



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-907/605-07

Date:23/05.2019

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 400 kV Double LILO line from existing 400 kV Nelamangala – Hoody D/C line to proposed 400/220 kV S/S at Devanahalli Hardware Park

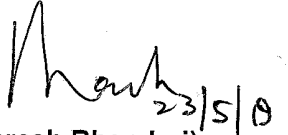
Reference: (i) BSNL letter no. SR-PTCC/SKT-2191/2 dated 27.09.2018
(ii) South Western Railway letter no. SG/SWR/PTCC/F-2782/1786/15 dated 06.12.2018
(iii) Defense letter no. B/46937/Sigs 7(b)/1247 dated 20.11.2018

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 25,000 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, 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-907

Annex-I

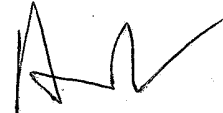
Case No. SKT-2191		SSA: Bengaluru Telecom District			
Name of the power line		400 KV Double LILO line from existing 400 KV Nelamangala-Hoody DC line to proposed 400/220 KV SS at Devanahalli Hardware Park in Bangalore Rural District			
Length:	0.963				
SR value : 25000 ohm cms		Map scale : 1cm = 500 mts			
Sl.No.	Name of Telecom line	LOP in KMs	MC in Ohms	FC in Amps	IV in Volts
I. BG					
Bagalur Exge UG cables					
1	Exge to Maralakunte BG-BG 1	- IV LESS THAN 430V			
2	Exge to Chokkanahalli BG-BG 2	} OUT OF PARALLELISM			
3	Exge to Mitganahalli BG-BG3				
4	Exge to Razak Sahibpalya BG-BG4				
5	Exge to Kadayarappannahalli BG-BG5	0.9	0.0879	15000	569
II. CKJ					
Chikkajala Exge UG cables					
1	Exge to Vidyanagar croos- Bilmaranahalli CK-CK'-CK 1	} IV LESS THAN 430V			
2	Exge to Vidyanagar croos- Bettahalasuni CK-CK'-CK 2				
3	Exge to Vidyanagar croos- Hunasamaranahalli CK-CK'-CK 3				
4	Exge to Bainahalli CK-CK 4	- OUT OF PARALLELISM			
5	Exge to Sadahalli-Hegganahalli CK-CK 5	} IV LESS THAN 430V			
6	Exge to Tarabanahalli CK-CK 6				
7	Exge to Misiganahalli CK-CK 7				
8	Exge to Doddajala CK-CK 8				


 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-907					
Name of the Power line: 400 kV Double LILO line from existing 400 kV Nelamangala – Hoody D/C line to proposed 400/220 kV S/S at Devanahalli Hardware Park		Map Scale : 1cm=500mts Total Length : 0.963 km Soil Resistivity : 25,000 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-2782/1786/15 dated 06.12.2018					
1	Channasandra (CSDR) – Yelahanka (YNK)	0.35	0.0001	15000	2
2	Yelahanka (YNK) – Devanahalli (DHL)	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

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

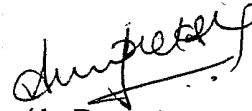
B/46937/Sigs 7(b)/1247/

20 Nov 2018

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

**PROPOSED 400KV DOUBLE LILO LINE FROM EXISTING 400KV NELAMANGALA-
HOODY DC LINE TO PROPOSED 400/220KV SS AT DEVANAHALI HARDWARE
PARK IN BANGALORE RURAL DISTRICT**

1. Ref your letter No CEE/SLDC/ PTCC/F-2782/-8878-86 dt 14 Aug 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.