



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. : MP-539		
Induced Voltage (IV) calculation for PTCC proposal of 400 kV D/C Pachora - Ujjain Transmission Line (Length-59.155 km)- regd.		
S. No	Reference No.	Dated
(i)	PPTL: GRIL/PT/TBCB/URJA/PPTL/0123	27.01.2025
(ii)	PPTL : e-mail	24.02.2026
(iii)	BSNL: IC/MBI/PTCC/MP	08.09.2025
(iv)	BSNL: e-mail	20.02.2026
(v)	Western Railway: SG.158/28/10/L-344	07.07.2025
(vi)	Defense: B/46937/Sigs-7(b)/5373	09.01.2026

The PTCC proposal submitted vide references (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL with respect to details furnished vide above references (iii) and (iv) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL under Single Line to Ground fault condition is enclosed at Annexure-I. The screening factors as applicable have been considered. Dy. CSTE, Western Railway, vide reference (v), and DG Signals, MoD, vide reference (vi), have issued their No Objection Certificates (NOCs) for charging of the line.

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
400/220 kV Pachora	224.71	29.61	0.266	3891	2498	28	N.A

As per the Telecom Details submitted by BSNL vide above reference (iii), there is no Telephone Exchange lying within the EPR zone of proposed 400/220 kV Pachora.

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), Western Zone	QA & Inspection circle, 1st floor, D- wing, BSNL Bldg., Santa Cruz (West), Mumbai - 400054	Annexure-I
2.	Assistant General Manager, Pachora Power Transmission Limited	Flat No. 1097, Sector-A, Pocket-A, Vasant Kunj, New Delhi - 110070	Copy for information.

ANNEXURE-I

CEA Case No.: MP-539			Map Scale : 1 cm= 500 m		
Name of the Power line PTCC proposal of 400 kV D/C Pachora - Ujjain Transmission Line (Length-59.155 km).			Total Length : 59.155 km		
			S.R. Value : 7500 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 : IC/MBI/PTCC/MP Dated 08.09.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Rupakhedi exchange to Rupakhedi town area	0.45	0.00045	33130	15
2.	Tilawad exchange to Tilawad town area	0.425	0.00213	40850	87
3.	Makrone exchange to Makrone town area	0.45	0.00020	35300	7
4.	Bichrod exchange to Bichrod town area	Out of Parallelism			

