



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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<b>CEA Case No. : RAJ-747</b>		
<b>Induced Voltage (IV) Calculation for PTCC proposal of 220 kV S/C Transmission Line from 220/33 kV PSS of M/s Sunfree Energy RJP1 Private Limited (SERPL) to 220 kV Jalore SS of RVPN [Length-23.534 km]</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	SERJP1/Jalore/012	02.07.2024
(ii)	BSNL: DET/PTCC/NZ/BSNL-TD/DV-10440/Raj-1524/2024-25	17.12.2024
(iii)	North Western Railway: SG/158/NWR/PTCC/985	14.08.2024
(iv)	Defense: B/46937/Sigs 7(b)/4050	05.09.2024

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of North Western Railway with respect to details furnished vide above reference (iii) has been computed. The voltage likely to be induced on paralleling communication cables of North Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET (PTCC), NZ, BSNL vide reference (ii) and DG Signals, MoD vide reference (iv) has given their NOC for charging the line.

EPR Zones for proposed substations are mentioned 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
220/33 kV PSS of M/s Sunfree Energy RJP1 Private Limited (SERPL)	68.15	35	0.174	897	570	NA	NA

Taking above into consideration, necessary action for issuance of PTCC route approval (RAC) shall be taken under intimation to this office in the stipulated period as specified in PTCC Manual and subsequent CLPTCC meetings.

As per the decision taken in 111<sup>th</sup> and 112<sup>th</sup> CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing RAC.

Encl.: As above

**Chief Engineer**

**To,**

1.	Divisional Engineer (PTCC), Northern Zone	BSNL, O/o PGM(North), QA & Inspection Circle D-Tax Building, Eastern Court, Janpath New Delhi-110001	
2.	Dy. CSTE, North Western Railway	Headquarter office, Room No. 136, First Floor, Near Jawahar Circle, Jaipur - 302 017	
3.	M/s Sunfree Energy RJP1 Private Limited	Faridkot Road, Guruharsahai, Jalalabad, Firozpur, Punjab – 152 022	Copy for information

**ANNEXURE-I**

<b>CEA Case No.: RAJ-747</b> <b>Name of the Power line:</b> 220 kV S/C Transmission Line from 220/33 kV PSS of M/s Sunfree Energy RJP1 Private Limited (SERPL) to 220 kV Jalore SS of RVPN			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 23.534 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>
<b>North Western Railway: SG/158/NWR/PTCC/985 Date: 14.08.2024</b>					
1	Bishangarh to Jalor	Out of parallelism			
2	Jalor to Jagnathji Road	7.8	0.0041	15610	64
3	Jagnathji Road to Marwar Bagra	2.8	0.00045	22222	10