



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-879 /1001-1004

Date :09.10.2019

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 400 kV D/C Hiriyur - Mysore Transmission Line

Reference: (i) BSNL letter no. SR-PTCC/SKT-1739/8 dated 10.08.2018
(ii) South Western Railway letter no. SG/SWR/PTCC/PGCIL/1572 dated 10.10.2017
(iii) Defense letter no. B/46937/Sigs 7(b)/604 dated 28.07.2017

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 15,000 Ohm-cm based on field inspection by CEA official. 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

रायवेंडु प्रताप सिंह
09.10.19 (R.P. Singh)
Director, PTCC

Copy to:

- 1) CSTE, South Western Railway, 1st Floor, West Block, Rail Soudha, Gadag Road, Hubli - 580020 (Annex - II only)
- 2) Chief Manager, PGCIL, SRTS-II, Hassan CAO, 400/220 kV Substation, NH-48, BM Road, Doddagenigere (Post), Shantigrama, Hassan, Karnataka - 573220

MJC

Case No. SKT-1739		SSAs involved: Hassan/davanagere/Tumkuru/Mysuru/Mandya			
Name of PWR line:		400 KV DC (Twin) Hiriyur-Mysore Transmission line			
Length:	206.369 Kms	MAP Scale	1 cm = 500 mts		
SR value: 15000 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
Mysuru SSA Topo map details					
I. A					
Yelwala Telephone Exge UG cables					
1	Exge to Maidarahally A-A1				IV LESS THAN 430V
II. B					
K.R.Nagar Telephone Exge UG cable					
1	Exge to Hassan Road B-B1				IV LESS THAN 430V
2	Exge to Mysore Road B-B2				
3	Exge to Bazar Road B-B3				
4	Exge to Hunsur Road B-B4				
III. C					
Bherya Telephone Exge UG cables					
1	Exge to Hassan road C-C1				IV LESS THAN 430V
2	Exge to Hosa Agrahara C-C2				
3	Exge to Saligram road C-C3				
IV. D					
Mirle Telepone Exge UG cables					
1	Exge to Natanahally D-D1				IV LESS THAN 430V
2	Exge to Gondanahally D-D2				
3	Exge to Town D-D3				
Tumkuru SSA Topo map details					
V. G					
Gurugadahalli Exge UG cables					
1	Exge to Chikkabidare G-G1				IV LESS THAN 430V
2	Exge to Madenur Gate G-G2				
3	Exge to Bennenahalli gate G-G3				
4	Exge to Basavanahalli G-G4				
5	Exge to Hosur G-G5				
6	Exge to Beluranahally G-G6				

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VI K	Konehalli Exge UG cables				
	1 Exge to Mattihalli K-K1	}	IV	LESS	THAN 430 V
	2 Exge to Anethekoppalu K-K2				
	3 Exge to Annenahally K-K3				
VII H	Honnnavally Exge UG cables				
	1 Exge to Thimmalapura H-H1	}	IV	LESS	THAN 430 V
	2 Exge to Nagathihally H-H 2				
	3 Exge to Ramanahalli H-H 3				
	4 Exge to Gyraghatta H-H 4				
	5 Exge to Anivala H-H5				
	6 Exge to Balavaneralu H-H6				
	7 Exge to Patrehally H-H7				
VIII J	Handanakere Exge UG cables				
	1 Exge to Ramaghatta J-J1	-	IV	LESS	THAN 430 V
	2 Exge to Mathighatta J-J2	-	OUTSIDE IV CONSIDERATION ZONE		
	3 Exge to Kengalapura J-J3	-	IV	LESS	THAN 430 V
	Davanagere SSA Topo map details				
IX A	Vanivilasapura Exge UG cables				
	1 Exge to Kurabarahalli Cross A-A1	}	IV	LESS	THAN 430 V
	2 Exge to Temple Circle A-A2				
X B	Madadakere Exge UG cables				
	1 Exge to Hospital DP B-B1	-	IV	LESS	THAN 430 V
XI C	Methodu Exge UG cables				
	1 Exge to Post office DP C-C1	}	IV	LESS	THAN 430 V
	2 Exge to Hospital DP C-C2				
XII D	Doddatekalavatti Exge UG cables				
	1 Exge to PG-Bank DP D-D1	-	IV	LESS	THAN 430 V
XIII E	Belagur Exge UG cables				
	1 Exge to Maravanji E-E1	-	OUTSIDE IV CONSIDERATION ZONE		
	2 Exge to Petrol Bunk, Kabbala RD E-E2	-	IV	LESS	THAN 430 V

