



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/TNG-62/332-34

Date : 22.03.2019

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 Transmission Line from the proposed 400/220 kV sub-station at Jangaon to the proposed 400 kV Tippapur sub-station

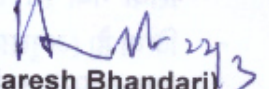
Reference: i) BSNL letter no. SR-PTCC/STS-2188/10 dated 27.02.2019
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRTS201837 RTD dated 08.08.2018
iii) Defense letter no. B/46937/Sigs 7(b)/1190 dated 30.08.2018

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 25,000 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, 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

Yours faithfully,


(Naresh Bhandari)
Chief Engineer

Copy to:

1. GM (S&T), South Central Railway, Head Quarters Office, Signal & Telecomm Branch, Rail Nilayam, Secunderabad – 500025 (Annexure-II only)
2. Chief Engineer, 400 kV, TSTRANSCO, Vidyut Soudha, Hyderabad-500082

M/C

ANNEXURE - I


Case No.: TNG-62					
Name of the Power line: 400 kV QMDC Transmission Line from the proposed 400/220 kV sub-station at Jangaon to the proposed 400 kV Tippapur sub-station		Map Scale	: 1cm=500mts		
		Total Length	: 69.142 Km.		
		Soil Resistivity	: 25000 ohm-cm		
	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/STS-2188/10 dated 27.02.2019									
Karimnagar SSA									
1	Ellandakunta Exchange								
1	Exchange to DP	IV LESS THAN 430 V							
2	Exchange to DP								
3	Exchange to DP								
4	Exchange to DP								
5	Exchange to DP								
6	Exchange to DP								
2	Galipally Exchange								
1	Exchange to DP	OUT OF PARALLELISM							
2	Exchange to DP								
3	Exchange to DP								
4	Exchange to DP								
		IV LESS THAN 430 V							
Warangal SSA									
Jangaon Exchange									
1	Exchange to P21	OUT OF PARALLELISM							
2	Exchange to P22								
3	Exchange to P23								
4	Exchange to P24								
5	Exchange to P25								
6	Exchange to P26								
Bachannapet Exchange									
1	Exchange to P21	IV LESS THAN 430 V							
2	Exchange to P22								
Maddur Exchange									
1	Exchange to P21	OUT OF PARALLELISM							
Sangareddy SSA									
Nangunur Exchange									
1	Exchange to Mugdumpur DP1	IV LESS THAN 430 V							
2	Exchange to Siddannapet DP2								
3	Exchange to Akkannapalli DP3								
4	Exchange to Ankshapur DP4								
5	Exchange to Khanapur DP5					4.5	0.0794	7500	596
6	Exchange to Nagarajpalli DP6					2.9	0.0748	7500	561
7	Exchange to Baddipadaga DP7					5.5	0.0852	7500	639

ANNEXURE - I

Case No.: TNG-62					
Name of the Power line: 400 kV QMDC Transmission Line from the proposed 400/220 kV sub-station at Jangaon to the proposed 400 kV Tippapur sub-station		Map Scale	: 1cm=500mts		
		Total Length	: 69.142 Km.		
		Soil Resistivity	: 25000 ohm-cm		
	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

Rajgopalpet Exchange					
1	Exchange to Venkatapur DP8	IV LESS THAN 430 V			
2	Exchange to Narmeta DP9				
3	Exchange to DP13				
4	Exchange to Mundral DP14				
5	Exchange to Palamakula DP15				
Ibrahimnagar Exchange					
1	Exchange to Medpally DP10	IV LESS THAN 430 V			
2	Exchange to Gonepally DP11				
3	Exchange to Gonapally DP12				


 नरेश भंडारी / NARESH BHANUJAK
 मुख्य अभियन्ता / Chief Engineer
 कन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi-66

ANNEXURE – II

Case No.: TNG-62					
Name of the Power line: 400 kV QMDC Transmission Line from the proposed 400/220 kV sub-station at Jangaon to the proposed 400 kV Tippapur sub-station		Map Scale	: 1cm=500mts		
		Total Length	: 69.142 Km.		
		Soil Resistivity	: 25000 ohm-cm		
	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

South Central Railway letter no. – SG.85/4/3/PTCC/SCRTS201837 RTD dated 08.08.2018					
1	Aler (ALER) – Pembarti (PBP)	OUT OF IV CALCULATION CONSIDERATION ZONE			0
2	Pembarti (PBP) – Janagaon (ZN)	0.5	0.0001	15000	2
3	Janagaon (ZN) – Raghunathpalli (RGP)	OUT OF PARALLELISM			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

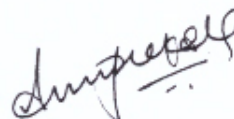
B/46937/Sigs 7(b)/1190/

30 Aug 2018

Chief Engineer
400 KV,
TSTRANSCO
Transmission Corporation of Telangana Ltd
Vidyut Soudha,
Hyderabad- 500 082

**SUPPLY, ERECTION, TESTING AND COMMISSIONING OF 400 KV QMDC LINE
FROM 400/220KV JANGAON SUB-STATION TO TIPPAPUR LI SUB-STATION OF
69.142 KMS ON TURNKEY BASIS-PTCC PROPOSALS-FORWARDED-APPROVAL-
REQUESTED-REG.**

1. Ref your letter No Ltr. No. CE/400KV/SE-II/400 KV/D3-A2/F.PTCC:LineJ-T/D.No. 165/18 dt 08 Jun 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.