



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

पावर कम्युनिकेशन डवलपमेंट प्रभाग

Power Communication Development Division

No./CEA/PCD/PTCC/TNG-68/600-02

Date : 23.05.2019

The Divisional Engineer Telecom (PTCC),  
QA & Inspection (T&D) circle, BSNL,  
1<sup>st</sup> floor, Raj Bhavan Exchange,  
No.26, Sardar Patel Road,  
Guindy, Chennai-600032

**Subject:** Induced Voltage Calculation in respect of PTCC proposal for 220 kV Multi Circuit LILO to Jangaon from existing 220 kV Waddekothapally - Bhonagiri DC line

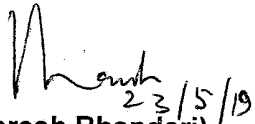
**Reference:** i) BSNL letter no. SR-PTCC/STS-2211/04 dated 18.12.2018  
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRSTS201916 RTD dated 28.02.2019  
iii) Defence letter no. B/46937/Sigs 7(b)/1274 dated 21.01.2019

Sir,  
The instant PTCC proposal has been examined. The low frequency induction on telecom cables of BSNL and Block & Telecom circuits of South Central Railway with respect to details furnished vide above references have been computed. The Soil Resistivity (SR) value has been taken as 25,000 Ohm-cm. The voltages likely to be induced on paralleling telecom cables of BSNL and Block & Telecom circuits of South Central Railway under Single Line to Ground fault condition are enclosed at Annex-I & II respectively. The screening factors, as applicable, have been considered. Vide ref. (iii) above, Defense Authority have issued No Objection Certificate (NOC) (enclosed as Annex – III).

Taking above into consideration, kindly take necessary action for PTCC route approval.

**Encl.:** As above

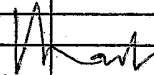
m/c

  
(Naresh Bhandari)  
Chief Engineer

Copy to:

1. GM (S&T), South Central Railway, Head Quarters Office, Signal & Telecomm Branch, Rail Nilayam, Secunderabad – 500025 (Annexure-II only)
2. Chief Engineer, Construction, TSTRANSCO, Vidyut Soudha, Hyderabad-500082

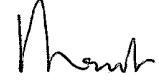
CEA Case No.: TNG-68

Case No. SRPTCC/STS/2211		SSA : Warangal				
Scale: 1:50000						
Name of Power line: :- 220 KV Line with Multi Circuit Towers for making LILO of existing 220 KV Waddekothapally - Bhongir DC Line to proposed 400/200 KV SS Jangaon in Jangaon Dist -LF comments .						
Length: 26 KMs				Type of Cable: PIJF		
SR value : 25000 $\Omega$ -cm				Map Scale : 1 cm = 500 mts		
No	Name of telecom line	LOP in KMs	MC in Ohms	FC in Amps	IV in Volts	Safe Separation Distance
<b>Jangaon Exchange</b>						
1	Exchange to P 21	} IV	LESS	THAN	430 V	
2	Exchange to P22					
3	Exchange to P23					
4	Exchange to P24					
5	Exchange to P25					
6	Exchange to P26					
<b>Pemberthy Exchange</b>						
1	Exchange to P21.	- IV	LESS	THAN	430V	
						
				नरेश भंडारी / NARESH BHANDARI मुख्य अभियन्ता / Chief Engineer केन्द्रीय विद्युत प्राधिकरण, C.E.A. विजुल मंत्रालय / Ministry of Power भारत सरकार / Govt. of India नई दिल्ली / New Delhi-66		

**ANNEXURE – II**

<b>Case No.: TNG-68</b> <b>Name of the Power line:</b> 220 kV Multi Circuit LILO to Jangaon from existing 220 kV Waddekothapally - Bhonagiri DC line		<b>Map Scale</b> : 1cm=500mts <b>Total Length</b> : 26 Km. <b>Soil Resistivity</b> : 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.

<b>South Central Railway letter no. – SG.85/4/3/PTCC/SCRTS201916 RTD dated 28.02.2019</b>					
1	Wangapalli (WP) – Aler (ALER)	4.6	0.0006	7200	4
2	Aler (ALER) – Pembarti (PBP)	5.4	0.0042	6000	25
3	Pembarti (PBP) – Janagaon (ZN)	5.6	0.0016	7700	12
4	Janagaon (ZN) – Raghunathpalli (RGP)	0.3	0.0001	9000	1



नरेश भंडारी / NARESH BHANDARI  
 मुख्य अभियन्ता / Chief Engineer  
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
 विद्युत मंत्रालय / Ministry of Power  
 भारत सरकार / Govt. of India  
 नई दिल्ली / New Delhi-66

Annex - III

Tele : 23019746

TNG-68

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

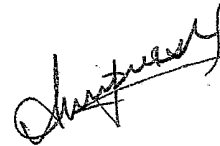
B/46937/Sigs 7(b)/1274

21 Jan 2019

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

**ERECTION OF 220KV LINE (26KM) WITH MULTI-CIRCUIT TOWERS FOR MAKING LILO OF  
EXISTING 220KV WADDEKOTHAPALLY-BHONGIR DC LINE (BOTH CIRCUITS) TO  
PROPOSED 400/200KV SS JANGAON IN JANGAON DISTRICT ON TURNKEY BASIS-PTCC  
PROPOSALS-FORWARDED-REGARDING**

1. Ref your letter No. Lr. No. CPT-320/SE-Const/F.No. 220kV MC line LILO to Jangaon/PTCC/D.No.1120/2018 dt 17 Sep 2018 (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

for information.