



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली संचार विकास प्रभाग

Power System Communication Development Division



CEA Case No. : RAJ – 750A		
Induced Voltage (IV) calculation for PTCC proposal of 765 kV D/C Fatehgarh III – Beawar Transmission Line [Length - 317 km]-Regd.		
S. No	Reference No.	Dated
(i)	Sterlite Power: SPTL/PKG-F/2024/112	18.07.2024
(ii)	BSNL: No.DE/PTCC/NZ/BSNL-TD/DV-10620/Raj-1649/2025-26	18.12.2025
(iii)	North Western Railway: SG/158/NWR/PTCC/1163	10.07.2025
(iv)	Defense: B/46937/Sigs 7(b)/4061	30.10.2024

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

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
765 kV Beawar S/s	332	44.1	0.0664	1929	1164	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (ii), there is no Telephone Exchange lying within the EPR zone of proposed 765 kV Beawar S/s.

Taking above into consideration, necessary action for issuance of PTCC route approval (RAC) shall be taken under intimation to this office in the stipulated period as specified in PTCC Manual and subsequent CLPTCC meetings.

As per the decision taken in 111th and 112th CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing RAC.

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer (PTCC), North Zone	O/o GM(N), QA & Inspection circle, D-Tax Building, Eastern Court Janapath, New Delhi-110001	Annexure-I
2.	Dy CSTE/Tele NWR/Jaipur	HQ's Office Room No.136, First Floor, Near Jawahar Circle, Jaipur-302017	Annexure-II
3.	Chief Manager	Beawar Transmission Limited, Project Office: House No. 112, Roop Nagar, Paota C Road, Jodhpur-342010	Copy for information.

ANNEXURE-I

CEA Case No.: RAJ-750A			Map Scale : 1 cm= 500 m		
Name of the Power line: : PTCC proposal of 765 kV D/C Fatehgarh III – Beawar Transmission Line [Length- 317 km]			Total Length : 317 km		
			S.R. Value : 15000 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 : No.DE/PTCC/NZ/BSNL-TD/DV-10620/Raj-1649/2025-26 Dated 18.12.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Luni to Sarecha	4.3	0.00906	25700	233
2.	Bilara to Jaitiwas	5.5	0.00364	35150	128
3.	Sheo to Bhiyad	19	0.01502	30900	464

ANNEXURE-II

CEA Case No.: RAJ – 750A			Map Scale : 1 cm= 500 m		
Name of the Power line: PTCC proposal of 765 kV D/C Fatehgarh III – Beawar Transmission Line [Length- 317 km]			Total Length : 317 km		
			S.R. Value : 15000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
North Western Railway: SG/158/NWR/PTCC/1163 Dated 10.07.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Hari to Bar	Out of IV consideration zone			
2.	Bar to Sendra	Out of IV consideration zone			
3.	Salawas to Hanwant	2.05	0.00031	22620	7
4.	Hanwant to Luni	2.6	0.00544	24630	134
5.	Luni to Rohat	4.8	0.00172	14560	25
6.	Luni to Satlana	Out of Parallelism			