



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

CEA Case No. : KNK-1052		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220kV S/C line from 204MW Wind Project Switchyard at Koppal to Pooling Station of M/s Serentica Renewables India 1 Pvt. Ltd.(50 km)- regd.		
S. No	Reference No.	Dated
(i)	Serentica: Serentica/PTCC/2023-24/26	29.09.2023
(ii)	BSNL: SR-PTCC/SKT 5453/02	12.03.2024
(iii)	South Western Railway: SG/SWR/PTCC/SERENTICA/2649	08.02.2024
(iv)	Defense: B/46937/Sigs 7(b)/3549	23.02.2024

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and Telecom circuits of BSNL and South Western Railway with respect to details furnished vide above reference (ii) and (iii) respectively has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL and South 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.

DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iv) (attached as Annexure -III).

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
220kV Serentica Solar PSS	82.23	35	0.1616	999	633	NA	NA
220kV Serentica Wind PSS	101.5	28	0.257	1597	1022	3	NA

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

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

Encl.: As above

Chief Engineer,

To,

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle, 2 nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5 th Block, 9 th Main, 47 th Cross, Bangalore-560041	
2.	PCSTE/SWR	Principal Chief Signal & Telecom Engineer, Rail Soudha, Gadag Road, Hubballi-580020	
3.	Serentica Renewables India 1 Pvt Ltd	DLF Cyber Park, 9 th floor, Tower-B Udyog Vihar, Phase-III, Sector-20, Gurugram-122008, Haryana	

ANNEXURE-I

CEA Case No.: KNK-1052 Name of the Power line: 220kV S/C line from 204MW Wind Project Switchyard at Koppal to Pooling Station of M/s Serentica Renewables India 1 Pvt. Ltd.			Map Scale : 1 cm= 500 m Total Length : 50 km S.R. Value : 50000 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/SKT 5453/02 Dated 12.03.2024					
A1-A2	KINNAL T/E to BUS STAND ROUTE	0.717	0.0106	20668	219
B1-B2	HALAGERA T/E to PGB BANK ROUTE	IV less than 430V			
K-1-K2	IRAKALGADA T/E to BUS STAND				
L1-L2	KAVLOOR T/E to PGB BANK	Out of Parallelism			
C1-C2	BANNIKOPPA TE TO PGB CABLE	Out of Parallelism			
D1-D2	TADKAL T/E TO SBI CABLE	IV less than 430V			
E1-E2	BENAKAL T/E TO INDIVIDUAL HOUSES				
F1-F2	MANGALORE TE TO PGB CABLE				
G1-G2	BEVOOR EXCHANGE TO PGB CABLE				
H1-H2	GUNALU TE CABLE	0.331	0.006	4491	30
I1-I2	HIREVNKAL KUNTA TE TO PGB CABLE	IV less than 430V			
J1-J2	TALAKERI TE TO SUBSCRIBERS				

ANNEXURE-II

CEA Case No.: KNK-1052 Name of the Power line: 220kV S/C line from 204MW Wind Project Switchyard at Koppal to Pooling Station of M/s Serentica Renewables India 1 Pvt. Ltd.			Map Scale : 1 cm= 500 m Total Length : 50 km S.R. Value : 50000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

SWR Letter No: SG/SWR/PTCC/SERENTICA/2649 Dated 08.02.2024					
1	BNA-TLKL	3.358	0.0009	30326	27
2	TLKL-BNP	3.987	0.0033	27853	92
3	BNP-KBL	5.387	0.0101	23693	240
4	TLKL-KANR	2.18	0.0006	29008	17