



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-914/1045-1047

Date :28.10.2019

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 regularization of existing 220 kV Nelamangala – Peenya 1&2 DC line and 3&4 DC line between 400/220 kV SS at Nelamangala and 220/66/11 kV SS at Peenya

Reference: (i) BSNL letter no. SR-PTCC/SKT-2354/4 dated 29.05.2019
(ii) South Western Railway letter no. SG/SWR/PTCC/F-2829/1834/46 dated 19.07.2019
(iii) Defense letter no. B/46937/Sigs 7(b)/1402 dated 02.04.2019

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 reference 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

उपेन्द्र कुमार
30/10/19
(Upendra Kumar)
Chief Engineer

Copy to:

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

MIC

Case No. SKT-2354		SSA: BGTD			
Name of the power line: Regularisation of existing 220 KV Nelamangala-Peenya 1 & 2 line and 3 & 4 DC line between 400/220 KV SS at Nelamangala and 220/66/11 KV SS at Peenya in Bangalore					
Length:	17.00 Kms & 16.2 Kms				
	Type of BSNL cable: PIJF cable				
SR value:	30000 ohm cms				
Sl.No.	Name of Telecom line	LOP in KMs	MC in Ohms	FC in Amps	IV in Volts
I. NA Nelamangala Exge UG cables					
1	Exge to Jakkasandra NA-NA 1	IV	LESS	THAN	430 V
2	Exge to Guragalapalya NA-NA 2	}	OUT OF PARALLELISM		
3	Exge to Byatappana palya NA-NA 3				
4	Exge to Bettanagere NA-NA 4				
5	Exge to Binnamangala NA-NA 5				
II. SD Sandekuppe Exge UG cables					
1	Exge to Mantankurchi SD-SD1	}	IV LESS THAN 430 V		
2	Exge to Hullegaudanahalli SD-SD2				
3	Exge to Ravutanahalli SD-SD3				
4	Exge to Mallasandra SD-SD4				
III. KDB Kadabagere Exge UG cables					
1	Exge to Gittanahalli KDB-KDB 1	}	IV LESS THAN 430 V		
2	Exge to Bayandahalli KDB-KDB 2				
3	Exge to Ravumanahalli KDB-KDB 3				
IV. PEN Peenya Exge UG cables					
1	Exge to Madanayakanahalli PEN-PEN1	}	IV LESS THAN 430 V		
2	Exge to Chikkabanavara Mn.road PEN-PEN2				
V. LG Laggere Exge UG cables					
1	Exge to Nelagadarahalli LG-LG 1	4.9	0.2091	7000	1464
VI. JH Jalahalli Exge UG cables					
1	Exge to Gokul Extn. JH-JH1	OUT OF PARALLELISM			
2	Exge to Kammagondanahalli JH-JH2	IV	LESS	THAN	430 V
3	Exge to Ramachandrapuram JH-JH3	OUT OF PARALLELISM			
VII. AB Abbigere Exge RSU (AB) UG cables					
1	Exge to Kammagondanahalli AB-AB1	}	IV LESS THAN 430 V		
2	Exge to Visveswaraiah L/O AB-AB2				
3	Exge to Lakshmipura AB-AB3				

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 Chief Engineer
 Central Power Commission/C.E.A.
 विद्युत मंत्रालय/Ministry of Power
 भारत सरकार/Govt. of India
 नई दिल्ली/New Delhi