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24/03/2014
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XIV F	Srirampura Exge UG cables				
	1 Exge to BESCOM office DP F-F1	}	IV	LESS	THAN 430 V
	2 Exge to Krushi office DP F-F2				
	Hassan SSA Topo map details				
XV K	Kanakatte Exge UG cables				
	1 Exge to Kanakatte Village K-K1	}	IV	LESS	THAN 430 V
	2 Exge to Dibbur K-K2				
	3 Exge to Mallenahally K-K3				
XVI M	Maddarahally Exge UG cables				
	1 Exge to Bennigundihally M-M1	}	IV	LESS	THAN 430 V
	2 Exge to Kithanakere M-M2				
	3 Exge to Yerehally Palya M-M3				
XVII D	D.M.Kurke Exge UG cables				
	1 Exge to Madalau D-D1	}	IV	LESS	THAN 430 V
	2 Exge to Sathanagere D-D2				
	3 Exge to Sasivala D-D3				
	4 Exge to Kamasamudra D-D4				
XVIII DMH	Dummenahally Exge UG cables				
	1 Exge to Vaddarahally DMH-DMH 1	}	IV	LESS	THAN 430 V
	2 Exge to Sulekere DMH-DMH 2				
	3 Exge to Aggunda DMH-DMH 3				
	4 Exge to Vaddarahally DMH-DMH 4				
XIX H	Harnahally Exge UG cables				
	1 Exge to Guthinakere H-H1	}	IV	LESS	THAN 430 V
	2 Exge to Vaddarahally H-H2				
	3 Exge to Gollarahally H-H3	}	OUTSIDE IV CONSIDERATION ZONE		
	4 Exge to Nagenahally H-H4				
XX B	Bageshapura Exge UG cables				
	1 Exge to Bus stand B-B1	}	OUTSIDE IV CONSIDERATION ZONE		
	2 Exge to MML B-B2				

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09.10.19
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RAGHVENDEVA PRATAP SINGH
Executive Director
केन्द्रीय विद्युत प्राधिकरण / C.E.A.
विद्युत प्रसारण विभाग / Central
विद्युत प्रसारण बोर्ड, दिल्ली
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XXI D	Dudda Exge UG cables					
	1 Exge to Thimmanahally D-D1	}				
	2 Exge to Mulla Dudda D-D2					
	3 Exge to Bommenahally D-D3					
	4 Exge to Koravangala D-D4					
	5 Exge to Honavara D-D5					
				} OUTSIDE IV CONSIDERATION ZONE		
XXII S	Shanthigram Exge UG cables					
	1 Exge to Madenur S-S1	}				
	2 Exge to Halasinahally S-S2					
	3 Exge to Devihally S-S3					
	4 Exge to Powergrid S-S4					
	5 Exge to Hongere S-S5					
				} OUTSIDE IV CONSIDERATION ZONE		
XXIII H	Hariharapura Exge UG cables					
	1 Exge to Malali H-H1	}				
	2 Exge to Doddakunehz H-H2					
	3 Exge to Haradanahalli H-H3					
				IV	LESS THAN 430 V	
XXIV N	Halenasipura Exge UG cables					
	1 Exge to Thattekere N-N1	}				
	2 Exge to Manappanahally N-N2					
	3 Exge to Chittanahally N-N3				OUTSIDE IV CONSIDERATION ZONE	
	4 Exge to Aladahalli N-N4			IV	LESS THAN 430 V	
	5 Exge to Archanahally N-N5	}				
	6 Exge to Krishnapura N-N6					
	7 Exge to Baagivavlu N-N7					
				} OUTSIDE IV CONSIDERATION ZONE		
XXV M	Mudalahippe Exge UG cables					
	1 Exge to Agrahara M-M1	}				
	2 Exge to Singapur M-M2					
				IV	LESS THAN 430 V	
XXVI D	Doddakanadam Exge UG cables					
	1 Exge to Sharavanur D-D1	}				
	2 Exge to Nagaranahalli D-D2					
	3 Exge to Doddahalli D-D4					
				IV	LESS THAN 430 V	

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राघवेंद्र प्रताप सिंह
 09.10.19
 राघवेंद्र प्रताप सिंह
 RAGHVENORA PRATAP SINGH
 Director
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 Ministry of Power
 भारत सरकार / Govt. of India
 New Delhi

