

I/33029/2024



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. : TNG-141		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220 kV DC line from existing 220 kV Pulukurthy SS to proposed 220/132/33KV SS at Kakatiya Mega Textile Park in Warangal district (30 km) - regd.		
S. No	Reference No.	Dated
(i)	TCTL: CPT-320/SE-Const-II/TST-CONST-e-01/2022-23/F.220KV SS KMTP & KITEX Line/PTCC/D.No.20/23	06.01.2023
(ii)	TCTL: CPT-320/SE-Const-II/TST-CONST-e-01/2022-23/F.220KV SS KMTP & KITEX Line/PTCC/D.No.914/23	06.12.2023
(iii)	BSNL: SR-PTCC/STS 4664/06	28.02.2023
(iv)	South Central Railway : SG.85/4/3/PTCC/SCR/2022-23/TS-32 RTD	27.01.2023
(v)	Defense: B/46937/Sigs 7(b)/3198	11.08.2023

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. Screening factors as applicable has been considered.

DET PTCC, Chennai (BSNL) vide reference (iii) and DG Signals, Mod vide reference (v) (enclosed as Annexure II) respectively have issued No Objection Certificate (NOC).

EPR details for the proposed substation is given below.

Name of the SS	Half Diagonal Distance, D/2 (mts)	Fault Current, I (kA)	Resistance of earthmat, R (Ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220/132/33KV SS at Kakatiya Mega Textile Park	117.15	28	0.48	3544.47	2305.15	107.78	40.30

As per the details submitted by BSNL, no telephone exchange is lying in the EPR zone of the proposed substation.

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

Director

I/33029/2024 To,

1.	Divisional Engineer (PTCC), Southern Zone	O/o CGM, QA&I circle, 2 nd floor, Sanchar Complex, WMS Compound, Jayanagar, 5 th block, 9 th main, 47 th cross, Bengaluru- 560 041
2.	GM (S&T)	South Central Railway, Office of PCSTE, 7 th Floor, Rail Nilayam, Secunderabad – 500 025
3.	Chief Engineer Construction	Vidyut Soudha, Hyderabad-500082

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ANNEXURE-I

CEA Case No.: TNG-141		Map Scale : 1 cm= 500 m			
Name of the Power line: Induced Voltage (IV) calculation in respect of PTCC proposal for erection of 220KV DC line from existing 220KV Pulukurthy SS to proposed 220/132/33KV SS at Kakatiya Mega Textile Park in Warangal district (30 km) - regd.		Total Length : 30 km			
		S.R. Value : 25000 Ohm-cm			
South Central Railway Letter No.- SG.85/4/3/PTCC/SCR/2022-23/TS-32 RTD			Date: 27.01.2023		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
1	Warangal –Chintalpalli	10.85	0.00609	12541	76.4
2	Chintalpalli - Yelgur	3.55	0.0161	9876	159
3	Yelgur - Nekonda	Out of parallelism			