

I/31517/2023



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-496		
Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of Birsinghpur – Satna 220 kV transmission line at Manpur (Bijouri) 220/33 kV S/s (18.649 km) - regd.		
S. No	Reference No.	Dated
(i)	M/s MP Power Transmission Package-II Ltd: MPPTP2L/JBP/PTCC/251	25.08.2022
(ii)	M/s MP Power Transmission Package-II Ltd: Email	25.10.2023
(iii)	BSNL: PTCC/WR/2023-24/MP-787	19.09.2023
(iv)	West Central Railway: WCR/N-HQ/120 PTCC-CORR-T-50-Pt-III Case -350	30.09.2022
(v)	Defense: B/46937/Sigs 7(b)/3018	17.10.2022

The PTCC proposal & details submitted vide reference (i) & (ii) have been examined. The LF induction on communication circuits of BSNL with respect to details furnished vide above reference (iii) have been computed. The voltages likely to be induced on paralleling communication cables of BSNL under Single Line to Ground fault conditions are enclosed at Annexure-I. The screening factors as applicable have been considered. Vide reference (iv) above, West Central Railway has issued No Objection Certification (NOC). Vide reference (v) above, Defense have issued NOC (enclosed as Annexure-II).

EPR details for the proposed substations are as follows:

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
220/33 kV Manpur S/s	81.8	35	0.87	5710.8	3750.2	274	167.3

As per the details submitted by BSNL, no telecom exchanges are falling within 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

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.	Manager (Projects)	MP Power Transmission Package-II Ltd, House No. 5/1006, Near Nachiketa School, Vijay Nagar, Jabalpur - 482002	Copy for information
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ANNEXURE-I

CEA Case No.: MP-496 Name of the Power line: LILO of Birsinghpur – Satna 220 kV transmission line at Manpur (Bijouri) 220/33 kV S/s			Map Scale : 1 cm= 500 m Total Length : 18.649 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.
BSNL Letter No PTCC/WR/2023-24/MP-787 Date: 19.09.2023					
1	Jaisingnagar Exchange				
(a)	Jaisingnagar Exch – Bus Stand JSN	Out of parallelism			
(b)	Bus Stand Jaisingnagar - Busti				