



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. : ASM-37

Induced Voltage (IV) calculation for PTCC proposal of LILO of 220 kV D/C Mariani - Samaguri Transmission line at proposed 220/132/33 kV Khumtai GIS. (Length – 10.67 km)-regd.

S. No	Reference No.	Dated
(i)	AEGCL: AEGCL/GM (P & D)/PTCC/G-121/Part-2/597	25.06.2024
(ii)	AEGCL: e-mail	22.01.2026
(iii)	BSNL: DE/ER/PTCC/EAS180620245906/02 received via e-mail	19.11.2025
(iv)	N. F. Railway: N/146/2/10 Pt. VIII (TC)	11.02.2025
(v)	Defense: B/46937/Sigs 7(b)/4019	15.10.2024

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of N. F. 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 N. F. Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DGM Telecom, PTCC, ER, BSNL, and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iii) and (v) respectively.

EPR zone for proposed S/s is mentioned below:

Name of the proposed Substation	Half diagonal distance, D/2 (mts)	Fault Current I (A)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220/132/33 kV Khumtai GIS	157.24	50.4	0.0416	609	350	N.A	N.A

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

Digitally signed by
Suman Kumar Maharana

Date: 10-02-2026

11:05:23

Chief Engineer

To,

1.	Divisional Engineer Telecom (PTCC), Eastern Region	QA & Inspection Circle Q.A Bhawan, EP-GP Block, Sector-V, Saltlake, Kolkata-700091	
2.	General Manager (S&T) NFR	O/o General Manager (S&T) Maligaon, Guwahati-11	Annexure-I
3.	General Manager (P&D), AEGCL	Bijulee Bhawan Campus, Paltan Bazar, Guwahati-01	Copy for information.

ANNEXURE-I

CEA Case No.: ASM-37			Map Scale : 1 cm= 500 m		
Name of the Power line: PTCC proposal of LILO of 220 kV D/C Mariani - Samaguri Transmission line at proposed 220/132/33 kV Khumtai GIS.			Total Length : 10.67 km		
			S.R. Value : 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.
N. F. Railway: N/146/2/10 Pt. VIII (TC) Dated 11.02.2025					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Numaligarh – Baruabamun Gaon	4.6	0.00047	44730	21
2.	Numaligarh – Golaghat	2.65	0.00027	40560	11
3.	Numaligarh – Numaligarh Siding	6.25	0.00544	50370	274