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-61/338-340 Date : 26.03.2019

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 Quad Moose Double Circuit Line from the proposed 400/220 kV sub-station at Julurupadu in Khammam District to the proposed 400/220 kV sub-station at Jangaon in Jangaon District

Reference: i) BSNL letter no. SR-PTCC/STS-2146/07 dated 05.03.2019
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRTS201842 RTD dated 28.08.2018
iii) Defense letter no. B/46937/Sigs 7(b)/1164 dated 27.08.2018

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 30,000 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

m/c

Yours faithfully,

(Naresh Bhandari)
Chief Engineer

Copy to:

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

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: 011-26565214Email:nbnareshbhandari@gmail.com Website:www.cea.nic.in

ANNEXURE – I

Case No.: TNG-61 **Name of the Power line**: 400 kV Quad Moose Double Circuit Line from the proposed 400/220 kV sub-station at Julurupadu in Khammam District to the proposed 400/220 kV sub-station at Jangaon in Jangaon District	**Map Scale** : 1cm=500mts **Total Length** : 174.565 Km. **Soil Resistivity** : 30000 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-2146/07 dated 05.03.2019				
I	**THORRUR Exge UG cables**				
1	Exge to Pillar 21 (Opp Pld Telephone Exge)	IV LESS THAN 430 V			
2	Exge to Pillar 22 (HPA X Road)				
3	Exge to Pillar 23 (Near Gram panchayat Office)				
4	Exge to Pillar 25 (Near Bus Stand)				
5	Exge to Pillar 26 (Near RK Theatre)				
6	Exge to Pillar 27 (Near Ambedkar Statue)				
7	Exge to Pillar 28 (Jangala bazar)				
8	Exge to Pillar 29 (Chintalapalli Road)				
9	Exge to Pillar 31 (Teachers Colony)				
10	Exge to Pillar 32 (Kalanjali)				
11	Exge to Pillar 33 (Old Exchange)				
12	Exge to Pillar 34 (New Exchange)				
II	**NELLIKUDUR Exge UG cables**				
1	Exge to Pillar 21 (Opp Pld Telephone Exge)	IV LESS THAN 430 V			
2	Exge to Pillar 21/A				
III	**NARASHIMHULAPETA Exge UG cables**				
1	Exge to Pillar 00 (Bank)	OUT OF PARALLELISM			
2	Exge to Pillar 01 (Auto Stand)				
IV	**JANGAON Exge UG cables**				
1	Exge to Pillar 21	IV LESS THAN 430 V			
2	Exge to Pillar 22				
3	Exge to Pillar 23				
4	Exge to Pillar 24				
5	Exge to Pillar 25				
6	Exge to Pillar 26				
V	**RAGHUNATHPALLY Exge UG cables**				
1	Exge to Pillar 21	IV LESS THAN 430 V			
2	Exge to Pillar 22				
VI	**PALAKURTHY Exge UG cables**				
1	Exge to Pillar 21	IV LESS THAN 430 V			

नरेश भंडारी/NARESH BHANDARI
मुख्य अभियंता/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.: TNG-61 **Name of the Power line**: 400 kV Quad Moose Double Circuit Line from the proposed 400/220 kV sub-station at Julurupadu in Khammam District to the proposed 400/220 kV sub-station at Jangaon in Jangaon District	**Map Scale** : 1cm=500mts **Total Length** : 174.565 Km. **Soil Resistivity** : 30000 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/SCRTS201842 RTD dated 28.08.2018				
1	Aler (ALER) – Pembarti (PBP)	0.5	0.0001	14500	2
2	Pembarti (PBP) – Janagaon (ZN)	1.2	0.0004	14500	6
3	Janagaon (ZN) – Raghunathpalli (RGP)	13.7	0.0197	13000	256
4	Raghunathpalli (RGP) – Ippaguda (IPG)	4.7	0.0022	12700	28
5	Tadalapusalapalli (TAA) – Mahbubabad (MABD)	1.25	0.0002	8100	2
6	Mahbubabad (MABD) – Gundratimadugu (GUU)	10.9	0.0029	8300	24
7	Gundratimadugu (GUU) – Dornakal Jn (DKJ)	10.4	0.0225	9000	203
8	Dornakal Jn (DKJ) – Papatapalli (PPY)	6.6	0.0016	10000	16
9	Dornakal Jn (DKJ) – Karepalli (KRA)	4.3	0.0018	10000	18

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

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)/1164/

27 Aug 2018

Chief Engineer
400kV,
TSTRANSCO,
Transmission Corporation of Telangana Ltd
Vidyut Soudha.
Hyderabad – 5000 082

SUPPLY, ERECTION, TESTING AND COMMISSIONING OF 400 KV QUAD MOOSE DC LINE FROM 400/220KV JULURUPADU SS TO PROPOSED 400/220KV JANGAON SS OF LENGTH 174.565 KM ON TURNKEY BASIS-PTCC PROPOSALS-FORWARDED-APPROVAL-REQUESTED-REG.

1. Ref your letter No. Lr. No. CE/400 kV/SE-I/400 kV/D1-A4/F.Julurupadu-Jangaon/D.No. 299/18 dt 06 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 - for information.
Power Communication Development Division
NRPC Complex, 18-A Shaheed Jeet Singh Marg
Katwaria Sarai, New Delhi - 110016