



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-44 / 2151-53

Date : 27.09.2018

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 TMDC line from 400/220/11 kV Yellampalli sub-station to 220/11 kV Medigadda sub-station in Karimnagar District.

**Reference:** i) BSNL letter no. SR-PTCC/STS-2023/08 dated 10.09.2018  
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRSTS201807 RTD dated 31.01.2018  
iii) Defense letter no. B/46937/Sigs 7(b)/957 dated 06.03.2018

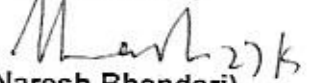
Sir,

The instant PTCC proposal has been examined. The low frequency induction on telecom cables of BSNL, and Block and Telecom circuits of South Central Railway with respect to details furnished vide above reference has been computed. The Soil Resistivity (SR) value has been taken as 25,000 Ohm-cm, as intimated by the Power authority (TSTransco). The voltages likely to be induced on paralleling telecom cables of BSNL and 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

Yours faithfully,

  
(Naresh Bhandari)  
Chief Engineer

Copy to:

- GM(S&T), South Central Railway, Head Quarters Office, Signal & Telecomm Branch, Rail Nilayam, Secunderabad – 500025 (Annexure II only)
- Executive Director, Lift Irrigation Schemes, TSTRANSCO, Vidyut Soudha, Hyderabad-500082

M/C



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Power Communication Development Division

नंबर / सीईए / पीसीडी / पीटीसीसी / टीएनजी-44 / 2151-53

दिनांक: 27/09.2018

डिवीजनल इंजीनियर टेलीकॉम (पीटीसीसी),  
क्यू ए एंड इन्स्पेक्शन (टी एंड डी) सर्कल, बीएसएनएल,  
1 तल, राज भवन एक्सचेंज,  
नं 26, सरदार पटेल रोड,  
गुडंडी, चेन्नई -600032

विषय: पीटीसीसी प्रस्ताव - 220 केवी TMDC लाइन 400/220/11 केवी येल्मपल्ली उपकेन्द्र से 220/11 केवी मेदिगहा उपकेन्द्र (करीमनगर जिला) तक - के संबंध में प्रेरित वोल्टेज की गणना |

- संदर्भ: i) बीएसएनएल पत्र संख्या SR-PTCC/STS-2023/08 दिनांक 10.09.2018  
ii) दक्षिण मध्य रेलवे पत्र संख्या SG.85/4/3/PTCC/SCRSTS201807 RTD दिनांक 31.01.2018  
iii) रक्षा सन्दर्भ सं. B/46937/Sigs 7(b)/957 दिनांक 06.03.2018

महोदय,

तत्काल पीटीसीसी प्रस्ताव की जांच की गई है। उपर्युक्त संदर्भों में दिए गए विवरण के अनुसार, दूरसंचार एवं रेलवे पर निम्न आवृत्ति प्रेरण (Low frequency induction) की जांच की गई है। औसत मृदा प्रतिरोधकता 25,000 ओम-सेमी ली गयी है। सिंगल लाइन to ग्राउंड फाल्ट अवस्था में समानांतर बीएसएनएल केबलों एवं रेलवे सर्किटों पर प्रेरित वोल्टेज (Induced Voltage) क्रमशः अनुलग्नक - I एवं II में संलग्न है। स्क्रीनिंग कारक (screening factor) का मान यथानुरूप लिया गया है। रक्षा प्राधिकरण ने उपरोक्त सन्दर्भ (iii) के द्वारा अनापत्ति प्रमाण पत्र (No objection certificate) जारी किया है। (अनुलग्नक - III में प्रतिलिपि संलग्न)।

अतः आपसे अनुरोध है कि ट्रांसमिशन लाइन के लिए पीटीसीसी रूट अनुमोदन के संबंध में आगे की आवश्यक कार्रवाई करने की कृपा करें।

संलग्न: उपरोक्त अनुसार

आपका आभारी

(नरेश भंडारी)

मुख्य अभियन्ता

कॉपी:

- i) महाप्रबंधक (सिवट्ट), मुख्यालय कार्यालय, सिग्रल एवं दूरसंचार शाखा, रेल निलयम, सिकंदराबाद - 500025 (अनुलग्नक - II केवल)  
ii) कार्यकारी निदेशक, LIFT IRRIGATION SCHEMES, TSTRANSCO, विद्युत सौधा, हैदराबाद -500082

