



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-869</b>		
<b>Induced Voltage (IV) calculation for PTCC proposal of 220 kV S/C transmission line from 400/220 kV Veloda SS of GETCO to 220/33 kV 300 MW Solar Pooling SS, Katara Village, Patan of M/s ABReL SPV 2 Ltd. (Length: 30.479 Kms) - regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	ABREL/2023-24/220kV/PTCC/001	08.12.2023
(ii)	BSNL: IC/MBI/PTCC/GUJ-WGJ100120245483	22.01.2024
(iii)	Western Railway: SG.158/28/12/1366	28.12.2023
(iv)	Defense: B/46937/Sigs 7(b)/3643	15.03.2024

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 references (ii) and (iii) respectively have been computed. The voltage 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. DG Signals, MoD have issued No Objection Certificate (NOC) vide reference (iv).

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 300 MW Solar Pooling SS, Katara Village, Patan of M/s ABReL SPV 2 Ltd	84.9	28	0.45	2403	1561	68	22

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.

**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.	GM (S&T)	Office of PCSTE, S&T Deptt., 5 <sup>th</sup> Floor, Station building, Churchgate, Mumbai – 400 020	
3.	M/s ABReL SPV 2 Ltd.	11 <sup>th</sup> Floor, Dr. Annie Besant Road, Worli, Mumbai – 400 030	Copy for information

**ANNEXURE-I**

<b>CEA Case No.: GUJ-869</b>		<b>Map Scale</b> : 1 cm= 500 m			
<b>Name of the Power line:</b> 220 kV S/C transmission line from 400/220 kV Veloda SS of GETCO to 220/33 kV 300 MW Solar Pooling SS, Katara Village, Patan of M/s ABReL SPV 2 Ltd.		<b>Total Length</b> : 30.479 km			
		<b>S.R. Value</b> : 15000 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 Letter No IC/MBI/PTCC/GUJ-WGJ100120245483 Date: 22.01.2024</b>					
1	Nana Exchange to Local – 200*1 P				IV less than 430 V
2	Sariyad Exchange to Local – 50*1 P				
3	Kosa Exchange to Local – 50*1 P				
4	Dudha Rampura Exchange to Local – 50*1 P				

**ANNEXURE-II**

<b>CEA Case No.: GUJ-869</b>			<b>Map Scale</b> : 1 cm= 500 m		
<b>Name of the Power line:</b> 220 kV S/C transmission line from 400/220 kV Veloda SS of GETCO to 220/33 kV 300 MW Solar Pooling SS, Katara Village, Patan of M/s ABReL SPV 2 Ltd.			<b>Total Length</b> : 30.479 km		
			<b>S.R. Value</b> : 15000 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>Western Railway: SG.158/28/12/1366 Date: 28.12.2023</b>					
1	Khalipur to Kansa	0.6	0.000054	18518	1
2	Kansa to Wayad	0.9	0.00098	26530	26
3	Wayad to Shihori	Out of parallelism			