



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

CEA Case No. : ASM-39		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C Transmission Line from Lower Kopili Hydro Electric Project to Sankardevnagar Grid S/s. [Length- 46.466 km] - Regd.		
S. No	Reference No.	Dated
(i)	AEGCL: AEGCL/GM (P&D)/PTCC/G-121/Part-6/1080	09.09.2025
(ii)	AEGCL: e-Mail	25.02.2026
(iii)	BSNL: DE/ER/PTCC/KHEP-SHD/offline/04	24.02.2026
(iv)	NEFR: N/146/2/10Pt.VIII(TC)	23.02.2026
(v)	Defense: B/46937/Sigs7(b)/3930	09.08.2024

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

EPR zone for 220 kV proposed S/s is mentioned below:

Name of the proposed Substation	Half diagonal	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 Switchyard	82	40	0.18	1291	826	2	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.

Digitally signed by
Suman Kumar Maharana
Date: 26-02-2026
12:58:57
Chief Engineer

To,

1.	Divisional Engineer (PTCC), Eastern Zone	BSNL, O/o QA & Inspection Circle QA Bhawan, EP-GP Block Sector-V, Salt lake, Kolkata	
2	GM (S&T)	North East Frontier Railway Maligaon, Guwahati	Annexure-I
3	GM (P&D), AEGCL	1 st Floor, Bijlee Bhawan Paltan Bazaar, Guwahati	

ANNEXURE-I

CEA Case No.: ASM-39			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV D/C Transmission Line from Lower Kopili Hydro Electric Project to Sankardevnagar Grid S/s..			Total Length: 46.466 km		
			S.R. Value: 15000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
North East Frontier Railway Letter No: N/146/2/10Pt.VIII(TC) Dated 23.02.2026					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Lanka R/s – Dhalpukhuri R/s	4.0	0.0093	19000	177
2	Lanka R/s – Habaipur R/s	2.5	0.0022	20500	45
3	Dhalpukhuri R/s – Hojai R/s	3.0	0.0036	22000	79