

I/32125/2023



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-466		
Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of both circuits of 220 kV DCDS Ujjain – Nagda line from Tr. No. 13 to 400 kV S/S Ujjain (10.171 km) - regd.		
S. No	Reference No.	Dated
(i)	MPPTCL: 04-01/PTCC/2491-B/TR-I/5595	12.09.2019
(ii)	MPPTCL: 04-02/PTCC/2491-A/2671	10.11.2023
(iii)	BSNL: IC/MBI/PTCC/MP-640	28.01.2020
(iv)	Western Railway: SG.158/28/10 (L-220)	24.01.2020
(v)	Defense: B/46937/Sigs 7(b)/1838	24.12.2019

The PTCC proposal submitted vide reference (i) has been examined. Vide reference (iii) above, BSNL has intimated that there are no BSNL cables within the vicinity of the transmission line. The LF induction on Block & Telecom details of Western Railway with respect to details furnished vide above reference (iv) has been computed. The voltage likely to be induced on paralleling Block & Telecom circuits of Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. Director General of Signals, MoD have issued NOC vide above reference (v) (enclosed as Annexure-II).

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

As per the details submitted by BSNL, no telecom exchanges are lying in the EPR zone of the proposed substation.

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-466 Name of the Power line: LILO of both circuits of 220 kV DCDS Ujjain – Nagda line from Tr. No. 13 to 400 kV S/S Ujjain			Map Scale : 1 cm= 500 m Total Length : 10.171 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-220) Date: 24.01.2020					
1	Naikheri – Sipra Bridge	Outside IV consideration zone			0
2	Sipra Bridge - Ujjain				0
3	Ujjain – Ujjain ‘C’ Cabin				0
4	Ujjain ‘C’ Cabin – Vikaram Nagar				0
5	Vikaram Nagar – Matana Buzurg				0
6	Ujjain - Pingleshwar	3.1	0.0003	8562	3
7	Pingleshwar - Tajpur	2.5	0.0002	9310	2
8	Tajpur – Tarana Road	Outside IV consideration zone			0

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Tele : 23019746

MP-466

Directorate General of Signals
 Signals 7
 General Staff Branch
 Integrated HQ of MoD, (Army)
 DHQ PO, New Delhi - 110011

28 Dec 2019

13 JAN 2020
 R.No. 17696

B/46937/Sigs 7(b)/1838/

Chief Engineer (Procurement)
 Madhya Pradesh Power Transmission Co. Ltd.
 Block No. 3, Shakti Bhawan, Rampur,
 Jabalpur(M.P.)482008

**CONSTRUCTION OF 220KV DCDS LINE FOR LILO OF BOTH CIRCUITS OF 220KV DCDS
 220KV UJJAIN-NAGDA LINE FROM TR.NO.-13 TO PROPOSED 400KV S/S UJJAIN-PTCC
 ROUTE APPROVAL**

1. Ref your letter No 04-01/PTCC/2491-B/TR-I/5595 dt 12 Sep 2019. (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(A Rawat)
 Maj
 GSO 1 (Comn)
 for SO-in-C

Enclosures : As above

Copy to :-

The Director (PTCC), CEA
 Power Communication Development Division
 NRPC Complex, 18-A Shaheed Jeet Singh Marg
 Katwaria Sarai, New Delhi - 110016

Divisional Engineer Telegraph (PTCC)
 O/o GM (North); BSNL, QA & Inspection Circle,
 CTS Compound, Africa Avenue Road,
 Netaji Nagar, New Delhi-110023

for information

SE-I	SE-II	SE-III
EE (S/S-I)	EE (TK-I)	EE (TR-I)
EE (S/S-II)	EE (TK-II)	EE (TR-II)
EE (S/S-III)	EE (TK-III)	EE (TR-III)
EE (S/S-IV)	EE (TK-IV)	EE (TK-VI)
EE (PNU)	EE (TK-V)	G.O./E&T.

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 20/12/21