



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. : GUJ-866		
Induced Voltage (IV) calculation for PTCC proposal of portion of 400 kV D/C Banaskantha – Prantij Transmission Line being constructed by Powergrid (from Banaskantha to Sankhari) [Length- 21.888 km]– Regd.		
S. No	Reference No.	Dated
(i)	PGCIL: WRTS-II/BK/TL/KEC/PTCC/969	14.11.2023
(ii)	PGCIL: e-Mail	20.02.2025
(iii)	BSNL: IC/MBI/PTCC/GUJ-2955	25.06.2024
(iv)	Western Railway: SG/158/28/12(1398)	06.06.2024
(v)	Defense: B/46937/Sigs7(b)/4290	13.01.2025

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL & Western Railway with respect to details furnished vide above reference (iii) & (iv) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL & Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I & Annexure-II respectively. The screening factors as applicable have been considered. DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (v).

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.

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Bldg., Santa Cruz (West), Mumbai-400054	Annexure-I
2.	GM (S&T) Western Railway	O/o PCSTE, S&T Dept. Western Railway Church gate, Mumbai	Annexure-II
3.	GM- PGCIL	400/220 kV S/s, Mudetha Village Mudetha-Arnivada Road, Banaskantha	

ANNEXURE-I

CEA Case No.: GUJ-866 Name of the Power line: Portion of 400 kV D/C Banaskantha – Prantij Transmission Line being constructed by Powergrid (from Banaskantha to Sankhari).			Map Scale : 1 cm= 500 m Total Length : 21.888 km S.R. Value : 5000 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/GUJ-2955 Dated 25.06.2024					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Bhidli Excg.- Local 800x1 pair				IV Less than 430 V
2.	Bhidli Excg.- Local 400x2 pair				
3.	Bhidli Excg.- Local 100x4 pair				
4.	Bhidli Excg.- Local 50x4 + 20x4 pair				
5.	Bhidli Excg.- Local 200x2 pair				
6.	Ratanpura Excg.- Local 400x2 pair				
7.	Vadaval Ratanpura Excg.- Local 200x2 pair + 50x2P + 20x2P				
8.	Peplu Excg.- Local 200x2 pair				
9.	Peplu Excg.- Local 100x1 pair + 50x2P				
10.	Nesda Juna Excg.- Local 100x1 pair + 50x1P				
11.	Nesda Juna Excg.- Local 50x2P				

ANNEXURE-II

CEA Case No.: GUJ-866 Name of the Power line: Portion of 400 kV D/C Banaskantha – Prantij Transmission Line being constructed by Powergrid (from Banaskantha to Sankhari).			Map Scale : 1 cm= 500 m Total Length : 21.888 km S.R. Value : 5000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
Western Railway: SG/158/28/12(1398) Dated 06.06.2024					
<u>Affected Blocks & Telecom Circuits Details</u>					
1.	Jasali R/s to Bhildi R/s	-Out of Parallelism-			
2.	Bhildi R/s to Lorwada R/s	-Out of Parallelism-			
3	Bhildi R/s to Shihori R/s	5.5	0.0017	18500	31
4	Shihori R/s to Wayad R/s	4.0	0.0134	14200	190
5	Wayad R/s to Kaansa R/s	2.0	0.0011	22000	24
6	Kaansa R/s to Khalipur R/s	-Out of Parallelism-			