



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-899</b>		
<b>Induced Voltage (IV) Calculation for PTCC proposal of 220 kV D/C line from 220/33 kV S/s of AEPL- DVC to 765/400 kV Lakadia S/s (Length: 16.0 km)</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	DVC/300MW/S.N/01	06.08.2025
(ii)	BSNL: IC/MBI/PTCC/GUJ-2988	22.11.2024
(iii)	Western Railway: SG.158/28/12/1412	21.11.2024
(iv)	Defense: B/46937/Sigs7(b)/4100	15.10.2024

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 (ii) and (iii) 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.

DET, PTCC (WZ), BSNL vide reference (ii) and DG Signals, MoD vide above reference (iv) have issued their No Objection Certificate (NOC) for charging of 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 S/s of AEPL- DVC	102.8	18.2	0.34	1377	876	NA	NA

As per the details submitted by BSNL, No Telephone exchange 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 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), Western Zone	QA & Inspection circle, 1st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054
2.	GM (S&T), Western Railway	S&T Department, 5 <sup>th</sup> Floor, Station Building, Church Gate, Mumbai – 400 020
3.	M/s Avaada Energy Private Limited	910/19, Suryakiran, Kasturba Gandhi Marg, New Delhi – 110 001

**ANNEXURE-I**

<b>CEA Case No.: GUJ-899</b> <b>Name of the Power line:</b> PTCC proposal of 220 kV D/C line from 220/33 kV S/s of AEPL- DVC to 765/400 kV Lakadia S/s			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 16 kms <b>S.R. Value</b> : 2000 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-2988 Date: 22.11.2024</b>					
1.	Adhoi Exchange local (50 x 1P)	IV less than 430 V			
2.	Adhoi Exchange local (20 x 1P)	IV less than 430 V			
3.	Adhoi Exchange local (30 x 1P)	IV less than 430 V			

**ANNEXURE-II**

<b>CEA Case No.: GUJ-899</b> <b>Name of the Power line:</b> PTCC proposal of 220 kV D/C line from 220/33 kV S/s of AEPL- DVC to 765/400 kV Lakadia S/s			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 16 kms <b>S.R. Value</b> : 2000 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.158/28/12/1412 Date: 21.11.2024</b>					
1.	Vondh to Samakhiyali	Out of IV consideration zone			
2.	Samakhiyali to Lakadiya	Out of IV consideration zone			
3.	Lakadiya to Shivilakha	Out of IV consideration zone			
4.	Shivilakha to Chitrod	Out of IV consideration zone			