भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

पावर कम्युनिकेशन डवलप्मेंट प्रभाग

Power Communication Development Division

No.:CEA/PCD/PTCC/KNK-896/306-308

Date:15.03.2019

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 2 no.s 220 kV DC lines from existing 220/66/11 kV KPTCL SS at Puttenahalli (D.G. Plant) Yelahanka to proposed KPCL 220 kV Gas Power Plant at Puttenahalli in Yelahanka**

Reference:
(i) BSNL letter no. SR-PTCC/SKT-2069/06 dated 16.11.2018
(ii) South Western Railway letter no. SG/SWR/PTCC/F-2743/1750 dated 27.07.2018
(iii) Defense letter no. B/46937/Sigs 7(b)/1053 dated 14.05.2018

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, 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

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

Case No.: KNK-896

Name of the Power line: 2 no.s 220 kV DC lines from existing 220/66/11 kV KPTCL SS at Puttenahalli (D.G. Plant) Yelahanka to proposed KPCL 220 kV Gas Power Plant at Puttenahalli in Yelahanka

Map Scale : 1cm=500mts
Total Length : 0.223 km, 0.356 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.
	BSNL letter no. – SR-PTCC/SKT-2069/06 dated 16.11.2018				
I	**SAHAKARNAGAR (SHNR) Exge UG cables**				
1	Exge to Bellay Road (SH-SH1)	OUT OF PARALLELISM			
2	Exge to Kodigehalli (SH-SH2)				
3	Exge to Towards Railway Tracks (SH-SH3)				
II	**AMRUTHALLI (AH) Exge UG cables**				
1	Exge to Amruthalli Main Road (AH-AH1)	IV LESS THAN 430 V			
2	Exge to Towards NH7 (AH-AH2)	OUT OF PARALLELISM			
III	**DASARAHALLI (DE) Exge UG cables**				
1	Exge to Dasarahalli Main Road (DE-DE1)	OUT OF PARALLELISM			
2	Exge to Coffee Board side (DE-DE2)				
3	Exge to Bhuvaneshwari Nagar (DE-DE3)				
IV	**ASTRAZENLLA DLC (AR) Exge UG cables**				
1	Exge to Godrej Housing Complex (AR-AR1)	IV LESS THAN 430 V			
2	Exge to Kempapura (AR-AR2)				
V	**YELAHANKA (YNK) Exge UG cables**				
1	Exge to Judicil L/O (YN-YN1)	IV LESS THAN 430 V			
2	Exge to Maruthiwagar RSU (YN-YN2)				
3	Exge to Attur L/O (YN-YN3)				
4	Exge to Anantpur (YN-YN4)				
5	Exge to Heritage DLC (YN-YN5)				
VI	**RAJANKUNTE (RJN) Exge UG cables**				
1	Exge to Marasandra (RJN-RJN1)	OUT OF PARALLELISM			
2	Exge to Yelahanka (RJN-RJN2)				

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-896 **Name of the Power line**: 2 no.s 220 kV DC lines from existing 220/66/11 kV KPTCL SS at Puttenahalli (D.G. Plant) Yelahanka to proposed KPCL 220 kV Gas Power Plant at Puttenahalli in Yelahanka	**Map Scale** : 1cm=500mts **Total Length** : 0.223 km, 0.356 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-2743/1750 dated 27.07.2018				
1	Yelahanka (YNK) – Rajankunte (RNN)	0.1	0.0013	10000	13

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

Annex-III

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)/1053 /

14 May 2018

Chief Engineer (Electricity)
State Load & Despatch Centre,
#28, R.C. Cross Road,
Bengaluru - 560009

PROPOSED 220KV DC LINE FROM EXISTING 220/66/11KV KPTCL SS AT PUTTENAHALLI (D.G. ;PLANT) YELAHANKA ATO PROPOSED KP[CL 220KV GAS POWER PLANT AT PUTTENAHALLI IN YELAHANKA BANGALORE URBAN DIST.

1. Reference your letter No. CEE/SLDC/PTCC/F-2743/26047-54 DT 17 Mar 2018.

2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.

3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(AV Umdekar)
Lt Col
GSO 1 (Comn)
for SO-in-C

Copy to :-

Chief Engineer (PTCC),
Chief Electrical authority, NREB Complex,
18A, Shaheed Jeet Singh Marg,
Block A, Katwaria Sarai, New Delhi – 110016