



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. : PNB-381</b>		
<b>Induced Voltage (IV) calculation for PTCC approval of 220 kV D/C Amritsar - Patti Transmission Line by utilizing towers of 220 kV D/C Varpal - Patti Transmission Line from point near 220 kV Varpal S/s [Length- 0.842 km]-Regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	PSTCL: 115	23.01.2023
(ii)	PSTCL: e-Mail	03.07.2024
(iii)	BSNL: DET/PTCC/ND/DV-10192/PB-936/2023-24/	27.06.2023
(iv)	Northern Railway: 342-SIG/1/PTCC/2022-23/02/04	10.02.2023
(v)	Defense: B/46937/Sigs7(b)/3203	30.06.2023
(vi)	Defense: B/46937/Sigs7(b)/3203	14.12.2023

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on block & telecom circuits of Northern Railway with respect to details furnished vide above references (iv) has been computed. The voltages likely to be induced on paralleling block & 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 and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iii) & (vi) respectively.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line may be taken under intimation to this office.

Encl.: As above

**Chief Engineer**

**To,**

1.	Divisional Engineer (PTCC), Northern Zone	O/o PGM(N), QA & Inspection Circle D-Tax Building, Eastern Court Janpath, New Delhi	
2.	GM (S&T) Northern Zone	Norther Railway HQ, Baroda House New Delhi	
3.	Addl. S.E/TS-II PSTCL	O/o C.E/TS, 3 <sup>rd</sup> Floor Shakti Sadan, Patiala	Copy for information

**ANNEXURE-I**

<b>CEA Case No.:</b> PNB-381			<b>Map Scale</b> : 1 cm= 500 m		
<b>Name of the Power line:</b> 220 kV D/C Amritsar - Patti Transmission Line by utilizing towers of 220 kV D/C Varpal - Patti Transmission Line from point near 220 kV Varpal S/s			<b>Total Length</b> : 0.842 km		
			<b>S.R. Value</b> : 500 Ohm-cm		
<b>S.No.</b>	<b>Telecom. Details</b>	<b>Length of Parallelism in Km.</b>	<b>Mutual Coupling in Ohms.</b>	<b>Effective Fault current in Amps.</b>	<b>I.V in Volts.</b>

Northern Railway Letter No: 342-SIG/1/PTCC/2022-23/02/04

Dated 10.02.2023

**Affected Blocks & Telecom Circuits Details**

1	Amritsar R/s to Bhagtanwala R/s	-Out of Parallelism-
2	Bhagtanwala R/s to Gohlwar Varpal R/s	
3	Gohlwar Varpal R/s to Duknawaran R/s	
4	Duknawaran R/s to Tarn Taran R/s	