



सत्यमेव जयते

**भारत सरकार**  
**Government of India**  
**विद्युत मंत्रालय**  
**Ministry of Power**  
**केन्द्रीय विद्युत प्राधिकरण**  
**Central Electricity Authority**  
**विद्युत प्रणाली संचार विकास प्रभाग**  
**Power System Communication Development Division**  
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CEA Case No. : MRA-1228		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV S/C line on D/C towers from proposed 220/33 kV Pooling Substation at Ghat Nandur village, Bhoom taluk, Osmanabad district to proposed 400/220kV Kallam SS (ISTS), Osmanabad, Maharashtra (29.62km)-regd		
S. No	Reference No.	Dated
(i)	RSPPL/RTC1-W3/PTCC/220 kV line/23-24/E/002	05.09.2023
(ii)	BSNL: IC/MBI/PTCC/MRA-2606/04	16.04.2024
(iii)	Central Railway: N.153/PTCC/220kV/MAH-857	10.01.2024
(iv)	Defense: B/46937/Sigs 7(b)/3879	07.06.2024

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL with respect to details furnished vide above reference (ii) has been computed. The voltage likely to be induced on paralleling communication circuits of BSNL under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered.

EPR zone for the proposed substation 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
220/33 kV Pooling Substation at Ghat Nandur village, Bhoom taluk, Osmanabad	94.4	24	0.3374	1683	1082	15	NA
400/220kV Kallam SS (ISTS), Osmanabad	155.54	43.24	0.336	5100	3321	167	70

As per the details submitted by BSNL vide reference (ii) above, no telephone exchanges are falling 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

**Chief Engineer**

**To,**

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 <sup>st</sup> floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
3.	M/s ReNew Solar Power Private Limited	ReNew.Hub, Commercial Block-1, Zone-6, Golf Course Road, DLF City Phase-V, Gurugram-122009	Copy for information

**ANNEXURE-I**

<b>CEA Case No.:</b> MRA-1228		<b>Map Scale</b> : 1 cm= 500 m			
<b>Name of the Power line:</b> 220 kV S/C line on D/C towers from proposed 220/33 kV Pooling Substation at Ghat Nandur village, Bhoom taluk, Osmanabad district to proposed 400/220kV Kallam SS (ISTS), Osmanabad, Maharashtra		<b>Total Length</b> : 29.62 km		<b>S.R. Value</b> : 25000 Ohm-cm	
<b>S.No.</b>	<b>Telecom. Details</b>	<b>Length of Parallelism in Km.</b>	<b>Mutual Coupling in Ohms.</b>	<b>Effective Fault current in Amps.</b>	<b>I.V in Volts.</b>
BSNL: IC/MBI/PTCC/MRA-2606/04 Dated: 16.04.2024					
1	Armoured OFC C TXC BOO IZORA-BJC-BOO WTR IZORA-1 (6F OFC)	1.6	0.00626	16614	104