



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-904/470-472

Date:10.04.2019

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

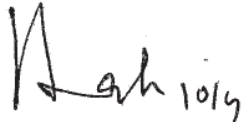
Subject: Induced Voltage Calculation in respect of PTCC proposal for 220 kV DC LILO line from existing 220 kV Shimoga – Antharasanahalli B1-B2 line near Bettadahalli village in b/w Towers 134 & 135 to the proposed RNS Pump House – II SS in Bettada Tavarekere village

Reference: (i) BSNL letter no. SR-PTCC/SKT-2156/6 dated 20.12.2018
(ii) South Western Railway letter no. SG/SWR/PTCC/F-2776/1780/28 dated 23.07.2018
(iii) Defense letter no. B/46937/Sigs 7(b)/1182 dated 14.09.2018

Sir,
The instant PTCC proposal has been examined. Low frequency induction on telecom cables of BSNL and Block & Telecom circuits of South Western 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

m/c


(Naresh Bhandari)
Chief Engineer

Copy to:

- 1) PCSTE, South Western Railway, Office of the Principal Chief Signal & Telecom Engineer, 1st Floor, West Block, Rail Soudha, Gadag Road, Hubli – 580020 (Annex – II only)
- 2) Chief Engineer Electricity, KPTCL, State Load Despatch Centre, No. 28, R.C. Cross Road, Bengaluru - 560009

CEA Case No. : KNK-904					
Case No. SKT-2156		SSA: Chickmangalore			
Name of PWR line: 220 KV LILO (DC) line from existing 220 KV Shimoga-Antharasanahalli (B1-B2) lines near Bettadahalli Village in between Tower No.134 & 135 to the proposed 220 KV RNS Pump House-II SS in Bettada Tavarekere Village, Tarikere Taluk, Chikkamangaluru District					
Length:	2.957 Kms	Map Scale	1 cm = 500 mts		
SR value : 30,000 ohm cms					
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	Doranaluru Exge UG cables				
1	Exge to Nandi Hosahalli A-A 1	}	}	}	}
2	Exge to Bairapura A-A 2				
3	Exge to Sunnahalli A-A 3				
4	Exge to Nandi A-A 4				
OUT OF PARALLELISM					
II C	Kudluru Exge UG cables				
1	Exge to Koratikere C-C1	}	}	}	}
2	Exge to Pundanahalli C-C2				
3	Exge to Nagavangala C-C3				
4	Exge to Veerapura Hosur C-C4				
IV LESS THAN 430 V					
III F	Hunsagatta Exge UG cables				
1	Exge to Medihalli F-F 1	}	}	}	}
2	Exge to Narasipura F-F 2				
3	Exge to Karanagatta F-F 3				
4	Exge to Hosahalli F-F 4				
OUT OF PARALLELISM					
IV LESS THAN 430 V					
IV. G	Sokke Exge UG cables				
1	Exge to Doddabokkikere G-G1	}	}	}	}
2	Exge to Shanaboganahalli G-G2				
3	Exge to Vaderahalli G-G3				
4	Exge to Baggavalli-1 G-G4				
5	Exge to Gondedahalli G-G5				
6	Exge to Kallashettyhalli G-G6				
IV LESS THAN 430 V					
		नरेश भंडारी / NARESH BHANDARI मुख्य अभियंता / Chief Engineer केन्द्रीय विद्युत प्राधिकरण / C.E.A.			


	7 Exge to Rangapura G-G7	}	IV	LESS	THAN	430 V
	8 Exge to Baggavalli-2 G-G8					
	9 Exge to Sokke G-G9					
V H	Korannahalli Exge UG cables					
	1 Exge to Bettadavarkere H-H1	}	IV	LESS	THAN	430 V
	2 Exge to Chattanahalli H-H2					
	3 Exge to Bettadahalli H-H3					
	4 Exge to Shivapura H-H4					
VI. I	Tarikere Exge UG cables					
	1 Exge to Galihalli cross I-I 1	}				
	2 Exge to Haliyur I-I 2					
	3 Exge to Lakkavalli cross I-I 3					
	4 Exge to MESCOM office I-I 4					
	5 Exge to Nagappa Colony I-I 5					
	6 Exge to Ittige cross I-I 6					
	7 Exge to Tudipete I-I 7					
					OUT OF PARALLELISM	
VII. E	Amruthapura Exge UG cables					
	1 Exge to Samatala E-E1	}	IV	LESS	THAN	430 V
	2 Exge to Neralakere E-E2					
	3 Exge to Miralenaahalli E-E3					
	4 Exge to Nagenahalli E-E4	}				
	5 Exge to Nagenahalli E-E5					
	6 Exge to Hadikere E-E6					
	7 Exge to Kuntinamadu E-E7					
	8 Exge to Vittlapura E-E8					

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

ANNEXURE – II

Case No.: KNK-904					
Name of the Power line: 220 kV DC LILO line from existing 220 kV Shimoga – Antharasanahalli B1-B2 line near Bettadahalli village in b/w Towers 134 & 135 to the proposed RNS Pump House – II SS in Bettada Tavarekere village		Map Scale : 1cm=500mts Total Length : 2.957 km Soil Resistivity : 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.

South Western Railway letter no. SG/SWR/PTCC/F-2776/1780/28 dated 23.07.2018					
1	Birur (RRB) – Sivapur (SPV)	OUT OF PARALLELISM			0
2	Sivapur (SPV) – Tarikere (TKE)	2.7	0.0039	10000	39
3	Tarikere (TKE) – Masarahalli (MSS)	OUTSIDE IV CALCULATION CONSIDERATION ZONE			0


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

Tele : 23019746

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

B/46937/Sigs 7(b)/1182/

14 Sep 2018

Chief Engineer (Electricity)
Karnataka Power Transmission Corporation Ltd
State Load Despatch Centre,
28, R.C. Cross Road
Bengaluru - 560009

**PROPOSED 220 KV DC LILO LINE FROM EXISTING 220 KV SHIMOGA-
ANTHARASANAHALI (B1-B2) LINES NEAR BETTADAHALLI VILLAGE IN
BETWEEN TOWER NO 134 & 135 TO THE PROPOSED 220 KV RNS PUMP HOUSE-II
SS IN BETTADA TAVEREKERE VILLAGE, TARIKERE TALUK,
CHIKKAMANGALURU DISTRICT**

1. Ref your letter No CEE/SLDC/PTCC/220 KV/F-2776/6048-55 dt 29 Jun 2018 (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.