS-3Mylavaram/PTCC/D.No205/2022	06.08.2024
(iii)	BSNL: SR-PTCC/SAP5918/6	24.07.2024
(iv)	South Central Railway: SG/85/4/3/PTCC/SCR/2024-25/AP16RTD	19.07.2024
(v)	Defense: B/46937/Sigs7(b)/3888	16.07.2024

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of South Central 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 Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET-PTCC, SZ BSNL and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iii) & (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 (KA)	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 PSS III	98	40	0.5	4460	2917	182	98

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	I floor , Raj Bhavan Exchange No.26, Sardar Patel Road, Guindy, Chennai	
2.	GM (S&T)	O/o PCSTE, South Central Railway Rail Nilayam, Secunderabad	
3.	Chief Engineer APTRANSCO	CE Projects Vidyut Sabha, Vijaywada	Copy for information

ANNEXURE-I

CEA Case No.: AND-714 Name of the Power line: 220 kV D/C Transmission Line form PSS III & IV to 400 kV Jammalamadugu S/s in Kadapa District			Map Scale : 1 cm= 500 m Total Length : 5.358 km + 1.396 km S.R. Value : 50000 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/SCR/2024-25/AP16RTD Dated 19.07.2024					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	S. Uppalapadu (SUPP)- Nossam(NOSM)	Out of Parallelism			
2.	Nossam(NOSM)-Sanjamala(SJMA)	Out of Parallelism			