



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**

\*\*\*\*\*

<b>CEA Case No. : KNK-1050</b>		
<b>Induced Voltage (IV) calculation in respect of PTCC proposal for 220KV SC line on DC towers from existing 220/110/11KV SS at Ghataprabha to proposed 220/25KV Traction SS at Gokak Road Railway Station, Belagavi(13.117 km) - regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	KPTCL: CEE/SLDC/PTCC/F-3642/5028-36	14.09.2023
(ii)	BSNL: SR-PTCC/SKT5510/2	18.01.2024
(iii)	South Western Railway: SG/SWR/PTCC/F-3642/2602	17.10.2023
(iv)	Defense: B/46937/Sigs 7(b)/3523	14.11.2023

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block & Telecom details of South Western Railway with respect to details furnished vide above reference (iii) has been computed. The voltage likely to be induced on paralleling Block & 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. DEPTCC, BSNL (Bangalore) vide reference (ii) and Director General of Signals, MoD vide above reference (iv) (Annexure-II) have issued No Objection Certificate (NOC).

EPR details for the proposed substation is given 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
220/25 kV SS Gokak	61.05	28	0.39	1489.34	964.59	34.19	190.15

As per the details submitted by BSNL, no telecom exchanges are lying 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 <sup>nd</sup> Floor, Sanchar Complex, WMS Compound, Jayanagar 5 <sup>th</sup> Block, 9 <sup>th</sup> Main, 47 <sup>th</sup> Cross, Bangalore-560041	
2.	PCSTE	South Western Railway, O/o PCSTE, Rail Soudha, Gadag Road, Hubballi- 580020	
3.	Chief Engineer Electricity	State Load Dispatch Center, KPTCL #28, R.C. Cross Road, Bengaluru-560009	

ANNEXURE-I

<b>CEA Case No.:</b> KNK-1050			<b>Map Scale</b> : 1 cm= 500 m		
<b>Name of the Power line:</b> Induced Voltage (IV) calculation in respect of PTCC proposal for 220KV SC line on DC towers from existing 220/110/11KV SS at Ghataprabha to proposed 220/25KV Traction SS at Gokak Road Railway Station, Belagavi(13.117 km) - regd.			<b>Total Length</b> : 13.117 km		
			<b>S.R. Value</b> : 25000 Ohm-cm		
<b>S.No.</b>	<b>Telecom. Details</b>	<b>Length of Parallelism in Km.</b>	<b>Mutual Coupling in Ohms.</b>	<b>Effective Fault current in Amps.</b>	<b>I.V in Volts.</b>
<b>Southern Railway Letter No SG/SWR/PTCC/F-3642/2602 Date: 17.10.2023</b>					
1	PCH-GKK	1	0.00179	23518	42
2	GKK-GPB	3.75	0.0109	28502	310
3	GPB-CKR	Out of parallelism			