



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. : GUJ-903</b>		
<b>Induced Voltage (IV) calculation for 220 kV S/C line on D/C and M/C towers from 220 kV Dhrangadhra SS (GETCO) to proposed 220 kV PSS of M/s Annecy Solar Private Limited at Malvan Village, Dhrangadhra, Surendranagar (Length: 16.88 km)</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	Annecy Solar/Solar Liner/PTCC/2024-25/001	30.08.2024
(ii)	Annecy Solar/PTCC/2025/02	21.01.2025
(iii)	BSNL: IC/MBI/PTCC/GUJ-2980	05.10.2024
(iv)	Western Railway: SG.158/28/12 (1419)	09.09.2024

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

EPR zone for proposed 220 kV 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 of M/s Annecy Solar Private Limited at Malvan Village, Dhrangadhra, Surendranagar	106.07	35	0.203	1647	1053	2	NA

As per the details submitted by BSNL, No Telephone exchange is falling within the EPR zone of proposed substation

Telecommunication details from DG Signals, MoD are awaited however, vide reference (ii) above, M/s ASPL have informed that all construction work of the solar plant, Grid Substation and connecting EHV underground cable has been completed and the line is awaiting charging due to want of PTCC approval. So as to charge the subject cited transmission line at the earliest, M/s ASPL has requested for issuance of provisional PTCC clearance and has given an undertaking that *"In case of any impact on the Telecom assets/ personnel of Defense due to charging of this transmission line, M/s Annecy Solar Private Limited will take all necessary action for its remediation and no other utility/ organization shall be held liable for this."*

Taking above into consideration, necessary action for issuance of provisional PTCC route approval may be taken under intimation to this office. LF induction on telecommunication circuits of Defense, will be communicated after the receipt of details from DG Signals, MoD.

**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	
2.	Director General of Signals	General Staff Branch, Integrated HQ, MoD (army), Sena Bhawan, DHQ, PO, New Delhi- 110 105	With a request to provide details of Telecom assets/ NOC at the earliest for IV calculation and issuance of final RAC.
3.	M/s Annecy Solar Private Limited	5 <sup>th</sup> Floor, North Tower, M3M Tee Point, Sector-65, Golf Course Extension Road, Gurugram- 122018	Copy for information.

ANNEXURE-I

<b>CEA Case No.: GUJ-903</b> <b>Name of the Power line:</b> 220 kV S/C line on D/C and M/C towers from 220 kV Dhrangadhra SS (GETCO) to proposed 220 kV PSS of M/s Annecy Solar Private Limited at Malvan Village, Dhrangadhra, Surendranagar			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 16.88 km <b>S.R. Value</b> : 3000 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>BSNL: IC/MBI/PTCC/GUJ-2980 Date: 05.10.2024</b>					
	<b>Dhagadhra Exchange</b>				
1.	Cable 1A	IV less than 430 V			
2.	Cable 2A				
3.	Cable 3A				
4.	Cable 4A				

**ANNEXURE-II**

<b>CEA Case No.: GUJ-903</b> <b>Name of the Power line:</b> 220 kV S/C line on D/C and M/C towers from 220 kV Dhrangadhra SS (GETCO) to proposed 220 kV PSS of M/s Annecy Solar Private Limited at Malvan Village, Dhrangadhra, Surendranagar			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 16.88 km <b>S.R. Value</b> : 3000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>Western Railway: SG.158/28/12 (1419) Date: 09.09.2024</b>					
1.	Ghanshyamgarh to Chuli	Out of parallelism			
2.	Vasadva to Haripar	Out of IV consideration zone			
3.	Haripar to Dhragandhra	Out of IV consideration zone			
4.	Dhragandhra to Ghanshyamgarh	2.2	0.00089	23596	21
5.	Surendranagar Jn. to Dhragandhra Jn.	Out of parallelism			