

I/28012/2023



सत्यमेव जयते



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

CEA Case No.: BHR-194		
PTCC proposal for 220 kV D/C Buxar TPP to GSS Karamnasa Transmission Line [Length- 59.345 km]- Regd.		
Reference:		
S. No.	Reference No.	Dated
(i)	BSPTCL Letter No: Tele/PTCC/07/2022/196	31.03.2022
(ii)	BSPTCL Letter No: Tele/PTCC/07/2021/73	10.05.2023
(iii)	CEA Letter No: CEA-PS-17-11(13)/10/2023-PCD Division	26.04.2023
(iv)	BSNL: DET/PTCC/ER/EBR060420223910 & EBR080420223923/IV/1	22.02.2023
(v)	East Central Railway : ECR-HQ0SnT(Genl)/13/2022- O/oDy.CSTE/HQ/ECR	31.05.2022
(vi)	Defense : B/46937/Sigs 7(b)/2835	27.04.2022

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL and East Central Railway with respect to details furnished vide above reference (iv) & (v) respectively, has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of East Central Railway and BSNL under Single Line to Ground fault condition are enclosed at Annexure-I & Annexure-II respectively. The screening factors as applicable has been considered. DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (vi).

EPR zone for proposed S/S is mentioned below:

Name of the proposed Substation	Half diagonal distance , D/2 (mts)	Fault Current I (KA)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7kV	d (mts) at 10kV
220/132/33 kV Karamnasa	182	40	0.013	38	N.A	N.A	N.A
Switchyard of 2x 660 MW Buxar TPP	122	50	0.032	332	178	N.A	N.A

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As per the Telecom Details submitted by BSNL vide above reference (iv), no telephone exchange of BSNL is falling within the EPR zone of proposed Substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line might be taken under intimation to this office.

Encl.: As above.

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Eastern Zone	BSNL QA & Inspection Circle, QA Bhawan, EP-GP Block, Sector-V Kolkata	
2.	General Manager (S&T)	O/o GM (S&T) East Central Railway Hajipur	
3.	Chief Engineer (Telecom & OPGW)	Bihar State Power Transmission Co. Ltd. 4 th Floor, Vidyut Bhawan Patna	Copy for information

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ANNEXURE-I

CEA Case No.: BHR-194		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV D/C Buxar TPP to GSS Karamnasa Transmission Line.		Total Length : 59.345 km			
		S.R. Value : 10000 Ω-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 Letter No: ECR-HQ0SnT(GenI)/13/2022-O/oDy.CSTE/HQ/ECR Date: 31.05.2022

Affected Blocks & Telecom Circuits Details**Saiyadraja-Bhabhua Road Section**

1	Saiyadraja to Karmanasa	-Out of Parallelism-			
2	Karmanasa to Dhanichha	3	0.0015	36350	55
3	Dhanichha to Durgawati	2.8	0.0017	33780	58
4	Durgawati to Bhabhua Road	-Out of Parallelism-			

Buxar-Gahmer Section

1	Buxer to Chausa	-Out of Parallelism-			
2	Chausa to Gahmer	-Out of Parallelism-			

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ANNEXURE-II

CEA Case No.: BHR-194			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV D/C Buxar TPP to GSS Karamnasa Transmission Line.			Total Length : 59.345 km		
			S.R. Value : 10000 Ω-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL Letter No: DET/PTCC/ER/EBR060420223910 & EBR080420223923/IV/1 Date: 22.02.2023					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Chausa Exchange				
a)	Chausa XGE to Rampur Dehri XGE (Un-Armoured OFC)	IV Calculation not required (Unarmored OFC)			
b)	Chausa Exchange to PNB	-Out of Parallelism-			
2	Rajpur XGE				
a)	Rajpur XGE to PNB	-Out of Parallelism-			
b)	Rajpur XGE to Gramin Bank	Out of Parallelism-			