



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. : AND-762		
Induced Voltage (IV) calculation for PTCC approval of 400 kV D/C Transmission Line form 400 kV Polavaram HEP S/s to 400 kV Guddigudem S/s in West Godavari District [Length – 24.157 km]-Regd.		
S. No	Reference No.	Dated
(i)	APTRANSCO: CE/Projects/SE-400kV/EE-1/DEE1/Polavaram/D.No761/2023	20.03.2024
(ii)	BSNL: SR-PTCC/SAP6639/9	22.02.2025
(iii)	South Central Railways: SG.85/4/3/PTCC/2024-25/SCRAP15RC	15.07.2024
(iv)	Defense: B/46937/Sigs7(b)/3837	16.07.2024

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

EPR zone for 440 kV 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
400 kV Polavaram HEP S/s	68	31.5	0.28	1327	855	18	NA

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 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

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Southern Zone	QA & Insp Circle, BSNL Office Jayanagar, Bangalore	
3.	Chief Engineer APTRANSCO	CE Projects Vidyut Sabha, Vijaywada	Copy for information

ANNEXURE-I

CEA Case No.: AND-762			Map Scale : 1 cm= 500 m		
Name of the Power line: 400 kV D/C Transmission Line form 400 kV Polavaram HEP S/s to 400 kV Guddigudem S/s in West Godavari District.			Total Length : 24.157 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.
BSNL: SR-PTCC/SAP6639/9			Dated 22.02.2025		
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Gopalpuram Exchange to A1		Out of Parallelism		
2.	Gopalpuram Exchange to A2		Out of Parallelism		
3.	Gopalpuram Exchange to A3		Out of Parallelism		
4.	Koyyalagudem Exchange to B1		Out of Parallelism		