

I/29623/2023



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

CEA Case No. : UP-592		
Induced Voltage (IV) calculation for LILO of one circuit of 220 kV D/C Gorakhpur (PG) – Maharajganj at 220 kV Anand Nagar S/s. (Length: 34.958 Kms)		
S. No	Reference No.	Dated
(i)	2524/ETD-II(G)/LILO of 220kVD/C Gkp(PG)- Maharajganj line	09.12.2021
(ii)	CEA Letter	15.09.2022
(iii)	UPPTCL: e-mail	09.08.2023
(iv)	BSNL: DET/PTCC/ND/DV-10056/UP-1039/2023-24	23.05.2023
(v)	North Eastern Railway: NER-HQ0SndT(TELE)/31/2020-O/O PCSTE?HQ/NER	16.03.2022
(vi)	Defense: B/46937/Sigs 7(b)/2813	31.03.2022

The PTCC proposal submitted vide reference (i) and (iii) has been examined. The LF induction on Block and Telecom circuits of North Eastern Railway with respect to details furnished vide above reference (v) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of North Eastern Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET (NZ), BSNL vide reference (iv) and DG Signals, MoD vide reference (vi) have issued No Objection Certificate (NOC).

EPR zone for the proposed substation is mentioned below:

Name of proposed substation	Half diagonal distance, D/2 (mts)	Fault Current I (kA)	Resistance of earth mat, R (onhs)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220 kV Anand Nagar S/s	124.05	24	0.027	63	NA	NA	NA

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

ent
 Director 11.8.2023

1.	Divisional Engineer (PTCC), Northern Zone	BSNL, O/o PGM(North), QA & Inspection Circle D-Tax Building, Eastern Court, Janpath New Delhi-110001	
2.	GM (S&T)	O/o GM (S&T), Gorakhpur	Annexure-I
4.	Executive Engineer	ETD-II, UPPTCL, Balli Plant, Mohaddipur, Gorakhpur	Copy for information.

I/29623/2023

ANNEXURE-I

CEA Case No.: UP-592			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of one circuit of 220 kV D/C Gorakhpur (PG) – Maharajganj at 220 kV Anand Nagar S/s.			Total Length : 34.958 Kms		S.R. Value : 25,000 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 Eastern Railway: NER-HQ0SndT(TELE)/31/2020-O/O PCSTE?HQ/NER Dated 16.03.2022					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Gorakhpur Junction to Nakaha Jungle	Out of parallelism			
2	Nakaha Jungle to Anand Nagar Jn.	24.6	0.0255	13412	342
3	Anand Nagar Jn. To Bridgemanganj	8.8	0.0053	15842	84