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-1065		
Induced Voltage (IV) Calculation for PTCC proposal of 220 kV S/C line on Double circuit from proposed 220/33 kV Pooling Station at Alwandi village, Koppal to proposed 220 kV common Pooling switching station at Talakal village, Koppal (Length: 10.651 kms)		
S. No	**Reference No.**	**Dated**
(i)	KSPPL/KOPPAL/CEA/PTCC/17012024	17.01.2024
(ii)	BSNL: SR-PTCC/SKT5814/2	08.05.2024
(iii)	South Western Railway: SG/SWR/PTCC/KNK1065/2701	19.04.2024
(iv)	Defense: B/46937/Sigs7(b)/3646 (received on 04.06.2024)	16.05.2024

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL and South Western Railway with respect to details furnished vide above references (ii) and (iii) respectively have been computed. The voltage likely to be induced on paralleling communication cables 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 vide above reference (iv) (enclosed as Annexure-III) have issued their No Objection Certificate (NOC) for charging of the line.

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 Pooling Station at Alwandi village, Koppal	88	44.7	0.0428	304	171	NA	NA
220 kV common Pooling switching station at Talakal village, Koppal	76.6	32.85	0.3918	2216	1440	64	22

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

Encl.: As above

Signed by Suman Kumar Maharana
Date: 10-06-2024 16:58:26
Chief Engineer

To,

1.	Divisional Engineer (PTCC)	O/o CGM, QA & Inspection circle, 2nd Floor, Sanchar complex, WMS compound, Jayanagar, 5th block, 9th main, 47th cross, Bengaluru- 560 041	
2.	GM (S&T), South Western Railway	South Western Railway Headquarter, Rail Soudha, Hubbali – 580 023	
3.	M/s Kleio Solar Power Private Limited	9th Floor, My Home Twitza, Plot No. 30/A, TSIIC Hyderabad Knowledge City, Raidurg, Hyderabad	Copy for information

ANNEXURE-I

CEA Case No.: KNK-1065 **Name of the Power line**: 220 kV S/C line on Double circuit from proposed 220/33 kV Pooling Station at Alwandi village, Koppal to proposed 220 kV common Pooling switching station at Talakal village, Koppal			**Map Scale :** 1 cm= 500 m **Total Length :** 10.651 km **S.R. Value :** 25000 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/SKT5814/2 Date: 08.05.2024					
1	Alawandi TE to Market	Out of parallelism			
2	Betagera TE to main circle				

ANNEXURE-II

CEA Case No.: KNK-1065 **Name of the Power line**: 220 kV S/C line on Double circuit from proposed 220/33 kV Pooling Station at Alwandi village, Koppal to proposed 220 kV common Pooling switching station at Talakal village, Koppal			**Map Scale :** 1 cm= 500 m **Total Length :** 10.651 km **S.R. Value :** 25000 Ohm-cm		
S.No.	**Telecom. Details**	**Length of Parallelism in Km.**	**Mutual Coupling in Ohms.**	**Effective Fault current in Amps.**	**I.V in Volts.**
South Western Railway: SG/SWR/PTCC/KNK1065/2701 Date: 19.04.2024					
1	SOQ to BNA	Out of parallelism			
2	BNA to TLKL				
3	TLKL to BNP				
4	BNP to KBL				
5	TLKL to KANR				