

I/28013/2023



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-196		
PTCC proposal for 220 kV D/C Buxar TPP to GSS Dehri-On-Sone Transmission Line [Length- 76.823 km] – Regd.		
Reference:		
S. No.	Reference No.	Dated
(i)	BSPTCL Letter No: Tele/PTCC/07/2021/302	19.05.2022
(ii)	BSPTCL Letter No: Tele/PTCC/07/2021/82	16.05.2023
(iii)	CEA Letter No: CEA-PS-17-11(13)/8/2023-PCD Division I/26636/2023	10.03.2023
(iv)	BSNL: DE/PTCC/ER/EBR250520223999 & EBR150320212988/IV/1	06.02.2023
(v)	East Central Railway : ECR-HQ0SnT (Genl) /13/2022-O/oDy. CSTE/HQ/ECR/2157	07.07.2022
(vi)	Defense : B/46937/Sigs 7 (b) /2889	15.07.2022

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block & 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 & 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
Switchyard of 2x 660 MW Buxar TPP	122	50	0.032	332	178	N.A	N.A

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.

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-196			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV D/C Buxar TPP to GSS Dehri-On-Sone Transmission Line.			Total Length : 76.823 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 (Genl) /13/2022-O/oDy.CSTE/HQ/ECR/2157 Date: 07.07.2022					
<u>Affected Blocks & Telecom Circuits Details</u>					
<u>Buxar-Gahmer Section</u>					
1	Buxer to Chausa		-Out of Parallelism-		
2	Chausa to Gahmer		-Out of Parallelism-		
<u>Dehri-On-Sone to Sasaram Section</u>					
1	Dehri-On-Sone to Pahleza	0.75	0.0013	23400	30
2	Pahleza to Karwandhiya	1.5	0.001	23000	23
3	Karwandhiya to Sasaram		-Out of Parallelism-		
<u>Bikramganj – Sasaram Section</u>					
1	Bikramganj to Garhnokha	3.5	0.008	15180	121
2	Garhnokha to Sasaram	4.0	0.002	17300	35

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ANNEXURE-II

CEA Case No. : BHR-196			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV D/C Buxar TPP to GSS Dehri-On-Sone Transmission Line.			Total Length : 76.823 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: DE/PTCC/ER/EBR250520223999 & EBR150320212988/IV/1 Date: 06.02.2023

Affected Blocks & Telecom Circuits Details

1	Chausa Exchange				
a)	Chausa Exchange to PNB	-Out of Parallelism-			
2	Rajpur XGE				
a)	Rajpur XGE to PNB	-Induced Voltage is Less than 430 V-			
b)	Rajpur XGE to Gramin Bank	-Induced Voltage is Less than 430 V-			
c)	Rajpur XGE to Chowk	-Induced Voltage is Less than 430 V-			
3	Ayarkotha Exchange				
a)	Ayarkotha Exchange to Chilbila	-Induced Voltage is Less than 430 V-			
b)	Ayarkotha Exchange to Dahrihat	-Induced Voltage is Less than 430 V-			
4	Akorigola Exchange				
a)	Akorigola Exchange to BAK	2.0	0.0178	23250	414
b)	Akorigola Exchange to Akori Village	-Induced Voltage is Less than 430 V-			
5	Dehri Exchange				
a)	Dehri Exchange to Pillar No-1	-Induced Voltage is Less than 430 V-			
b)	Pillar No-1 to BAK	-Induced Voltage is Less than 430 V-			
c)	Dehri Exchange to Ganguli Pillar	-Induced Voltage is Less than 430 V-			