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
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CEA Case No . : KNK-1077		
Induced Voltage (IV) Calculation for PTCC proposal of 33 kV S/C Feeder-02 on RSJ poles with partly AL-59 Dog & partly AL-59 Panther conductor from proposed 220/33 kV 300 MW Wind Energy Pooling Substation, Hire Mannapur, Kushtagi Taluk, Koppal to 33 kV Unit Substation of Wind turbine Generators situated near Kengunti & Bijkal in Kushtagi (Length: 14.572 km)- regd		
S. No	**Reference No.**	**Dated**
(i)	GIWEL/33 kV PTCC/F-2	20.02.2024
(ii)	GIWEL E-mail	26.04.2024
(iii)	Undertaking for provisional: NIL (received via e-mail dated 25.04.2024))	NIL
(iv)	BSNL: SR-PTCC/SKT 5758/2	24.04.2024
(v)	South Western Railway: SG/SWR/PTCC/KNK1077/2705	16.04.2024

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 (iv) has 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 vide 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
220/33 kV 300 MW Wind Energy Pooling Substation, Hire Mannapur, Kushtagi Taluk, Koppal	86.65	37.68	0.0386	206	107	NA	NA
33 kV Unit Substation	7.84	18	0.5482	169	109	3	NA

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

Telecommunication details from DG Signals, MoD are awaited, however, vide reference (ii) above, M/s GIWEL have informed that all construction related work of the transmission line has completed and the line is awaiting charging due to want of PTCC approval. So as to charge the subject cited transmission line as per schedule, M/s GIWEL has requested for issuance of provisional PTCC clearance and has submitted an undertaking that in case of any impact on telecom asset/ personnel of Defense due to charging of this transmission line, M/s GIWELL shall take all remedial action.

Taking above into consideration, necessary action for issuance of provisional PTCC route approval may be taken under intimation to this office. LF induction on telecommunication circuits of Defense, will be communicated after the receipt of details from DG Signals, MoD.

Encl.: As above

Signed by Suman Kumar Maharana
Date: 26-04-2024 17:11:36

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Southern Zone	O/o Chief General Manager, Core Network Transmission- South, No.11, Link Road, Ganapathy Colony, Guindy Industrial Estate, Guindy, Chennai.600 032.	
2.	Director General of Signals	General Staff Branch, Integrated HQ, MoD (army), Sena Bhawan, DHQ, PO, New Delhi- 110 105	With a request to provide details of Telecom assets/ NOC at the earliest for IV calculation and issuance of final RAC.
3.	M/s Green Infra Wind Energy Limited	5th floor, Tower C, Building No. 8, DLF Cybercity, Gurugram – 122 002	For information

ANNEXURE-I

CEA Case No.: KNK-1077 **Name of the Power line**: 33 kV S/C Feeder-02 on RSJ poles with partly AL-59 Dog & partly AL-59 Panther conductor from proposed 220/33 kV 300 MW Wind Energy Pooling Substation, Hire Mannapur, Kushtagi Taluk, Koppal to 33 kV Unit Substation of Wind turbine Generators situated near Kengunti & Bijkal in Kushtagi			**Map Scale :** 1 cm= 500 m **Total Length :** 14.572 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/SKT 5758/2 Date: 24.04.2024					
Hiremannapur Telephone Exchange					
1.	Hiremannapur TE to Hiremannapur Local	Out of parallelism			