

I/31876/2023



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**

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<b>CEA Case No. : MP-493</b>		
<b>Induced Voltage (IV) calculation in respect of PTCC proposal for 220 kV DCDS Sagar – Begumganj transmission line (62.54 km) - regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	M/s MP Power Transmission Package-II Ltd: MPPTP2L/JBP/PTCC/164	14.06.2022
(ii)	M/s MP Power Transmission Package-II Ltd: Email	25.10.2023
(iii)	BSNL: PTCC/WR/2023-24/MP-770	19.09.2023
(iv)	West Central Railway: WCR/N-HQ/120 PTCC-CORR-T-50-Pt-III Case 339	12.08.2022
(v)	Defense: B/46937/Sigs 7(b)/2925	23.08.2022

The PTCC proposal & details submitted vide reference (i) & (ii) have been examined. The LF induction on communication circuits of BSNL and West Central Railway with respect to details furnished vide above reference (iii) & (iv) respectively have been computed. The voltages likely to be induced on paralleling communication cables of BSNL and West Central Railway under Single Line to Ground fault conditions are enclosed at Annexure-I & II respectively. The screening factors as applicable have been considered. Vide reference (v) above, Defense have issued NOC (enclosed as Annexure-III).

EPR details for the proposed substations are as follows:

Name of the proposed SS	Half Diagonal Distance, D/2 (mts)	Fault Current, I (kA)	Resistance of earthmat, R (Ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220/132/33 kV Begumganj S/s	127.5	50	0.20	2837.1	1833.7	54.6	NIL

As per the details submitted by BSNL, no telecom exchanges are falling within the EPR zone of the proposed substation.

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

**Director**

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**To,**

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 <sup>st</sup> floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM (S&T)	West Central Railway, O/o GM (S&T), 1 <sup>st</sup> floor, Annex II Building, Jabalpur	
2.	Manager (Projects)	MP Power Transmission Package-II Ltd, House No. 5/1006, Near Nachiketa School, Vijay Nagar, Jabalpur - 482002	Copy for information

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ANNEXURE-I

CEA Case No.: MP-493		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV DCDS Sagar – Begumganj transmission line		Total Length : 62.54 km			
		S.R. Value : 10000 Ohm-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 PTCC/WR/2023-24/MP-770 Date: 19.09.2023

1	1 to 2	IV less than 430 V			
2	2 to 3				
3	Makronia Chauraha to 3				
4	Makronia Chauraha to 4				
5	Makronia Chauraha to 5				
6	Makronia Chauraha to 16				
7	Civil Line Chauraha to 16				
8	Civil Line Chauraha to 15				
9	Civil Line Chauraha to Junction Govt, Bus Stand				
10	Civil Line Chauraha to Swami Vivekanand Statue				
11	Swami Vivekanand Statue to Jyoti Bhavan				
12	Swami Vivekanand Statue to Hari Govind Singh University				
13	Hari Govind Singh University to 6				
14	Post Office to Sagar Cantt				
15	Post Office to 15				
16	Bus Stop to 8				
17	Jyoti Bhavan to 8				
18	Jyoti Bhavan to 7				
19	7 to 9				

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ANNEXURE-II

CEA Case No.: MP-493		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV DCDS Sagar – Begumganj transmission line		Total Length : 62.54 km			
		S.R. Value : 10000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>West Central Railway Letter</b> WCR/N-HQ/120 PTCC-CORR-T-50-Pt-III Case 339 Date: 12.08.2022					
1	Saugor – Makronia	Outside IV consideration zone			
2	Makronia – Lidhora Khurd	0.6	0.0003	34660	10
3	Lidhora Khurd – Girwar	Outside IV consideration zone			

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## Annexure-III

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)/2925/

23 Aug 2022

Manager (Projects)  
MP Power Transmission Package-II Limited  
House No. 5/1006, Near Nachiketa School  
Vijay Nagar, Jabalpur-482002, Madhya Pradesh

**PTCC ROUTE APPROVAL FOR 220 KV DCDS SAGAR-BEGUMGANJ  
TRANSMISSION LINE**

1. Refer your letter No. MPPTP2L/JBP/PTCC/164 dt 14 Jun 2022 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheet received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

*Samyal*  
(PS Samyal)

Col  
GSO 1 (Comn)  
for ADG T

**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

The DET(PTCC), Northern Zone  
O/o PGM (North), QA & Inspection Circle,  
D-Tax Building, Eastern Court, Janpath  
New Delhi-110001