



सत्यमेव जयते

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-74/828-930

Date : 28.08.2019

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 400 kV QMDC line from 400 kV Telangana STPP (2X800 MW) Ramagundam to 400/220/132 kV Narsapur SS

**Reference:** i) BSNL letter no. SR-PTCC/STS/2266/07 dated 13.06.2019  
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRSTS201925 RTD dated 29.04.2019  
iii) Defence letter no. B/46937/Sigs 7(b)/1422 dated 12.06.2019

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 15,000 Ohm-cm and 20,000 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, Defence Authority have issued No Objection Certificate (NOC) (a copy enclosed as Annex-III).

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

**Encl.:** As above

राधेवन्दु प्रताप सिंह  
28.08.2019  
(R. P. Singh)  
Director, PTCC

Copy to:

- 1) GM (S&T), South Central Railway, Head Quarters Office, Signal & Telecomm Branch, Rail Nilayam, Secunderabad, Telangana – 500025 (Annex – II only)
- 2) Superintending Engineer, 400 kV Construction Circle, TSTRANSCO, Karimnagar - 505001

MIC



(2/4)

<b>A</b>	<b>Nacharam Exchange</b>				
A1	Exchange to Yawapur		IV	Less than	430 V
A2	Exchange to Begampet				
A3	Exchange to Anantagiripalli	3.6	0.0413	12500	516
A4	Exchange to Welur		IV	less than	430 V
<b>B</b>	<b>Tupron Exchange</b>				
B1	Exchange to Venkatapur				
B2	Exchange to Gaunpur				
B3	Exchange to Ravelli		IV	less than	430 V
B4	Exchange to Imampur				
<b>C</b>	<b>Manohara Bad</b>				
C1	Exchange to Kalkal				
C2	Exchange to Dandupalli		IV	less than	430 V
<b>D</b>	<b>Shivampet Exchange</b>				
	Exchange to A1-A2		IV	less than	430 V
	<b>Shabashpally Exchange</b>				
B1	Exchange to B1				
B2	Exchange to B2		IV	less than	430 V
<b>1</b>	<b>Karimnagar SSA</b>				
<b>1</b>	<b>Godavarikhani Exchange</b>				
G1	Exchange to P 28 - DP 2801				
G2	Exchange to P 41 - DP 4101				
G3	Exchange to P 72 to Dp 7201				
G4	Exchange to P 69 - DP 6901		IV	less than	430 V
<b>2</b>	<b>Tilaknagar Exchange</b>				
T1	Exchange to P 32 DP 3201				
T2	Exchange to P 21 DP 2101				
T3	Exchange to P 62 DP 6201				
T4	Exchange to P 54 DP 5401		IV	less than	430 V
<b>3</b>	<b>Powerhouse Colony Exchange</b>				
P1	Exchange to P 29 Dp 2901				
P2	Exchange to P24 DP 2401				
P3	Exchange to P 23 DP 2301				
P4	Exchange to P31 DP 3101		IV	less than	430 V

सचिव प्रताप सिंह  
 22/8/19  
 सचिव प्रताप सिंह  
 RAGHENDRA PRATAP SINGH  
 प्रिंसिपल/Principal  
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.

(3/4)

