



सत्यमेव जयते

**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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<b>CEA Case No. : MRA-1224</b>		
<b>Induced Voltage (IV) calculation for 765 kV D/C Navsari (New) - Padghe Transmission Line [Length- 224.927 km]– Regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	POWERGRID: WRTS-1/JWR/TLC/765kV/NOC/265	29.07.2023
(ii)	POWERGRID: WRHQ-II/Navsari/PTCC/Navsari-Padghe/159	09.08.2023
(iii)	POWERGRID: e-Mail	02.12.2024
(iv)	BSNL: IC/MBI/PTCC/MRA-2591/03 (NOC)	05.08.2024
(v)	BSNL: IC/MBI/PTCC/GUJ-2980-2983	05.10.2024
(vi)	Central Railway: N.153/PTCC/765kV/MAH-844	06.11.2023
(vii)	Western Railway: SG/158/28/12 (1359)	18.10.2023
(viii)	Defense: B/46937/Sigs7(b)/3478	22.11.2023
(ix)	Defense: B/46937/Sigs7(b)/4046	12.09.2024

The PTCC proposals submitted vide reference (i), (ii) and (iii) has been examined. The LF induction on Block and Telecom circuits of BSNL with respect to details furnished vide above reference (v) have been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL under Single Line to Ground fault condition are enclosed at Annexure-I.

The LF induction on Block and Telecom circuits of Central Railway & Western Railway with respect to details furnished vide above reference (vi) & (vii) have been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of Central Railway & Western Railway under Single Line to Ground fault condition are enclosed at Annexure-II and Annexure-III respectively.

The screening factors as applicable have been considered. DG Signals, MoD vide reference (viii) & (ix) have issued No Objection Certificate (NOC). DET, PTCC WZ, BSNL for a part of transmission line have issued No Objection Certificate (NOC) vide reference (iv).

EPR Zones for proposed substation is 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
765/400kV Navsari S/s	268	44.1	0.019	279	94	NA	NA

As per the Telecom Details submitted by BSNL vide above reference (iv) & (v) no telephone exchange of BSNL is falling within the EPR zone of proposed Substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line might be taken under intimation to this office.

Encl.: As above

**Chief Engineer**

**To,**

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 <sup>st</sup> floor, D- wing, BSNL Bldg., Santa Cruz (West), Mumbai-400054	
2.	GM (S&T) Western Railway	O/o PCSTE, S&T Dept. Western Railway Church gate, Mumbai	
3.	GM (S&T) Central Railway	O/o PCSTE, S&T Dept. Central Railway CST, Mumbai	
4.	DGM-TLC POWERGRID	765/400 kV GIS POWERGRID Vashind, Thane	Copy for information.
5.	GM POWERGRID	765/400 kV Navsari, Karpada TLC Vapi	Copy for information.

**ANNEXURE-I**

<b>CEA Case No.:</b> MRA-1224 <b>Name of the Power line:</b> 765 kV D/C Navsari- Phadge Transmission Line.			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 225 km <b>S.R. Value</b> : 10000 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-2983      Dated 05.10.2024**Affected Blocks & Telecom Circuits Details**

1.	VAL040-Ronnel T.E	IV Less than 430 V
2.	VAL045-Faldhara T.E	
3.	VAL038-Khergaam T.E	
4.	Ganderi T.E	
5.	Bilamor Copper Connection	
6.	Amalgad Copper Connection	
7.	Navsari Copper connection	
8.	Murali Exchange App7	
9.	Kabilpur Exchange App25	

**ANNEXURE-II**

<b>CEA Case No.:</b> MRA-1224 <b>Name of the Power line:</b> 765 kV D/C Navsari- Phadge Transmission Line.			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 225 km <b>S.R. Value</b> : 10000 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>Central Railway:</b> N.153/PTCC/765kV/MAH-844      Dated 06.11.2023					
<b><u>Affected Blocks &amp; Telecom Circuits Details</u></b>					
1.	Titwala R/s to Khadawali R/s	-Out of Parallelism-			
2.	Khadawali R/s to Amangaon R/s	-Out of Parallelism-			

**ANNEXURE-III**

<b>CEA Case No.:</b> MRA-1224 <b>Name of the Power line:</b> 765 kV D/C Navsari- Phadge Transmission Line.			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 225 km <b>S.R. Value</b> : 10000 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(1359)</b>					
Dated 18.10.2023					
<b><u>Affected Blocks &amp; Telecom Circuits Details</u></b>					
1.	Valsad R/s to Dungri R/s	-Out of Parallelism-			
2.	Dungri R/s to Bilimora R/s	2.0	0.0025	18600	47
3.	Bilimora R/s to Amalsad R/s	-Out of Parallelism-			
4	Amalsad R/s to Ancheli R/s	-Out of Parallelism-			
5	Ancheli R/s to Vedchha R/s	-Out of Parallelism-			
6	Vedchha R/s to Navsari R/s	-Out of Parallelism-			
7	Navsari R/s to Maroli R/s	2.5	0.0043	20400	88
8	Maroli R/s to Sachin R/s	-Out of Parallelism-			
9	Sachin R/s to Bhestan R/s	-Out of Parallelism-			