

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/TNG-74 /928-930

Date: 28.08.2019

The Divisional Engineer Telecom (PTCC), QA & Inspection (T&D) circle, BSNL, 1st floor, Raj Bhavan Exchange, No.26, Sardar Patel Road, Guindy, Chennai-600032

Subject: Induced Voltage Calculation in respect of PTCC proposal for 400 kV QMDC line from 400

kV Telangana STPP (2X800 MW) Ramagundam to 400/220/132 kV Narsapur SS

Reference: i) BSNL letter no. SR-PTCC/STS/2266/07 dated 13.06.2019

ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRTS201925 RTD dated 29.04.2019

iii) Defence letter no. B/46937/Sigs 7(b)/1422 dated 12.06.2019

Sir.

The instant PTCC proposal has been examined. The low frequency induction on telecom cables of BSNL and Block & Telecom circuits of South Central Railway with respect to details furnished vide above references have been computed. The Soil Resistivity (SR) value has been taken as 15,000 Ohm-cm and 20,000 Ohm-cm. The voltages likely to be induced on paralleling telecom cables of BSNL and Block & Telecom circuits of South Central Railway under Single Line to Ground fault condition are enclosed at Annex-I & II respectively. The screening factors, as applicable, have been considered. Vide ref. (iii) above, Defence Authority have issued No Objection Certificate (NOC) (a copy enclosed as Annex-III).

Taking above into consideration, kindly take necessary action for PTCC route approval.

Encl.: As above

न्याप ति है न्या

Copy to:

1) GM (S&T), South Central Railway, Head Quarters Office, Signal & Telecomm Branch, Rail Nilayam, Secunderabad, Telangana – 500025 (Annex – II only)

2) Superintending Engineer, 400 kV Construction Circle, TSTRANSCO, Karimnagar - 505001

MIC

CEA COLO No.: TNG-74 (1/4)Case No.SRPTCC/SAP/2266 Karimnagar/ Sangareddy Scale: 1:50000 Name of Power line: 400 KV QMDC Line from 400 KV Telangana STPP(NTPC) Switchyard to 400 KV Narsapur SS - LF comments . Length: 178.684 KMs Type of Cable: PIJF 15,000. SR value: 20,000 R-cm Νo Name of telecom line LOP in KMs MC in FC in Amps IV in Volts Safe Ohms Separation Distance Sangareddy SSA Siddipet RBM Exchange Exchange to Ponnala - DP1 Exchange to Mittapally DP 2 nutside IV ransideration zone Echange to Narsapur DP 3 Siddipet MBM Exchange Exchange to Narsapur X Road DP 4 Outside consideration zone Exchange to Lingareddypally DP 5 Exchange to Burgupalli DP 6 Exchange to Chinnagundavelli DP 7 Less than Exchange to Thadkapalli DP 18 Exchange to Kammampalli Dp 8 Chinnakodur Exchange Exchange to Chandlapur DP 10 Exchange to Peddakodur DP 8 IV less than Exchange to Ramunipatla DP 9 Outside considention zone Thimmapur Exchange Exchange to Thornala - DP 12 Exchange to Padmanabapally DP 11 IV less than 4180 Exchange to Peddagundavelli DP 21 Mirdoddi Exchange Exchange to Andey Dp 13 Exchange to Dp 18 IV less than 430 Exchange to Kasulabad D 22 Thoguta Exchange Exchange to Venkatraopet DP 2 14 than Exchange to Chandrapur D P 15 4.2 0.0670 10700 Exchange to Yellareddypet DP 23 4.4 0.0702 10700 Veerareddypally Exchange Exchange to Dommata DP 19 Exchange to Gajulapalli DP 20 Outside IV Consideration

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A2	Exchange to Yawapur Exchange to Begampet		I	V	Les				-
A3	Exchange to begampet		3	.6	0.04			130 1	7
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सार्वेष प्रताय सिंह RAGHVENDRA PRATAP SINGH सिंदेशस्त्र/Director केन्द्रीय विश्वत प्राधिकस्प/C.E.A.

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	Exchange to P 52 DP 5201	\dashv	YIV	1000			
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	Exchange to P43 DP 4301		 				
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	Exchange to P 22 DP 2201	_	ļ				
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राजवेद प्रशास शिंह RAGHVENDRA PRATAP SINGH स्थिशक / Director केन्द्रीय विद्युत अधिकरण / C.E.A. विद्युत पंत्रालय / Ministry of Power

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				-		
14	Choppadandi Exchange				1	
1	Exchange to Gumlapur X Road					
2	Exchange to Bhupalpatnam					
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0	Ellandakunta Exchange					(
1	Exchange to DP	 				
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रावर्षेत्र प्रताय शिव RAGHVENDRA PRATAP SINGH निवेशक/Director केन्द्रीय रि.ज. प्राधिकरण/C.E.A. विद्युत मंत्रालय/Ministry of Power भारत सरकार/Govt. of India नई दिल्ली/New Delhi-68

ANNEXURE - II

Name Telanga	lo.: TNG-74 of the Power line : 400 kV QMDC line from 400 ana STPP (2X800 MW) Ramagundam to 400/220/1 sapur SS		: 1cm=500r : 178.684 F : 15000, 200 ohm-cm	۲m.
S.No	Telecom. Details	Length of Parallelism in Km.	Effective Fault current in Amps.	I.V in Volts.

	South Central Railway letter no. SG.85/4/3/PTCC/S	CRTS201925				
1	Manchiryal (MCI) – Peddampet (PPZ)	Outside	IV considerati	consideration zone		
2	Peddampet (PPZ) – Ramagundam (RDM)	0.5	0.00006	14200	1	
3	Ramagundam (RDM) – Raghavapuram (RGPM)	6.8	0.0175	14000	245	
4	Raghavapuram (RGPM) – Peddapalli (PDPL)	3.4	0.0055	13800	76	
5	Peddapalli (PDPL) – Kolanur (KOLR)	0.3	0.00004	13800	1	
6	Peddapalli (PDPL) – Sultanabad (STB)	0.3	0.00004	13800	1	
7	Sultanabad (STB) – Karimnagar (KRMR)	Outside	IV considerati	ion zone	0	
8	Karimnagar (KRMR) – Gangadhara (GDRA)	8.9	0.0090	10300	93	
9	Masaipet (ME) - Manoharabad (MOB)	4.6	0.0025	14000	35	
10	Manoharabad (MOB) – Medchal (MED)	. 2.7	0.0004	14000	6	

श्रीयनड पुताप १५%

स्वार्धेक्षं प्रसाय विति
RAGHVE META PRATAP SINGH
किन्द्रीय विद्युत प्रशिक्तामा/C.E.A.
विद्युत मंत्राला/Metaphy of Power
भारत सरकार/Govt. of India
नई दिल्ली/New Delhi-68-

Tele: 23019746

HIMEX TING-74

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

B/46937/Sigs 7(b)/1422

12 Jun 2019

The Chief Engineer
Transmission Corporation of Telangana Limited
400 KV, TSTRANSCO
Vidyut Soudha,
Hyderabad – 500 082

ERECTION OF 400KV QMDC LINE (178.684MS) FROM 400KV TELANGANA STPP (NTPC) SWITCHYARD TO 400KV NARSAPUR SUB-STATION-PTCC PROPOSALS-FORWARDEDAPPROVAL-REG

- 1. Ref your letter No CE/400kV/SE-I/400kV/D3-A2/F.PTCC:Line J-T/D.No. 738/18 dt 13 Dec 2018 (copy att).
- 2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your above mentioned letter.
- 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.