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

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CEA Case No. : DL-35		
Induced Voltage (IV) calculation for PTCC proposal of 400 kV M/C Maharanibagh to Narela Transmission Line. [Length- 28.389 km]-Regd		
S. No	**Reference No.**	**Dated**
(i)	PGCIL: PG/NR-1/Mbgh/TL/	08.09.2023
(ii)	PGCIL: e-Mail	03.07.2024
(iii)	BSNL**:** DET/PTCC/ND/DV-10313/ND-241/2023-24/	29.02.2024
(iv)	Northern Railway: 342-SIG/1/PTCC/2023-24/09/03	27.09.2023
(v)	Defense: B/46937/Sigs7(b)/3517/	17.11.2023

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of Northern Railway with respect to details furnished vide above reference (iv) have 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-PTCC NZ, BSNL and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iii) & (v).

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 Narela S/s	239	44.1	0.069	1452	880	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 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

Signed by Suman Kumar Maharana
Date: 04-07-2024 15:24:44
Chief Engineer

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, HQ's Office, Baroda House, New Delhi	
3.	DGM, Powergrid	400/220 kV Maharani Bagh S/s Behlopur Khader, New Delhi	For information

ANNEXURE-I

CEA Case No.: DL-35 **Name of the Power line**: 400 kV M/C Maharanibagh to Narela Transmission Line.	**Map Scale :** 1 cm= 500 m **Total Length :** 28.389 km **S.R. Value :** 5000 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/2023-24/09/03				Dated 27.09.2023	
Affected Blocks & Telecom Circuits Details					
1	Sonipat R/s to Rathdhana R/s	-Out of Parallelism-			
2	Rathdhana R/s to Narela R/s	-Out of Parallelism-			
3	Narela R/s to Holambi Kalan R/s	4.0	0.0023	19200	44
4	Holambi Kalan R/s to Badli R/s	-Out of Parallelism-			
5	Badli R/s to Adarsh Nagar R/s	-Out of Parallelism-			
6	Adarsh Nagar R/s to Azadpur R/s	-Out of Parallelism-			
7	Khekra R/s to Noli R/s	-Out of Parallelism-			