



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power Communication Development Division

No. CEA/PCD/ PTCC/BHR-161/37-39

Date: 15.01.2021

Subject: - Induced voltage calculation in respect of 220 kV D/C Pusauli to Karmanasha transmission line. - regd.

Ref. : (i) BSTCL Ref. No. 1351 TC/DOS Dated : 30.07.2020
(ii) BSNL Ref. No. DE/PTCC/ER/EBR140820192564/01 Dated : 10.12.2019
(iii) East Central Railway Ref. No. ECR-HQ0SnT(CPTC)/1/2020- O/o Dy. CSTE/HQ/ECR Dated : 26.11.2020
(iv) Defense Ref. No. B/46937/Sigs 7(b)/1786/ Dated : 04.10.2019

The PTCC proposal submitted vide ref. (i) has been examined. The LF induction on telecom cables of BSNL and Block & Telecom circuits of East Central Railway with respect to details furnished vide above references (ii) and (iii) respectively has been computed. The Soil Resistivity (SR) value has been taken as 15,000 ohm-cm. The voltages likely to be induced on paralleling telecom cables of BSNL and Block & Telecom circuits of East Central Railway under Single Line to Ground fault condition are enclosed at Annex-I and II respectively. The screening factors, as applicable, have been considered. Vide ref. (iv) 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.

उपेन्द्र कुमार
15.01-21

(Upendra Kumar)
Chief Engineer

To,

1. DET (PTCC), Eastern Region, Inspection & QA Circle, BSNL, Q.A. Bhawan, EP-GP Block, Sector-V, Salt Lake, Kolkata – 700091. (Annex-I & III only)
2. Dy. CSTE/HQ O/o General Manager (S&T), East Central Railway, Hajipur, District- Vaishali-844101. (Annex-II only)

Copy to:

Electrical Superintending Engineer, Bihar State Power Transmission Company Ltd.,
220/132/33 kV Grid Substation, Dalmia Nagar, Transmission Circle, Dehri-On-Sone-
821305.

BHR-161

S.R. = 15,000

(Annex-I)

Details particular of the Telecom Alignment in connection with 220 KV D/C Pusaali (BSPTCL) - Karmasha (New) Transmission Line with Twin Moose Conductor

SINO.	NAME OF THE TELECOM ALIGNMENT	ALONG ROAD OR RAIL	AVERAGE SEPERATION FROM ROAD OR RAIL	LENGTH	FULL NAME OF THE CIRCUITS	METALLIC OR EARTH RETURN	MARKED INTERMEDIATE OR TAPPING POINTS	REMARKS
1.	Higavadi	Road (near GTR)	20 Mtr.	2.1 KM	Pusaali to Mohania	OFC	IV	24 T. No.
2.	Mohania	Road	20 Mtr.	2.2 KM	Mohania to Darga- vadi	OFC	IV less than 430	
3.	Dargavadi	Road	20 Mtr.	1.6 KM	Dargavadi to Karamasha	OFC		

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 0000 00000/Govt. of Ind
 0000 00000/New Delhi-60

ANNEXURE - II

Case No.: BHR-161 Name of the Power line: 220 kV D/C Pusauli to Karmnasha transmission line.			Map Scale : 1 cm=500 m Total Length : 35.181 km S.R. Value : 15,000 ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

EAST CENTRAL RAILWAY Ref. No: ECR-HQ0SnT(CPTC)/1/2020-O/o Dy. CSTE/HQ/ECR dated: 26-11-2020					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Karmnasa - Durgawati	4.3	0.0019	8778	17
2	Durgawati - Bhabhua Road	8.9	0.0032	5659	18
3	Bhabhua Road - Muthani	9.2	0.0038	6312	24
4	Muthani - Pusauli	6.6	0.0047	7714	36
5	Pusauli - Kudra	0.5	0.0003	9893	03

तनुज/TANUJ
सहायक निदेशक-II/Asstt. Director-II
केन्द्रीय विद्युत प्राधिकरण/C.E.A.
विद्युत मंत्रालय/Ministry of Power
भारत सरकार/Govt. of India
नई दिल्ली/New Delhi-68

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

B/46937/Sigs 7(b)/1786/

07 Oct 2019

Electrical Superintending Engineer
Bihar State Power Transmission Company Ltd.
220/132/33kV Grid Substation
Dalmia Nagar, Transmission Circle, Dehri-on-Sone
PIN-821305

PTCC PROPOSAL FOR CONSTRUCTION OF 220KV D/C PUSAULI (BSPTCL)-KARMNASA
(NEW) TRANSMISSION LINE ON TURNKEY BASIS

1. Ref your letter No 1351/TC/DOS/ dt 30 Jul 2019. (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

[Handwritten Signature]
(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

Divisional Engineer Telegraph (PTCC)
O/o GM (North); BSNL, QA & Inspection Circle,
CTS Compound, Africa Avenue Road,
Netaji Naagar, New Delhi-110023

} for information