



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. : TNG-101		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C line from 400/220 kV Dichpally Substation to proposed 220/11 kV Yacharam Thanda S/s (Length: 26.85 km) – regd.		
S. No	Reference No.	Dated
(i)	CE(LIS)/SE(LI)/DE/ADE-6/PTCC-Dichpally-Yacharam/D.No. 163/2020	10.12.2020
(ii)	CE(LIS)/SE(LI)/DE/ADE-6/PTCC-Dichpally-Yacharam/D.No. 177/22	27.12.2022
(iii)	CE(LIS)/SE(LI)/DE/ADE-6/PTCC-Dichpally-Yacharam/D.No. 211/23	28.03.2023
(iv)	TCTL E-mail	03.05.2024
(v)	BSNL:SR-PTCC/STS 2870/03	21.08.2021
(vi)	South Central Railway:SG.85/4/3/PTCC/SCR/2023-24/TS-25-RTD	05.02.2024
(vii)	Defense: B/46937/Sigs 7(b)/2270	21.01.2021

The PTCC proposal submitted vide reference (i) and (iv) has been examined. The LF induction on communication circuits of BSNL and South Central Railway with respect to details furnished vide above references (v) and (vi) respectively have been computed. The voltage likely to be induced on paralleling communication cables of BSNL and South Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I and Annexure-II respectively. The screening factors as applicable have been considered

DG Signals, MoD vide reference (vii) has issued their No Objection Certificate (NOC) (Annexure-III) for charging of the transmission line.

EPR Zones for proposed substations are mentioned below.

Name of the proposed 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
220/11 kV Yacharam Thanda S/s	93	28	0.45	2632	1710	74	24

As per the details submitted by BSNL vide reference (v) above, no telephone exchange is falling in the EPR zone of the proposed substations.

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

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM, Tele	Office of PCSTE, 7 th Floor, Rail Nilayam, Secunderabad – 500 025	
3.	Chief Engineer, Lift Irrigation Schemes	TSTRANSCO, Vidyut Soudha, Hyderabad, Telangana – 500 082	Copy for information

ANNEXURE-I

CEA Case No.: TNG-101			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV D/C line from 400/220 kV Dichpally Substation to proposed 220/11 kV Yacharam Thanda S/s			Total Length : 26.85 km		
			S.R. Value : 20,000 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 Letter No SR-PTCC/STS 2870/03 Date: 21.08.2021					
I	Dichipally MBM Exchange				
1.	Exge to Telangana University Mini Pillar (A-A1)	IV less than 430 V			
2.	Exge to Railway Station Pillar (A-A2)				
3.	Exge to Islampura Pillar (A-A3)				
4.	Exge to Police camp Pillar (A-A4)				

ANNEXURE-II

CEA Case No.: TNG-101		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV D/C line from 400/220 kV Dichpally Substation to proposed 220/11 kV Yacharam Thanda S/s		Total Length : 26.85 km			
		S.R. Value : 20,000 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/2023-24/TS-25-RTD Date: 05.02.2024					
1.	Uppalavai (UPW) to Sirnipalli (SCP)	Out of parallelism			
2.	Sirnipalli (SCP) to Indalvai (IDL)	3.1	0.01436	15599	224
3.	Indalvai (IDL) to Dichpalli (DHP)	8.2	0.00701	19941	140
4.	Dichpalli (DHP) to Nizamabad (NZZ)	Out of parallelism			

Tele : 23019746

TNG-101

Directorate General of Signals
 Signals - 7
 General Staff Branch
 Integrated HQ of MoD, (Army)
 DHQ PO, New Delhi - 110011

B/46937/Sigs 7(b)/2270

21 Jan 2021

Chief Engineer, Lift Irrigation Schemes
 Transmission Corporation of Telangana Limited
 TSTRANSCO, Vidyut Soudha,
 Hyderabad, Telangana - 500 082

**ERECTION OF 220KV SMDG LINE-26.85KM FROM 400/220KV DICHPALLY
 SUBSTATION TO PROPOSED 220/11KV YACHARAM THANDA SUBSTATION
 UNDER KALESHWARAM LIFT IRRIGATION SCHEME IN KAMAREDDY
 DISTRICT-PTCC PROPOSAL-FOR APPROVAL-FORWARDED**

1. Ref your letter No CE(LIS)/SE(LI)/DE/ADE-6/PTCC-Dichpally-Yacharam/D.No.163/2020 dt 10 Dec 2020 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your above mentioned letter.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.



(A Rawat)
 Maj
 GSO 1 (Comn)
 for SO-in-C

Enclosures : (As above)

Copy to :-

✓ The Director (PTCC), CEA
 Power Communication Development Division
 NRPC Complex, 18-A Shaheed Jeet Singh Marg
 Katwaria Sarai, New Delhi - 110016

The DET(PTCC), Northern Zone
 O/o PGM (North), QA & Inspection Circle,
 D-Tax Building, Janpath
 New Delhi-110001

for information

Tammy

VK
 VTK

