



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-96		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220 kV D/C line from proposed 400/220 kV substation Janagaon to proposed 220/132 kV substation Husnabad in Siddipet district (41.40 km) - regd.		
S. No	Reference No.	Dated
(i)	TSTRANSCO: CPT330/SE (Const)/DE3/220kV Husnabad SS/PTCC/D. no. 18/2020	06.01.2020
(ii)	TSTRANSCO: Email	21.07.2023
(iii)	BSNL: SR-PTCC/STS 2693/05	22.05.2023
(iv)	South Central Railway: SG.85/4/3/PTCC/SCRTS202001 RTD	31.01.2020
(v)	Defense: B/46937/Sigs 7(b)/1977	01.06.2020

The PTCC proposal submitted vide references (i) & (ii) has been examined. The LF induction on communication cables of BSNL and South Central Railway with respect to details furnished vide above references (iii) and (iv) 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 & II respectively. The screening factors as applicable have been considered. Vide reference (v) above, DG Signals, MoD has issued No Objection Certificate (NOC) (enclosed as Annexure-III).

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
400/220 kV Janagaon SS	266.46	28.647	0.123	1917.02	1178.00	NIL	NIL
220/132 kV Husnabad SS	109.78	24	0.78	4669.48	3051.88	183.80	95.72

As per the telecom details submitted by BSNL vide above reference (ii), no telecom exchanges are lying within the EPR zone of the proposed substations.

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

Encl.: As above

24.7.23
 Director

I/29147/2023

To,

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle, 1st Floor, Raj Bhavan Exchange No. 26, Sardar Patel Road, Guindy, Chennai-600032	
2.	General Manager (S&T)	South Central Railway, O/o PCSTE, 7 th floor, Rail Nilayam, Secunderabad - 500025	
3.	Chief Engineer, Construction	TSTRANSCO, Vidyut Soudha, Hyderabad - 500082	Copy for information

I/29147/2023

ANNEXURE-I

CEA Case No.: TNG-96 Name of the Power line: 220 kV D/C line from proposed 400/220 kV substation Janagaon to proposed 220/132 kV substation Husnabad in Siddipet district		Map Scale : 1 cm= 500 m Total Length : 41.40 km S.R. Value : 25000 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 2693/05 Date: 22.05.2023					
I A1	JANGAON TELEPHONE EXCHANGE				
1	EXGE to Jangaon Bus Stand (A1-A2)		IV less than 430 V		

I/29147/2023

ANNEXURE-II

CEA Case No.: TNG-96		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV D/C line from proposed 400/220 kV substation Janagaon to proposed 220/132 kV substation Husnabad in Siddipet district		Total Length : 41.40 km			
		S.R. Value : 25000 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 Letter No: SG.85/4/3/PTCC/SCRTS202001 RTD Date: 31.01.2020					
1	Wangapally (WP) –Aler (ALER)	Out of parallelism			0
2	Aler (ALER) – Pembarti (PBP)				0
3	Pembarti (PBP) – Jangaon (ZN)				0
4	Jangaon (ZN) – Raghunathpalli (RGP)	0.3	0.00004	27200	1

I/29147/2023

Tele : 23019746

TNG-96

Annexure-III

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


B/46937/Sigs 7(b)/1977

01 Jun 2020

The Chief Engineer, Construction
Transmission Corporation of Telangana Limited
Vidyut Soudha,
Hyderabad - 500 082

**ERECTION OF 220KV DC LINE (41.40KM) FROM PROPOSED 400/220KV SUBSTATION
JANAGAON TO PROPOSED 220/132KV SUBSTATION HUSNABAD IN SIDDIKET DISTRICT-
PTCC PROPOSALS-FORWARDED-REGARDING**

1. Ref your letter No Lr. No. CPT330/SE(Const)/DE3/220KV Husnabad SS/PTCC/D.No.18/2020 dt 06 Jan 2020 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
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

Divisional Engineer Telegraph (PTCC)
O/c GM (North); BSNL, QA & Inspection Circle,
CTS Compound, Africa Avenue Road,
Netaji Nagar, New Delhi-110023

for information

Sh. Tanuj
R-PS&S
23.7.20

409
20/7/20