



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**

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<b>CEA Case No.: HRA-265</b>		
<b>Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C Transmission Line from 400 kV PGCIL Jajji S/s to 220 kV IMT Kharkhoda GIS. (Length-20,998 km)- regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	HVPNL: Ch-144/CW-543Vol-II	10.09.2025
(ii)	HVPNL: Undertaking received via e-Mail	09.10.2025
(iii)	BSNL : DE/PTCC/NZ/BSNL-TD/DV-10599/HR-895/2025-26/	29.09.2025
(iv)	Northern Railway: 342-SIG/1/PTCC/2025-26/10/02	08.10.2025

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of Northern 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 Northern Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET-PTCC, NZ BSNL vide above reference (iii) has issued their NOC.

EPR zone for 220 kV 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 kV IMT Kharkhoda GIS.	101	30	0.163	1048	659	N.A	N.A

Telecommunication details from Defense are still pending and vide above reference (ii), transmission utility has shown urgency for charging of line and has requested for provisional PTCC approval. Taking above into consideration, necessary action for issuance of provisional 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 111<sup>th</sup> and 112<sup>th</sup> CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing provisional RAC.

**Chief Engineer**

**To,**

1.	Divisional Engineer (PTCC), Northern Zone	BSNL, O/o PGM(North), QA & Inspection Circle D-Tax Building, Jan path, New Delhi	
2.	GM (S&T)	O/o GM (S&T), Northern Railways Baroda House, Delhi	
3.	Director General of Signals	General Staff Branch, Integrated HQ, MoD (army), Sena Bhawan, DHQ, PO, New Delhi- 110 105	With a request to provide details of Telecom assets/ NOC at the earliest for issuance of final RAC.
4.	Executive Engineer	O/o Executive Engineer HVPNL, Panipat	Copy for information

**ANNEXURE-I**

<b>CEA Case No.:</b> HRA-265 <b>Name of the Power line:</b> LILO of 220 kV D/C PGCIL Sec-72 to HVPNL Sec-72 Transmission Line on M/C Towers at 220 kV HVPNL Sec-15-II S/s.			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 20.998 km <b>S.R. Value</b> : 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>Northern Railway Letter No:</b> 342-SIG/1/PTCC/2025-26/10/02			Dated 08.10.2025		
1.	Gohana R/s to Mohana Haryana R/s	2.5	0.0023	24600	57
2.	Mohana Haryana R/s to Sonipat R/s	-Out of Parallelism-			