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
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CEA Case No. : UP-579		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C Shamli-Deoband Transmission Line [Length-46.413 km] -Regd.		
S. No	**Reference No.**	**Dated**
(i)	UPPTCL: 1267/ विपाखद्विस/ETD-II/SRE/PTCC	22.09.2021
(ii)	UPPTCL: 6653/ विपाखद्विस/सoपुर/ETD-II/SRE/	29.05.2023
(iii)	UPPTCL: 7034/ विपाखद्विस/ETD-II/SRE/	08.08.2023
(iv)	BSNL: DET/PTCC/ND/DV-9967/UP-998/2023-2024/	24.07.2023
(v)	Northern Railway: 342-SIG/1/PTCC/2021-22/10/01	01.10.2021
(vi)	Defense: B/46937/ Sigs 7(b)/2585	09.11.2021

The PTCC proposal submitted vide reference (i), (ii) & (iii) has been examined. The LF induction on block & telecom circuits of Northern Railway with respect to details furnished vide above references (v) has been computed. The voltages likely to be induced on paralleling block & 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 have issued No Objection Certificate (NOC) vide reference (iv) & (vi) respectively.

EPR zone for 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
220/132/33 kV Deoband S/S	53	28	0.2	631	400	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 Substation.

Taking above into consideration, necessary action regarding issuance of PTCC route approval may be taken.

Encl.: As above

Director

I/29686/2023 To,

1.	Div. Engr.(PTCC) Northern Zone	O/o PGM(N), QA & Inspection Circle D-Tax Building, Eastern Court, Janpath, New Delhi	
2.	GM (S&T)	HQ Office Northern Railway Baroda House, New Delhi	
3.	Exec. Engineer UPPTCL	Electricity Transmission Division-II U.P Power Trans. Corp. Ltd. 220 KV Sub Station, Saharanpur	Copy for information

ANNEXURE-I

CEA Case No.: UP-579 **Name of the Power line**: 220 kV D/C Shamli-Deoband Transmission Line.	**Map Scale** : 1 cm= 500 m **Total Length** : 46.413 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.
Northern Railway Letter No: : 342-SIG/1/PTCC/2021-22/10/01 Date: 01.10.2021					
Affected Blocks & Telecom Circuits Details					
(**AB**)	**Saharanpur-Ghaziabad**				
1	Bamanheri R/S to Rohana Kalan R/S	-Out of Parallelism-			
2	Rohana Kalan R/S to Deoband R/S	-Out of Parallelism-			
3	Deoband R/S to Talheri Buzurg R/S	5.2	0.006	21850	131
4	Talheri Buzurg R/S to Nagal R/S	-Out of Parallelism-			
5	Nagal R/S to Taprii R/S	-Out of Parallelism-			
(AC)	**Shamli-Saharanpur**				
6	Kandhla R/S to Shamli R/S	-Out of Parallelism-			
7	Shamli R/S to Hind R/S	-Out of Parallelism-			
8	Hind R/S to Thana Bhawan R/S	10	0.004	15950	64
9	Thana Bhawan R/S to Nanauta R/S	4.5	0.0009	16650	15
10	Nanauta R/S to Rampur Maniharan R/S	-Out of Parallelism-			