



सत्यमेव जयते

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 - 795		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C Transmission line from existing 400 kV GSS Hindaun to proposed 220 kV GSS Karauli [Length- 42.672 km]-Regd.		
S. No	Reference No.	Dated
(i)	RRVPNL: RVPN/SE (QC, insp. & Montg.)/XEN (PTCC)/F.2067-A-00337 Rajkaj No. 13421116	06.02.2025
(ii)	RRVPNL: e-mail	24.03.2026
(iii)	BSNL: DE/PTCC/NZ/BSNL-TD/DV-10671/Raj-1682/2025-26	24.01.2026
(iv)	West Central Railway: WCR/N-HQ/120/PTCC/CORR/T-50-Pt-III, Case-453	22.04.2025
(v)	Defense: B/46937/Sigs-7(b)/4452	21.07.2025

The PTCC proposal submitted vide references (i) and (ii) has been examined. As per the Telecom Details submitted by BSNL vide above reference (iii), there is no copper cable or armoured OFC within 8 km boundary and hence IV computation is not done. The LF induction on Block and Telecom circuits of West Central Railway with respect to details furnished vide above reference (iv) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of West Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (v).

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 7 kV	d (mts) at 10kV
220 kV GSS Karauli	114	16	0.18	650	391	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (iii), there is no Telephone Exchange/BTS lying within the EPR zone of proposed 220 kV GSS Karauli.

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), Northern Zone	O/o GM(N), QA & Inspection circle, D-Tax Building, Eastern Court Janapath, New Delhi-110001	
2.	GM (S&T) WCR	O/o GM (S&T), 1st Floor, Annex II building, P.F.No. 6, Jabalpur	Annexure-I
3.	SE (QC, Insp. & Montg.)	O/o Superintending Engineer (QC, Inspection & Monitoring) Room No. 320, Vidyut Bhawan, Jyoti Nagar, Jaipur - 302005	Copy for information.

ANNEXURE-I

CEA Case No.: RAJ - 795			Map Scale : 1 cm= 500 m		
Name of the Power line: PTCC proposal of 220 kV D/C Transmission line from existing 400 kV GSS Hindaun to proposed 220 kV GSS Karauli.			Total Length : 42.672 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.
West Central Railway: WCR/N-HQ/120/PTCC/CORR/T-50-Pt-III, Case-453 Dated 22.04.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Piloda – Shri Mahaveerji	Out of IV Consideration Zone			
2.	Shri Mahaveerji – Hindaun City	9.25	0.00158	17800	28
3.	Hindaun City – Fateh Singhpura	11	0.00313	26850	84
4.	Fateh Singhpura - Dumariya	Out of IV Consideration Zone			