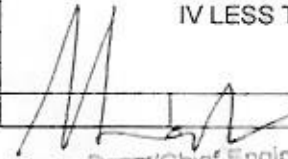
एन आर पी सी परिसर, कटवारिया सराय, नई दिल्ली-110016 टेलीफैक्स: 011-26565214 ईमेल: nbnareshbhandari@gmail.com

NRPC Building, Katwaria Sarai, New Delhi-110016 Telefax: 011-26565214 Email: nbnareshbhandari@gmail.com Website: www.cea.nic.in

## ANNEXURE - I

<b>Case No.: TNG-44</b>		<b>Map Scale : 1cm=500mts</b>			
<b>Name of the Power line: 220 kV TMDC line from 400/220/11 kV Yellampalli sub-station to 220/11 kV Medigadda sub-station in Karimnagar District.</b>		<b>Total Length : 75.60 Km.</b>			
		<b>Average Soil Resistivity: 25000 ohm-cm</b>			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

<b>BSNL letter no. – SR-PTCC/STS-2023/08 dated 10.09.2018</b>					
<b>G</b>	<b>Godavarikhani Exchange</b>				
G1	Exchange to P28 – DP 2801	IV LESS THAN 430 V			
G2	Exchange to P41 – DP 4101				
G3	Exchange to P72 – DP 7201				
G4	Exchange to P69 – DP 6901				
<b>T</b>	<b>Tilaknagar Exchange</b>				
T1	Exchange to P32 – DP 3201	IV LESS THAN 430 V			
T2	Exchange to P21 – DP 2101				
T3	Exchange to P62 – DP 6201				
T4	Exchange to P54 – DP 5401				
<b>P</b>	<b>Powerhouse Colony Exchange</b>				
P1	Exchange to P29 – DP 2901	IV LESS THAN 430 V			
P2	Exchange to P24 – DP 2401				
P3	Exchange to P23 – DP 2301				
P4	Exchange to P31 – DP 3101				
<b>J</b>	<b>Jyothinagar Exchange</b>				
J1	Exchange to P23 – DP 2301	1.4	0.0466	8000	373
J2	Exchange to P38 – DP 3801	IV LESS THAN 430 V			
J3	Exchange to P52 – DP 5201				
J4	Exchange to P44 – DP 4401				
J5	Exchange to P43 – DP 4301				
<b>F</b>	<b>FCI Exchange</b>				
F1	Exchange to P31 – DP 3101	IV LESS THAN 430 V			
F2	Exchange to P21A – DP 21101				
F3	Exchange to P22 – DP 2201				
F4	Exchange to P21 – DP 2101				
<b>R</b>	<b>Ramagundam Exchange</b>				
R1	Exchange to (Power Line) to DP 2901	IV LESS THAN 430 V			
R2	Exchange to P28 – DP 2801				
R3	Exchange to P26 – DP 2601				
R4	Exchange to P21 – DP 2101				
<b>M</b>	<b>Manthani Exchange</b>				
M1	Exchange to P71 – DP 7101	IV LESS THAN 430 V			
M2	Exchange to P61 – DP 6101				
M3	Exchange to P41 – DP 4101				
M4	Exchange to P42 – DP 4201				
M5	Exchange to P43 – DP 4301				

  
 मुख्य अभियन्ता/Chief Engineer  
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.  
 सेवा भवन, आर.डी. पुरम,  
 सेवा भवन, आर.डी. पुरम,  
 नई दिल्ली-110066



Tele : 23019746

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

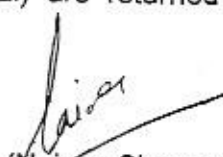
B/46937/Sigs 7(b)/957/

06 Mar 2018

Executive Director  
Lift Irrigation Schemes,  
TSTRANSCO,  
Vidyut soudha,  
Hyderabad - 500082

**ERECTION OF 220 KV TMDC LINE FROM 400/220/11KV  
YELLAMPALLI SUB-STATION TO 220/11KV MEDIGADDA  
SUBSTATION IN KARIMNAGAR DISTRICT**

1. Reference your letter No ED/LIS/SE(LI)/DE1(LI)/ADE4/PTCC/ 220KV/ Medigadda/D.No. 56/2018/dt 17 Jan 2018..
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

  
(Nainee Sharma)  
Lt Col  
GSO 1 (Comn)  
for SO-in-C

**Copy to :-**

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

- For information.