



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

CEA Case No.: GOA-06		
Induced Voltage (IV) calculation in respect of PTCC proposal of 220 kV DC line from 400/220 kV PGCIL SS at Colvale to 220/33 kV Saligao SS (17.2 km)- regd.		
S. No	Reference No.	Dated
(i)	EE-IX/Tech/Tender-02/2023-24/ (CSC-Tender 320/2022-23)/2023-24/2267	15.12.2023
(ii)	Goa Electricity Dept.: Email	27.11.2025
(iii)	BSNL: IC/MBI/PTCC/MRA-2749/03	27.09.2025
(iv)	Konkan Railway: KR/KAWR/SG/PTCC/GOA	04.02.2025
(v)	Defense: B/46937/Sigs 7(b)/4882	06.08.2025

The PTCC proposal submitted vide above references (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of Konkan 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 Konkan Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered.

AGM(Bldgs.), BSNL, Panaji (Goa) has stated that all telecom exchanges within the vicinity of 8km of proposed transmission line are Inactive. Thus, DET (PTCC), WZ, Mumbai letter vide above reference (iii) is considered deemed NOC.

ADG (Telecommunications) has issued No Objection Certificate (NOC) vide reference (v) above (attached as Annexure –II).

EPR Zones for proposed substation are mentioned below.

Name of the proposed SS	Half Diagonal Distance, D/2 (mts)	Fault Current, I (kA)	Resistance of earthmat, R (Ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220/33 kV Saligao SS	82	50	1.35	12790	8433	709	472

All stakeholders to take a note of the EPR zone and ensure non-presence of any telecom equipment within the specified zone, considering the fact that contour of EPR zone is spreading across 12.79 kms and the telecom details were sought only for 08 kms boundary.

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, 1 st floor, D- wing, BSNL Admin Bldg., Juhu Tara Road, Santacruz (West), Mumbai-400054	
2.	Chief Signal and Telecommunication Engineer	Konkan Railway Corporation Ltd Sector -11, CBD Belapur, Navi Mumbai, Maharashtra-400614	
3.	Project Director (M/s Aravinda Electricals Infra Pvt Ltd)	No.56, BMS Plaza, 1st Block, Banashankari 3rd Stage Bangalore - 560085,	Copy for information

ANNEXURE-I

CEA Case No.: GOA-06 Name of the Power line: 220 kV DC line from 400/20 kV PGCIL SS at Colvale to 220/33 kV Saligao SS			Map Scale: 1 cm= 500 m Total Length: 17.2 km S.R. Value: 20000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

Konkan Railway Letter No: KR/KAWR/SG/PTCC/GOA Dated 04.02.2025

1.	PERN-THVM	2.05	0.00023	19431	4
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