



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-726</b>		
<b>Induced Voltage (IV) calculation for PTCC proposal of 220 kV S/C Transmission Line from 220/33 kV PSS for 200 MW PV Solar Power Plant of M/s SPRNG Natural Power Source Private Limited, Chuli Village, Barmer to 400/220 kV RVPN GSS, Barmer [Length-8.341 km] -Regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	M/s Sprng Natural Power Source Private Ltd: SNPSPL/RJ/PTCC/2023-24/001	28.09.2023
(ii)	M/s Sprng Natural power Source Private Ltd: e-Mail	05.03.2024
(iii)	BSNL: DET/PTCC/ND/DV-10288/Raj-1446/2023-24/	11.01.2024
(iv)	North Western Railway: SG/158/NWR/PTCC/935	26.10.2023
(v)	Defense: B/46937/Sigs7(b)/3560	23.02.2024

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of North Western Railway with respect to details furnished vide above reference (iv) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits 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, BSNL NZ and DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iii) & (v) respectively.

EPR zone for 220 kV proposed S/S 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 kV PSS for 200 MW Solar PV Plant at Barmer	100	20	0.73	3295	2146	109	46

As per the Telecom Details submitted by BSNL vide above reference (iii), no telephone exchange of BSNL is falling within the EPR zone of proposed 220 kV Substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line may be taken under intimation to this office.

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.	GM (S&T)	North Western Railway HQ Office, Near Jawahar Circle, Jaipur	
3.	Authorized Personal Sprng Natural power Source Private Ltd	Unit No FF-48A, First Floor Omaxe Square Jasola, New Delhi	Copy for information.

ANNEXURE-I

<b>CEA Case No.:</b> RAJ-726			<b>Map Scale</b> : 1 cm = 500 m		
<b>Name of the Power line:</b> 220 kV S/C Transmission Line from 220/33 kV PSS for 200 MW PV Solar Power Plant of M/s SPRNG Natural Power Source Private Limited, Chuli Village, Barmer to 400/220 kV RVPN GSS, Barmer			<b>Total Length</b> : 8.341 km		
			<b>S.R. Value</b> : 50,000 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>
North Western Railway Letter No: SG/158/NWR/PTCC/935 Dated 26.10.2023					
<b><u>Affected Blocks &amp; Telecom Circuits Details</u></b>					
1	Jasai R/s to Barmer R/s	1.25	0.00068	23450	16
2	Barmer R/s to Utarlai R/s	-Out of Parallelism-			