P.T.O. 1/2

VIII. BC	Best county Exge UG cables				
1	Exge to Lakshmipura BC-BC1	IV	LESS	THAN	430V
2	Exge to Sambaram college BC-BC2	OUT	OF	PARALLELISM	
IX. BN	Basveshwara Nagar Exge UG cables				
1	Exge to Shahkaramutt BN-BN 1	}	IV	LESS	THAN 430V
2	Exge to Manjunath Nagar BN-BN 2				
X. NL	Nandini L/O Exge (NLO)				
1	Exge to Kurubarahalli NL-NL1	IV	LESS	THAN	430V
2	Exge to Modi Hosp. road NL-NL2	OUT	OF	PARALLELISM	
3	Exge to Chord road NL-NL3	IV	LESS	THAN	430V
XI. RA	Rajaji Nagar Exge UG cables				
1	Exge to Rly O/L RA-RA 1	}	OUT	OF	PARALLELISM
2	Exge to Gopalapura RA-RA 2				
3	Exge to Chord Road RA-RA 3				
4	Exge to Raj 64th Cross RA-RA 4				
XII. VN	Vijayanagar Exge UG cables				
1	Exge to Manjunathnagar VN-VN 1	}	IV	LESS	THAN 430 V
2	Exge to Modi Hosp. road VN-VN 2				
3	Exge to Saneguranaahalli VN-VN 3				
4	Exge to Mudalapalya VN-VN 4				
5	Exge to RPC L/O VN-VN 5				
XIII AN	Anjananagar Exge UG cables				
1	Exge to Beggar colony AN-AN 1	}	IV	LESS	THAN 430 V
2	Exge to Gollahatti AN-AN 2				
3	Exge to Ullal AN-AN 3				
XIV NG	Nagarabhavi Exge UG cables				
1	Exge to Kottigepalya NG-NG 1	}	OUT	OF	PARALLELISM
2	Exge to Magadi Road NG-NG 2				
3	Exge to Ullal cross NG-NG 3				
4	Exge to Nagabhavi 2nd stage NG-NG 4				
XV CL	Chandra L/O (CLO) Exge UG cables				
1	Exge to BTS Garage CL-CL1	IV	LESS	THAN	430 V
2	Exge to Canara Bank CL-CL2	}	OUT	OF	PARALLELISM
3	Exge to Nagarbhavi Circle CL-CL3				
XVI CT	CTSD Exge UG cables				
1	Exge to Bavesnaranagar CT-CT1	}	IV	LESS	THAN 430 V
2	Exge to Sunkanahalli CT-CT2				

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30/10/15

मुख्य अभियंता/Chief Engineer
केन्द्रीय विद्युत प्राधिकरण/C.E.A.
विद्युत मंत्रालय/Ministry of Power
भारत सरकार/Govt. of India
नई दिल्ली/New Delhi

ANNEXURE – II

Case No.: KNK-914					
Name of the Power line: Regularization of existing 220 kV Nelamangala – Peenya 1&2 DC line and 3&4 DC line between 400/220 kV SS at Nelamangala and 220/66/11 kV SS at Peenya		Map Scale : 1cm=500mts Total Length : 17 & 16.2 kms 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-2829/1834/46 dated 19.07.2019					
1	NMGA – BAW	11.9	0.0043	7500	32
2	BAW – GHL	11.9	0.0028	7500	21
3	GHL – DBL	OUT OF PARALLELISM			0
4	BAW – YPR Bypass	2.75	0.0011	9000	10
5	YPR Bypass – LOGH	OUT OF PARALLELISM			0
6	LOGH – YNK				0
7	YPR – SBC				0
8	SBC – NYH	1.8	0.0002	9000	2

3553/19
30/07/19
मुख्य अभियंता/Chief Engineer
राष्ट्रीय विद्युत प्राधिकरण/C.E.A.
विद्युत मंत्रालय/Ministry of Power
भारत सरकार/Govt. of India
नई दिल्ली/New Delhi

Tele : 23019746

Annex - III
KNK-914

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

B/46937/Sigs 7(b)/1402

- Apr 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 FOR REGULARISATION OF EXISTING 220KV NELAMANGALA-PEENYA 1&2 DC
LINE AND 3&4 DC LINE BETWEEN 400/220KV SS AT NELAMANGALA AND 220/66/11KV SS
AT PEENYA IN BENGALURU**

1. Ref your letter No CEE/SLDC/ PTCC/F-2829/-16001-09 dt 03 Jan 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.