

I/32067/2023



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-464		
Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of both circuits of 220 kV Ujjain to Badod (line-2) from LILO point Tr. No. 23 at proposed 400 kV S/S Ujjain (Tajpur) (5.691 km) - regd.		
S. No	Reference No.	Dated
(i)	MPPTCL: 04-01/PTCC/2491-A/TR-I/5182	30.08.2019
(ii)	MPPTCL: 04-02/PTCC/2491-A/2671	10.11.2023
(iii)	Western Railway: SG.158/28/10 (L-216)	14.09.2021

Induced Voltage (IV) calculation in respect of subject PTCC proposal was issued vide this office letter of even number dated 29.07.2021.

In light of MPPTCL letter at reference (ii) above, it is found that IV on communication circuits of Western Railway were inadvertently issued considering Western Railway telecom details pertaining to other PTCC proposal. The voltages likely to be induced on paralleling communication circuits of Western Railway submitted vide reference (iii) above are enclosed at Annexure-I. The screening factors as applicable have been considered.

EPR details for the proposed substation is given below.

Name of the proposed SS	Half Diagonal Distance, D/2 (mts)	Fault Current, I (kA)	Resistance of earthmat, R (Ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
400/220/132 kV SS Ujjain	199.22	25.61	0.10	987.3	585.7	NIL	NIL

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

For Director

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
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2.	Dy. CSTE	Western Railway, O/o CSTE, S&T Dept., 5 th floor, Station Building, Chuech Gate, Mumbai - 400020	
3.	Chief Engineer (Plg. & Design)	MPPTCL, Block No. 3, Shakti Bhawan, Rampur, Jabalpur – 482008	Copy for information

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ANNEXURE-I

CEA Case No.: MP-464 Name of the Power line: LILO of both circuits of 220 kV Ujjain to Badod (line-2) from LILO point Tr. No. 23 at proposed 400 kV S/S Ujjain (Tajpur)			Map Scale : 1 cm= 500 m Total Length : 5.691 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.
Western Railway Letter No SG.158/28/10 (L-216) Date: 14.09.2021					
1	Ujjain 'C' cablin - Pingleshwar	Outside IV consideration zone			0
2	Pingleshwar - Tajpur	2.5	0.0002	8929	2
3	Tajpur – Tarana Road	Outside IV consideration zone			0