

I/33227/2024



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. : UP-613		
Induced Voltage (IV) calculation for PTCC proposal of LILO of 400 kV S/C Sarojini Nagar – Unnao Transmission Line at 400 kV Mohanlalganj S/s [Length– 38.432 km]-Regd.		
S. No	Reference No.	Dated
(i)	PGYTL: NR-III/PGYTL/TBCB/MLG/PTCC/323	02.03.2023
(ii)	PGYTL: NR-III/TBCB Project/MLG/468	13.06.2023
(iii)	PGYTL: e-Mail	18.01.2024
(iv)	BSNL: DET/PTCC/ND/DV-10283/UP-1157/2023-24/	03.01.2024
(v)	Northern Railway: 342-SIG/1/PTCC/2023-24/01/03	11.01.2024
(vi)	Defense: B/46937/Sigs7(b)/3301	21.07.2023

The PTCC proposal submitted vide reference (i), (ii) & (iii) has been examined. The LF induction on Block and Telecom circuits of Northern 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 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 and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iv) & (vi) respectively.

EPR zone for 400 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 (iv), no telephone exchange of BSNL is falling within the EPR zone of proposed 400 kV Substation.

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

Chief Engineer

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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.	CGM (TBCB) PGYTL	O/o CGM (TBCB) Mohanlalganj, PGYTL	Copy for information.

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ANNEXURE-I

CEA Case No.: UP-613			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of 400 kV S/C Sarojini Nagar – Unnao Transmission Line at 400 kV Mohanlalganj S/s			Total Length : 38.432 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/2023-24/01/03 Dated 11.01.2024					
<u>Affected Blocks & Telecom Circuits Details</u>					
<u>Lucknow-Raebarelli Section</u>					
1	Utraitia R/s to Mohanlalganj R/s	-Out of Parallelism-			
2	Mohanlalganj R/s to Kankaha R/s	4.5	0.0027	26850	73
3	Kankaha R/s to Nigohan R/s	-Out of Parallelism-			
4	Nigohan R/s to Shri Rajnagar R/s	-Out of Parallelism-			
<u>Unnao - Lucknow Section</u>					
5	Ajgain R/s to Jaitipur R/s	-Out of Parallelism-			
6	Jaitipur R/s to Harauni R/s	1.1	0.00035	25600	9
7	Harauni R/s to Piparsand R/s	-Out of Parallelism-			
8	Piparsand R/s to Amausi R/s	-Out of Parallelism-			