

I/31065/2023



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. : MP-467		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV DCDS Transmission Line from 400 kV Pithampur S/S to proposed 220 kV Depalpur S/S. [Length-37.46km]-Regd.		
S. No	Reference No.	Dated
(i)	MPPTCL: 04-01/PTCC/2366/TR-I/5691	16.09.2019
(ii)	MPPTCL: 04-02/PTCC/1202/2083	14.09.2023
(iii)	BSNL: PTCC/WR/2020-21/MP-642	23.02.2021
(iv)	Western Railway: SG.158/28/10	16.09.2021
(v)	Defense: B/4693/Sigs7(b)/1839	27.12.2019

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and Telecom circuits of BSNL & Western Railway has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL & Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I & Annexure-II respectively. The screening factors as applicable have been considered. DG Signals, MoD have issued No Objection Certificate (NOC) vide reference (v).

EPR zone for 220 kV S/S at Depalpur 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 kV Depalpur S/s	111	28	0.20	1335	845	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 220 kV Depalpur Substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line might be taken under intimation to this office.

Encl.: As above

Director

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To,

1.	Div. Engr.(PTCC) Western Zone	'D' Wing, III floor, Administrative Bldg., Telecom Complex, Juhu Tara Road Santa Cruz (West), Mumbai	
2.	GM (S&T)	Western Railway, Churchgate Mumbai	
3.	Chief Engineer (Procurement)- MPPTCL	Block No.3 Shakti Bhawan, Rampur Jabalpur- M.P	Copy for information .

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ANNEXURE-I

CEA Case No.: MP-467 Name of the Power line: 220 kV DCDS Transmission Line from 400 kV Pithampur S/S to proposed 220 kV Depalpur S/S.			Map Scale : 1 cm= 500 m Total Length : 37.46 km S.R. Value : 20000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL Letter No.: PTCC/WR/2020-21/MP-642 Dated 23.02.2021					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	100Pair- U/G cable Bagdon				IV Less than 430 Volts
2	200Pair- U/G cable Indrama to Kuki				
3	Bagdon to Sagore				
4	Loacl N/w U/G cable				

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ANNEXURE-II

CEA Case No.: MP-467			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV DCDS Transmission Line from 400 kV Pithampur S/S to proposed 220 kV Depalpur S/S.			Total Length : 37.46 km		
			S.R. Value : 20000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
Western Railway Letter No.: SG.158/28/10 Dated 16.09.2021					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Pithampur R/s to Sagore R/s	6.5	0.0099	17080	169
2	Sagore R/s to Gunawad R/s R/s	-Out of Parallelism-			