XXVII HM	Hally Mysore Exge UG cables				
1	Exge to GO halli HM-HM 1	}	OUTSIDE IV	CONSIDERATION	ZONE
2	Exge to Ankannahalli HM-HM 2				
3	Exge to Dalagondanalli HM-HM 3				
4	Exge to Tatanahally HM-HM 4				
Mandya SSA Topo map details					
XXVIII A.	Akkihebbal Exge UG cables				
1	Exge to Cauvery Power Station A-A1	}	IV	LESS	THAN
2	Exge to Town limits A-A2				
3	Exge to Railway Station A-A3				
4	Exge to Hosa Dadadehalli A-A4				
					4130 V
XXIX M	Mandagere Exge UG cables				
1	Exge to MUSS (Power SS) M-M1	}	IV	LESS	THAN
2	Exge to Bevahalli M-M2				
3	Exge to Dabbeghatha Farm House M-M3				
4	Exge to Town limit M-M4				
					430 V

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09.10.19

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RAGHVENDRA PRATAP SINGH
डायरेक्टर/Officer
केन्द्रीय विद्युत आयोग/C.E.A.
विद्युत विभाग/Ministry of Power
भारत सरकार/Govt. of India

Case No.: KNK-879

ANNEXURE - II

Name of the Power Line :

400 KV DC Hiriyur-Mysore Transmission line

Map Scale : 1 cm = 500 mtrs
 Route Length : 206.369 km
 Soil Resistivity : 15,000 Ohm-cm

S.No.	Telecom Details	Length of Parallelism (in km)	Mutual Coupling (Ohms)	Fault Current (Amps)	Induced Voltage (Volts)
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SOUTH WESTERN RAILWAY					
Ref. No: SG/SWR/PTCC/PGCIL/1572			DATED: 10-10-2017		
Affected Blocks & Telcom Circuits Details					
1	Mysore (MYS)-MNGT New Bypass(MBBC)	OUT OF PARALLELISM			0
2	MNGT New Bypass(MBBC) - Belagula (BLGA)	1.0	0.0003	14000	4
3	Belagula (BLGA) - Sagarakatte (STE)	9.5	0.0195	14000	273
4	Sagarakatte (STE) - Krishnarajnagar (KRNR)	13.2	0.0057	13200	75
5	Krishnarajnagar (KRNR)-Hosa Agrahara(HAH)	13.5	0.0220	12200	268
6	Hosa Agrahara(HAH) - Akkihebbalu (AKK)	5.6	0.0268	11600	311
7	Akkihebbalu (AKK) - Mandagere (MGF)	10.5	0.0113	11100	125
8	Mandagere (MGF) - Hole Narsipur (HLN)	11.0	0.0028	10200	29
9	Hole Narsipur (HLN) - Mavinkere (MVN)	OUTSIDE IV CONSIDERATION ZONE			0
10	Bageshapura (BGPA) - Habanghatta (HHT)	3.5	0.0009	8400	8
11	Habanghatta (HHT) - Arsikere (ASK)	4.0	0.0008	8700	7
12	Arsikere (ASK) - Adihalli (ADHL)	1.0	0.0001	9500	1
13	Adihalli (ADHL) - Honnavalli Rd.(HVL)	1.7	0.0034	9400	32
14	Honnavalli Rd. (HVL) - Tiptur (TTR)	1.0	0.0001	9100	1

राघवेंद्र प्रताप सिंह

09.10.19.

राघवेंद्र प्रताप सिंह
 RAGHENDRA PRATAP SINGH
 Director
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत विभाग / Ministry of Power
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 नई दिल्ली / New Delhi-55

KNK 873

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

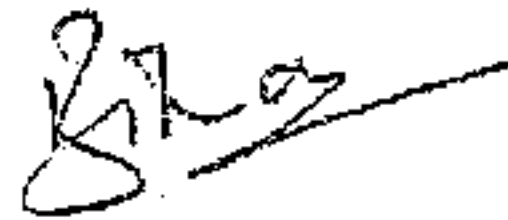
B/46937/Sigs 7(b)/604/

28 Jul 2017

Mr R. Gunasekaran, Chief Manager
Southern Region Transmission System - II,
Hassan CAO, 400/220 KV Substation,
NH-48, BM Road, Doddagenigere (Post)
Shanatigrama, Hassan - 573220, (Karnataka)

**PTCC PROPOSAL FOR 400KV D/C (TWIN) HIRIYUR - MYSORE
TRANSMISSION LINE**

1. Please reference your letter No SR-II/HSN/HIRI-MYS-TLC/PTCC/2017 dated 08 Jul 2017.
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.


(Bikram Kunwar)
Lt Col
GSO 1 (Comn)
for SO-in-C

Enclosures (As above)

Copy to :-

Central Electricity Authority
Power Communication, NRPC Complex,
18-A, Shaheed Jeet Singh S Marg
Katwaria Sarai, New Delhi - 110016

- for information.

1/112 of