



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-975		
Induced Voltage (IV) calculation in respect of PTCC proposal of 220 kV DC line from 400/220 kV GIS at Hiremallanahole to 220/66 kV SS at Hanagal (36.304 km)- regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3226/4925-34	07.08.2021
(ii)	KPTCL: Email_ EMD Parameters	14.11.2025
(iii)	BSNL: SR-PTCC/3226/1	31.10.2025
(iv)	South Western Railway: SG/SWR/PTCC/F-3226/2207	27.09.2021
(v)	Defense: B/46937/Sigs 7(b)/2508	30.09.2021

The PTCC proposal submitted vide above references (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of South Western Railway with respect to details furnished vide above reference (iv) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of South Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET (PTCC), SZ has issued NOC vide reference (iii) above.

DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (v) (attached as Annexure –II).

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
220/66 kV SS at Hanagal	127.36	20	0.82	4730	3086	171	82

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 (RAC) shall be taken under intimation to this office in the stipulated period as specified in PTCC Manual and subsequent CLPTCC meetings.

As per the decision taken in 111th and 112th CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing RAC

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.	Member(Power) SLPTCC	Chief Engineer Electricity, SLDC #28, Race Course Cross Road, Bengaluru - 560009	Copy for Information

ANNEXURE-I

CEA Case No.: KNK-975 Name of the Power line: 220 kV DC line from 400/220 kV GIS at Hiremallanahole to 220/66 kV SS at Hanagal			Map Scale : 1 cm= 500 m Total Length : 36.304 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.

SWR Letter No: SG/SWR/PTCC/F-3226/2207 **Dated** 27.09.2021

1.	THKU-BOMN	Outside IV consideration zone			
2.	BOMN-MOMU	3.4	0.00053	13753	7

Tele : 23019746

Directorate General of Signals **KNK-975**
 Signals - 7
 General Staff Branch
 Integrated HQ of MoD, (Army)
 DHQ PO, New Delhi - 110011


B/46937/Sigs 7(b)/2508

30 Sep 2021

Office of the Chief Engineer Electricity,
 Karnataka Power Transmission Corporation Limited
 State Load Despatch Centre,
 # 28, R.C. Cross Road,
 Bengaluru - 560 009

**PTCC PROPOSAL FOR CONSTRUCTION OF 220KV DC LINE ON DC TOWERS
 FROM EXISTING 400/220KV GIS AT HIREMALLANAHOLE (JAGALUR TALUK)
 TO THE PROPOSED 220/66KV SS AT HANAGAL IN MOLAKALMUR TALUK IN
 CHITRADURGA DISTRICT**

1. Refer your letter No CEE/SLDC/ PTCC/F-3226/-4925-34 dt 07 Aug 2021 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheets received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.


 (A Rawat)
 Lt Col
 GSO 1 (Comn)
 for SO-in-C

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

✓ The DET(PTCC), Northern Zone
 O/c PGM (North), QA & Inspection Circle,
 D-Tax Building, Eastern Court, Janpath
 New Delhi-110001

- for information

932
 26.10.21