



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/KNK-921/953-55

Date :17.09.2019

DET (PTCC),  
QA & Inspection (T&D) Circle, BSNL  
1 Floor, Raj Bhavan Exchange,  
No. 26, Sardar Patel Road,  
Guindy, Chennai – 600032

**Subject:** Induced Voltage Calculation in respect of PTCC proposal for 220 kV DC LILO line on MC towers from existing 220 kV Ghataprabha – Chikkodi DC line to proposed 220/110 kV S/S at Kabbur (Mugalkhod)

**Reference:** (i) BSNL letter no. SR-PTCC/SKT-2463/04 dated 16.08.2019  
(ii) South Western Railway letter no. SG/SWR/PTCC/F-2915/1905/54 dated 21.06.2019  
(iii) Defense letter no. B/46937/Sigs 7(b)/1652 dated 22.07.2019

Sir,

The instant PTCC proposal has been examined. Low frequency induction on telecom circuits of BSNL and Railway with respect to details furnished vide above references has been computed. The Soil Resistivity (SR) value has been taken as 30,000 Ohm-cm. The voltages likely to be induced on paralleling telecom cables of BSNL and Block & Telecom circuits of South Western Railway under Single Line to Ground fault condition have been computed and are enclosed as 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

*(Signature)*  
21/09/19  
(R.P. Singh)  
Director, PTCC

**Copy to:**

1. PCSTE, South Western Railway, 1<sup>st</sup> Floor, West Block, Rail Soudha, Gadag Road, Hubli, Karnataka – 580020 (Annex – II only)
2. Chief Engineer Electricity, KPTCL, State Load Despatch Centre, No. 28, R.C. Cross Road, Bengaluru - 560009

*MIC*

Annex-I

CEA Case No: KNK-921

Case No:SKT-2463		SSA: Belagavi			
Name of the power line		Proposed 220 KV Double circuit LILO lines on MC Towers from existing 220 KV Ghataprabha - Chikkodi DC line to the proposed 220/110 KV SS at Kabbur (Mugalkhod) in Chikkodi Taluk Belagavi District.			
Length:	2.510	Kms			
Soil Resistivity: 30000 $\Omega$ -cm		Type of BSNL Cable: PIJF cable			
Sl.No.	Name of Telecom line	LOP in KMs	MC in Ohms	FC in Amps	IV in Volts
I	A) KABBUR Exge UG cables				
1	Exge to Mahalingpur Road (A-A1)	} IV	LESS	THAN	430 V
2	Exge to Towards Chikodi(A-A2)				
3	Exge to Local Kabbur(A-A3)				
4	Exge to Local Kabbur(A-A4)				

21/09/19 14:58  
 राघवेंद्र प्रताप सिंह  
 RAGHVENDRA PRATAP SINGH  
 निदेशक / Director  
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
 विद्युत मंत्रालय / Ministry of Power  
 भारत सरकार / Govt. of India  
 नई दिल्ली / New Delhi-65

## ANNEXURE - II

<b>Case No.:</b> KNK-921					
<b>Name of the Power line:</b> 220 kV DC LILO line on MC towers from existing 220 kV Ghataprabha – Chikkodi DC line to proposed 220/110 kV S/S at Kabbur (Mugalkhod)		<b>Map Scale</b> : -1cm=500mts <b>Total Length</b> : 2.510 km <b>Soil Resistivity</b> : 30,000 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 Western Railway</b> letter no. SG/SWR/PTCC/F-2915/1905/54 dated 21.06.2019					
1	Chikodi Road - Raybog	0.2	0.0003	10000	3
2	Ghataprabha – Chikodi Road*	2.2	0.0144	9000	130

\* Not given in Railway Annexure, but observed from Topo Map

राघवेंद्र प्रताप सिंह  
18.09.19  
RAGHVENDR PRATAP SINGH  
निर्देशक/DIRECTOR  
केन्द्रीय विद्युत प्रणाली/ C.E.S.  
विद्युत मंत्रालय/Ministry of Power  
भारत  
नई दिल्ली

Annex-III KNK-921

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)/1652

22 Jul 2019

Karnataka Power Transmission Corporation Limited  
Office of the Chief Engineer Electricity,  
State Load Despatch Centre,  
# 28, R.C. Cross Road,  
Bengaluru - 560 009

**PROPOSED 220KV DOUBLE CIRCUIT LILO LINES ON MC TOWERS FROM EXISTING 220KV  
GHATAPRABHA-CHIKKODI DC LINE TO THE PROPOSED 220/110KV SS AT KABBUR  
[MUGALKHOD] IN CHIKKODI TALUK BELAGAVI DISTRICT**

1. Ref your letter No CEE/SLDC/ PTCC/F-2915/-2339-47 dt 21 May 2019 (copy att).
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.

  
(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.