

I/32737/2023



**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. : KNK-1037		
<b>Induced Voltage (IV) Calculation for PTCC proposal for 33 kV S/C OH line for Feeder No. 1 on RSJ Pole with AL59 Dog conductor and AL59 TW (Eco) Panther conductor from 220/33 kV Vena Energy Vidyuth Private Limited S/s at Jumalapura Village, Kushtagi to proposed 33 kV unit substation (Length: 10.0 km)</b>		
S. No	Reference No.	Dated
(i)	VENA/33kVPTCC/FED01	30.05.2023
(ii)	BSNL: SR-PTCC/SKT5086/02	19.12.2023
(iii)	South Western Railway: SG/SWR/PTCC/KNK1037/2609	06.11.2023
(iv)	Defense: B/46937/Sigs 7(b)/3428	01.09.2023

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

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 Vena Energy Vidyuth Private Limited S/s at Jumalapura Village, Kushtagi	113.1	28	0.2032	1383	877	NA	NA
33/0.69 kV Unit substation for Feeder No. 1	12.7	20	0.6184	353	229	10	3

As per the details submitted by BSNL vide reference (ii) above, no telephone exchange is falling in the EPR zone of the proposed substations.

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

**Director**

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**To,**

1.	Divisional Engineer (PTCC)	O/o CGM, QA & Inspection circle, 2 <sup>nd</sup> Floor, Sanchar complex, WMS compound, Jayanagar, 5 <sup>th</sup> block, 9 <sup>th</sup> main, 47 <sup>th</sup> cross, Bengaluru- 560 041	
2.	M/s Vena Energy Vidyuth Private Limited	2/1, First Floor, Embassy Icon Annexe Infantry Road, Bengaluru	Copy for information

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ANNEXURE-I

CEA Case No.: KNK-1037					
Name of the Power line: 33 kV S/C OH line for Feeder No. 1 on RSJ Pole with AL59 Dog conductor and AL59 TW (Eco) Panther conductor from 220/33 kV Vena Energy Vidyuth Private Limited S/s at Jumalapura Village, Kushtagi to proposed 33 kV unit substation		Map Scale : 1 cm= 500 m			
		Total Length : 10 km			
		S.R. Value : 20000 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 Letter No: SR-PTCC/SKT5086/02 Date: 19.12.2023					
<b>I</b>	<b>Tavaragera Telephone Exchange</b>				
1	Exchange to Menadhhal road (T-T1)	Out of parallelism			
2	Exchange to Kushtagi road (T-T2)				
3	Exchange to KEB office (T-TA)				
4	KEB office to Temple road (TA-T3)				
5	Exchange to Police Station (T-T4)				
6	KEB office to Killharhati road (TA-T5)				
7	KEB office to Sindhanoor road (TA-T6)				
<b>II</b>	<b>Hiremanpura Telephone Exchange</b>				
1	Exchange to Navalhalli road (H-H1)	IV less than 430 V			
2	Exchange to Gumagera road (H-H2)				
3	Exchange to MG road (H-H2)				