



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-79 | 931A-C

Date : 29.08.2019

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 proposed 400 kV STPP Ramagundam to proposed 400/220 kV Ramadugu SS

**Reference:** i) BSNL letter no. SR-PTCC/STS/2296/03 dated 14.06.2019  
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRTS201932 RTD dated 29.05.2019  
iii) Defence letter no. B/46937/Sigs 7(b)/1420 dated 09.04.2019

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 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

राघवेंद्र प्रसाद सिंह  
(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) Chief Engineer, 400 kV, TSTRANSCO, Vidyut Soudha, Hyderabad - 500082

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CEA Case No. 2 TNG-79

Case No. SRPTCC/SAP/2296		SSA : Karimnagar				
Scale: 1 : 50000						
Name of Power line: 400 KV QMDC Line from 400 KV Telangana STPP(NTPC) Ramagundam .to 400/220 KV Ramadugu SS - LF comments .						
Length: 52.050 KMs		Type of Cable: PIJF				
Average SR value : 20,000 Ω-cm						
No	Name of telecom line	LOP in KMs	MC in Ohms	FC in Amps	IV in Volts	Safe Separation Distance
<b>Karimnagar SSA</b>						
1	Godavarikhani Exchange					
G1	Exchange to P 28 - DP 2801	}	IV	less than	430 V	
G2	Exchange to P 41 - DP 4101					
G3	Exchange to P 72 to Dp 7201					
G4	Exchange to P 69 - DP 6901					
<b>Tilaknagar Exchange</b>						
T1	Exchange to P 32 DP 3201	}	IV	less than	430 V	
T2	Exchange to P 21 DP 2101					
T3	Exchange to P 62 DP 6201					
T4	Exchange to P 54 DP 5401					
<b>Powerhouse Colony Exchange</b>						
P1	Exchange to P 29 Dp 2901	}	IV	less than	430 V	
P2	Exchange tto P24 DP 2401					
P3	Exchange to P 23 DP 2301					
P4	Exchange to P31 DP 3101					
<b>Jyothinagar Exchange</b>						
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 4301					
<b>Basanthnagar Exchange</b>						
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					
<b>Kamanpur Exchange</b>						
K1	Exchange to P 23 DP 2301	}	Out	of	Parallelism	
K2	Exchange to P 25 DP 2501					

23/11/22  
 RAGHUNATH PRASAD SINGH  
 Director  
 C.E.A.  
 केन्द्रीय विद्युत प्राधिकरण / Ministry of Power  
 विद्युत मंत्रालय / Govt. of India  
 नया दिल्ली / New Delhi-55

	<b>Peddapalli Exchange</b>				
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				
	<b>Julapalli Exchange</b>				
J1	Exchange to P 21 DP 2101	}	IV	less	than 430 V
J2	Exchange to P 22 DP 2201				
	<b>Ramadugu Exchange</b>				
1	Exchange to Pochamma Temple	}	Out	of	Parallelism
2	Exchange to Andhra Bank pillar				
	<b>Gopalraopeta Exchange</b>				
1	Exchange to Gopalraopeta Old TE	}	IV	less	than 430 V
2	Exchange to Petrol Pump				
3	Exchange to Gopalraopet Bus Stand				
4	Exchange to Andhra Bank				

24/8  
 राघवेंद्र प्रताप सिंह  
 RAGHVENDR PRATAP SINGH  
 Director / C.E.A.  
 केंद्रीय विद्युत मंत्रालय / Ministry of Power  
 नई दिल्ली / Govt. of India  
 नई दिल्ली / New Delhi-68

**ANNEXURE - II**

<b>Case No.:</b> TNG-79 <b>Name of the Power line:</b> 400 kV QMDC line from proposed 400 kV STPP Ramagundam to proposed 400/220 kV Ramadugu SS		<b>Map Scale</b> : 1cm=500mts <b>Total Length</b> : 52.050 Km. <b>Soil Resistivity</b> : 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.

<b>South Central Railway</b> letter no. SG.85/4/3/PTCC/SCRTS201932 RTD dated 29.05.2019					
1	Peddampet (PPZ) – Ramagundam (RGM)	0.5	0.00006	13900	1
2	Ramagundam (RGM) – Raghavapuram (RGPM)	10	0.0210	10500	221
3	Raghavapuram (RGPM) – Peddapalli (PDPL)	2	0.0009	10000	9
4	Peddapalli (PDPL) – Kolanur (KOLR)	OUT OF PARALLELISM			0
5	Peddapalli (PDPL) – Sulthanabad (STB)				0

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 राघवेंद्र प्रताप सिंह  
 RAGHVENDRA PRATAAP SINGH  
 निदेशक/Director  
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.  
 विद्युत मंत्रालय/Ministry of Power  
 भारत सरकार/Govt. of India  
 नई दिल्ली/New Delhi-66

Annex-III TNA-79

Tele : 23019746

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

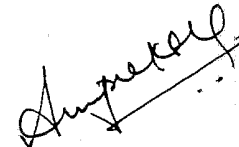
B/46937/Sigs 7(b)/1420

09 Apr 2019

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

**ERECTION OF 400KV QUAD MOOSE DC LINE FROM TELANGANA STPP (NTPC) TO  
400/220KV RAMADUGU SUB-STATION OF LENGTH 52.05KMS-PTCC PROPOSALS-  
FORWARDED-REG**

1. Ref your letter No CE/400kV/SE-I/400kV/D2-A3/F.PTCC:RMDG-L/D.No. 861/18 dt 08 Jan 2019 (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

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**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.