

I/31264/2023



सत्यमेव जयते



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**भारत सरकार**  
**Government of India**  
**विद्युत मंत्रालय**  
**Ministry of Power**  
**केन्द्रीय विद्युत प्राधिकरण**  
**Central Electricity Authority**  
**विद्युत संचार विकास प्रभाग**  
**Power Communication Development Division**

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CEA Case No. : GUJ-848		
Induced Voltage (IV) calculation for PTCC proposal of 765 kV D/C Khavda – Bhuj Transmission Line (108.625 Kms)		
S. No	Reference No.	Dated
(i)	Khavda Bhuj Transmission Ltd. Letter No. KBTL/2022-23/85 (received on 09.01.2023)	17.09.2022
(ii)	Khavda Bhuj Transmission Ltd correspondence: NIL (received on 21.02.2023)	NIL
(iii)	BSNL: IC/MBI/PTCC/WGJ-130820235166-020620234977-010920224216-090820235178-190920235180-190920235179-130820235165-010920235208-130820235167-190920235290	19.09.2023
(iv)	Western Railway: SG.158/28/1200(E-226530) (received on 09.01.2023)	03.10.2022
(v)	Defense: B/46937/Sigs 7(b)/3466 (received via e-mail from KBTL on 26.10.2023)	13.09.2023

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

GM (S&T), Western Railway, vide above reference (iv) and DG Signals, MoD, vide above reference (v) has issued their No Objection certificate (NOC) for charging of the line.

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
765/400 kV Khavda Substation	152	37.8	0.5	6529	4268	258	135

As per the details submitted by BSNL vide reference (iii) above, no telephone exchanges are falling in the EPR zone of the proposed 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

**Director**

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**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.	General Manager (Projects)	Khavda Bhuj Transmission Limited, RS No. 817P, Plot No. 167, Shiv Aradhna Society, Near Seven Sky Mall, Air Port road, Bhuj – 370 001	Copy for information

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ANNEXURE-I

CEA Case No.: GUJ-848 Name of the Power line: 765 kV D/C Khavda – Bhuj Transmission Line			Map Scale : 1 cm= 500 m Total Length : 108.625 km S.R. Value : 7500 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL: IC/MBI/PTCC/WGJ-130820235166-020620234977-010920224216-090820235178-190920235180-190920235179-130820235165-010920235208-130820235167-190920235290 Dated: 19.09.2023					
<b>(I) Khavda Exchange</b>					
1	Khavda Exchange local (1A)	IV less than 430 V			
2	Khavda Exchange local (2A)				
3	Khavda Exchange local (3A)				
<b>(II) Mobile Tower BTS</b>					
1	Dharamshala Mobile Tower BTS	IV Calculation not required			
2	Khari Mobile Tower BTS				
3	Dhorabana Mobile Tower BTS				
4	Sumrasar Mobile Tower BTS				