Ⓐ Jyothinagar Exchange						
J1	Exchange to P 23 DP 2301	}	IV	less	than	430 V
J2	Exchange to P 38 DP 3801					
J3	Exchange to P 52 DP 5201					
J4	Exchange to P 44 DP 4401					
J5	Exchange to P43 DP 4501					
Ⓑ Basanthnagar Exchange						
B1	Exchange to P 26 DP 2601	}	IV	less	than	430 V
B2	Exchange to P 22 DP 2201					
B3	Exchange to P 31 DP 3101					
B4	Exchange to P 24 DP 2401					
Ⓒ Kamanpur Exchange						
K1	Exchange to P 23 DP 2301	}				
K2	Exchange to P 25 DP 2501					
Ⓓ Peddapalli Exchange						
P1	Exchange to P 39 DP 3901	}	IV	less	than	430 V
P2	Exchange to P 30 DP 3001					
P3	Exchange to P 25 DP 2501					
P4	Exchange to P 32 DP 3201					
Ⓔ Julapalli Exchange						
J1	Exchange to P 21 DP 2101	}				
J2	Exchange to P 22 DP 2201					
Ⓕ Kothapally Exchange						
1	Exchange to Koramanadal Pillar	}	IV	less	than	430 V
2	Exchange to Velichala X Road Pillar					
3	Exchange to Velichala Village					
4	Exchange to Sangham Pillar					
5	Exchange to Kokkerakunta Village					
Ⓖ Nagunooru Exchange						
1	Exchange to Rukmapur	}	IV	less	than	430 V
2	Exchange to Katnapally					
Ⓗ Venkat Rao Pally Exchange						
Ⓐ	Exchange to Kothapeta	}	IV	less	than	430 V
Ⓑ	Exchange to Manwada					
Ⓒ	Exchange to Venkat rao pally bus stand					

सचिव प्रलय सिंह  
21/8/19

रघुवेंद्र प्रताप सिंह  
RAGHUVENDRA PRATAP SINGH  
निदेशक/Director  
केन्द्रीय विद्यु. प्राधिकरण/C.E.A.  
विद्युत मंत्रालय/Ministry of Power



## ANNEXURE - II

<b>Case No.:</b> TNG-74 <b>Name of the Power line:</b> 400 kV QMDC line from 400 KV Telangana STPP (2X800 MW) Ramagundam to 400/220/132 KV Narsapur SS		<b>Map Scale</b> : 1cm=500mts <b>Total Length</b> : 178.684 Km. <b>Soil Resistivity</b> : 15000, 20000 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/SCRTS201925 RTD dated 29.04.2019					
1	Manchiryal (MCI) – Peddampet (PPZ)	Outside IV consideration zone			0
2	Peddampet (PPZ) – Ramagundam (RDM)	0.5	0.00006	14200	1
3	Ramagundam (RDM) – Raghavapuram (RGPM)	6.8	0.0175	14000	245
4	Raghavapuram (RGPM) – Peddapalli (PDPL)	3.4	0.0055	13800	76
5	Peddapalli (PDPL) – Kolanur (KOLR)	0.3	0.00004	13800	1
6	Peddapalli (PDPL) – Sultanabad (STB)	0.3	0.00004	13800	1
7	Sultanabad (STB) – Karimnagar (KRMR)	Outside IV consideration zone			0
8	Karimnagar (KRMR) – Gangadhara (GDRA)	8.9	0.0090	10300	93
9	Masaipet (ME) – Manoharabad (MOB)	4.6	0.0025	14000	35
10	Manoharabad (MOB) – Medchal (MED)	2.7	0.0004	14000	6

राघवेंद्र प्रताप सिंह  
29-08-19

राघवेंद्र प्रताप सिंह  
RAGHVENDR PRATAP SINGH  
Director  
केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
विद्युत मंत्रालय / Ministry of Power  
भारत सरकार / Govt. of India  
नई दिल्ली / New Delhi-68

Tele : 23019746

Annex III  
TNG-74  
Directorate General of Signals  
Signals - 7  
General Staff Branch  
Integrated HQ of MoD, (Army)  
DHQ PO, New Delhi - 110011

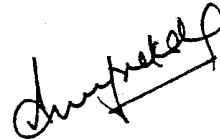
B/46937/Sigs 7(b)/1422

12 Jun 2019

The Chief Engineer  
Transmission Corporation of Telangana Limited  
400KV, TSTRANSCO  
Vidyut Soudha,  
Hyderabad - 500 082

**ERECTION OF 400KV QMDC LINE (178.684MS) FROM 400KV TELANGANA STPP (NTPC) SWITCHYARD TO 400KV NARSAPUR SUB-STATION-PTCC PROPOSALS-FORWARDED-APPROVAL-REG**

1. Ref your letter No CE/400kV/SE-I/400kV/D3-A2/F.PTCC:Line J-T/D.No. 738/18 dt 13 Dec 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.