



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-642		
Induced Voltage (IV) calculation for LILO of 400 kV Lucknow-Sultanpur Transmission Line at 400 kV Mohanlalganj S/s [Length – 6.807 km] – Regd.		
S. No	Reference No.	Dated
(i)	PGYTL: NR-III/PGYTL/TBCB/MLG/PTCC/320 (Received on 26.12.2023)	02.03.2023
(ii)	PGYTL: NR-III/ TBCB/MLG/TW-02/PTCC/715	17.01.2024
(iii)	BSNL: DET/PTCC/ND/DV-10282/UP-1156/2023-24/	03.01.2024
(iv)	Northern Railway: 342-SIG/1/PTCC/2023-24/01/01	08.01.2024

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and Telecom circuits of Northern 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 Northern Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET, BSNL NZ has issued No Objection Certificate (NOC) vide reference (iii).

EPR zone for 220 kV 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 kV Mohanlalganj S/s	168	31.5	0.1	1063	646	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (iii), no telephone exchange of BSNL is falling within the EPR zone of proposed 400 kV Substation.

Telecommunication details from DG Signals, MoD are pending. However, vide above reference (ii), PGYTL has shown urgency for charging the line and has requested for provisional PTCC clearance.

In view of the above, it is requested that provisional PTCC route approval may be issued for the subject transmission line under intimation to this office.

Encl.: As above

Chief Engineer

I/33466/2024 To,

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)	Northern Railway Baroda House, Delhi	
3.	Director General of Signals	General Staff Branch, Integrated HQ, MoD (army), Sena Bhawan, DHQ, PO, New Delhi- 110 105	With a request to provide details of Telecom assets/ NOC at the earliest for issuance of final RAC.
4.	Chief General Manager, TBCB PGYTL	CGM, TBCB PGYTL, Lucknow	Copy for information.

I/33466/2024

ANNEXURE-I

CEA Case No.: UP-642			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of 400 kV Lucknow-Sultanpur Transmission Line at 400 kV Mohanlalganj S/s			Total Length : 6.807 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.
Northern Railway Letter No : 342-SIG/1/PTCC/2023-24/01/01 Dated 08.01.2024					
<u>Affected Blocks & Telecom Circuits Details</u>					
<u>Lucknow-Raebarelli Section</u>					
1	Lucknow R/s to Utraitia R/s				-Out of Parallelism-
2	Utraitia R/s to Mohanlalganj R/s				-Out of Parallelism-
3	Mohanlalganj R/s to Kankaha R/s				-Out of Parallelism-
4	Kankaha R/s to Nigoohan R/s				-Out of Parallelism-
<u>Lucknow-Sultanpur Section</u>					
1	Bakkas R/s to Anoopganj R/s				-Out of Parallelism-
2	Anoopganj R/s to Rahmatnagar R/s				-Out of Parallelism-
3	Rahmatnagar R/s to Chandraulli R/s				-Out of Parallelism-