



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

CEA Case No. : RAJ-753		
Induced Voltage (IV) calculation for PTCC proposal of LILO of both circuit of 765 kV D/C Ajmer-Chittorgarh Transmission Line at 765 kV Beawar S/s (Loop Out) [Length- 33.99 km]– Regd.		
S. No	Reference No.	Dated
(i)	Ref: SPTL/PKG-F/2024/121	20.07.2024
(ii)	Sterlite Power: e-Mail	11.11.2025
(iii)	BSNL: DE/PTCC/NZ/ BSNL-TD/DV-10624/RAJ-1652/2025-26	26.11.2025
(iv)	North Western Railway: SG/158/NWR/PTCC/989	28.08.2024
(v)	Defense: B/46937/Sigs7(b)/4073	30.10.2024

The PTCC proposal submitted vide reference (i) and (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. DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (v).

EPR zone for 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
765 kV Beawar S/s	332	44.1	0.0664	1929	1164	N.A	N.A

DET-PTCC, NZ BSNL vide reference (iii) has mentioned that only Un-Armored OFC and BTS are present within 8 km boundary and hence, IV computation is not done and no telephone exchange of BSNL is falling within the EPR zone of proposed Substation.

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 111th and 112th CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing RAC.

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Northern Zone	BSNL, O/o GM (North), QA & Inspection Circle D-Tax Building, Eastern Court, Janpath New Delhi-110001	
2.	GM (S&T) NWR	North Western Railway, Headquarter Office, Room No. 136, First Floor, Near Jawahar Circle, Jaipur - 302017	
3.	Chief Manager Beawar transmission Limited	Beawar transmission Limited House No: 112/1, Roop Nagar Jodhpur	Copy for information.

ANNEXURE-I

CEA Case No.: RAJ-753			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of both circuit of 765 kV D/C Ajmer-Chittorgarh Transmission Line at 765 kV Beawar S/s (Loop Out)			Total Length: 33.99 km		
			S.R. Value : 25000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
North Western Railway: SG/158/NWR/PTCC/989			Dated 28.08.2024		
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Makera R/s to Mangaliyawas R/s	Out of Parallelism			
2.	Mangaliyawas R/s to Kharwa R/s	4.0	0.0046	28500	131
3.	Kharwa R/s to Bngurgarm R/s	3.5	0.004	26000	104