



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-1047		
Induced Voltage (IV) calculation in respect of PTCC proposal for 400KV D/C line from 400/220kV SS at Mushigeri in Gadag to 400/200kV SS at Talakal in Koppal (49.781 km)-regd.		
S. No	Reference No.	Dated
(i)	ReNew: GTL II-A/PTCC/2023-24/39	13.07.2023
(ii)	ReNew E-mail:	14.08.2024
(iii)	BSNL: SR-PTCC/SKT 5544/02	02.02.2024
(iv)	South Western Railway: SG/SWR/PTCC/GTL-II/2599	11.10.2023
(v)	Defense: B/46937/Sigs 7(b)/3505	19.10.2023

The PTCC proposal submitted vide reference (i) and (ii) 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 (iii) and (iv) 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 (v) (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 (k A)	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
400/220kV Mushigeri SS, Gadag	132.07	47.88	0.11403	1545	977	NA	NA
400/220kV Talakal SS, Koppal	178	63	0.0233	430	224	NA	NA

As per the details submitted by BSNL vide reference (iii) 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.	M/s Gadag II-A Transmission Ltd.	138, Ansal Chambers-II, Bhikaji Cama Place, New – Delhi-110066	Copy for information

ANNEXURE-I

CEA Case No.: KNK-1047 Name of the Power line: 400KV D/C line from 400/220kV SS at Mushigeri in Gadag to 400/200kV SS at Talakal in Koppal			Map Scale : 1 cm= 500 m Total Length : 49.781 km S.R. Value : 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 Letter No:SR-PTCC/SKT 5544/02 **Dated** 02.02.2024

TADAKAL MDF (T1)

T1-T2	TADAKAL MDF TO BUSSTAND ROAD PILLAR	IV less than 430V
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BANNIKOPPA,MDF (B1)

B1-B2	BANNIKOPPA MDF to BUSSTAND ROAD PILLER	IV less than 430V
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KUKUNOOR MDF (A1)

A1-A2	KUKUNOOR MDF to BUSSTAND ROAD PILLAR	IV less than 430V
A1-A3	KUKUNOOR MDF to YELBURGA ROAD PILLAR	

ITAGI MDF (C1)

C1-C2	ITAGI MDF to MAIN CIRCLE PILLAR	IV less than 430V
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MUDHOL MDF (D1)

D1-D2	MUDHOL MDF to MAIN CIRCLE PILLAR	IV less than 430V
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ANNEXURE-II

CEA Case No.: KNK-1047 Name of the Power line: 400KV D/C line from 400/220kV SS at Mushigeri in Gadag to 400/200kV SS at Talakal in Koppal			Map Scale : 1 cm= 500 m Total Length : 49.781 km S.R. Value : 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.

SWR Letter No: SG/SWR/PTCC/GTL-II/2599						Dated 11.10.2023					
1.	SOQ-BNA	0.5	0.00005	3600	0.2						
2.	BNA-TLKL	0.9	0.0023	24473	56						
3.	TLKL-BNP	2.655	0.0023	28075	65						
4.	BNP-KBL	Out of Parallelism									
5.	TLKL-KANR	10.2	0.013	17867	232						
6.	KANR-SGNL	7	0.003	15826	47						

Tele : 23019746

Directorate General of Signals
Signals - 7
General Staff Branch
Integrated HQ of MoD, (Army)
DHQ PO, New Delhi – 110011

KNK-1647

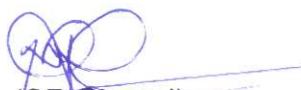
B/46937/Sigs 7(b)/3505

19 Oct 2023

Dy. General Manager-Transmission
Gadag II-A Transmission Limited
ReNew Hub, Commercial Block-1, Zone-6
Golf Course Road, DLF City Phase-V
Gurugram-122009

PTCC PROPOSAL FOR CONSTRUCTION OF 400KV DC GADAG II-A TRANSMISSION LINE FROM GADAG (PS) TO KOPPAL (PS) REG.

1. Refer your letter No. GTL II-A/PTCC/2023-24/40 dt 13 Jul 2023 (copy att).
2. **No Objection Certificate (NOC) is accorded** based on inputs provided as per Map sheets received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.


 (SP Choyal)
 Lieutenant Colonel
 General Staff Officer Grade 1 (Communication)
 for Additional Director General (Telecommunication)

Enclosures : As above

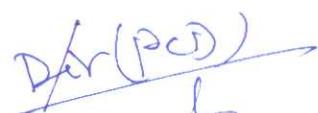
Copy to :-

The Director (PTCC), CEA
 Power Communication Development Division
 NRPC Complex, 18-A Shaheed Jeet Singh Marg
 Katwaria Sarai, New Delhi – 110016

- for information

The DET(PTCC), Northern Zone
 Bharat Sanchar Nigam Limited
 O/o PGM (North), QA & Inspection Circle,
 D-Tax Building, Eastern Court, Janpath
 New Delhi-110001

Central Electricity Authority
 PCD Division
 Diary No. 282
 Date 30/10/23


 30/10

Sh. Akshay, DD
 30/10

Pls examine
 31/10
 31/10
 Sh. Prateek