



**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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<b>CEA Case No.: KNK-973</b>		
<b>Induced Voltage (IV) calculation in respect of PTCC proposal for 220kV DC line from existing 220/110kV Bidnal SS to existing 220/110kV Mahalingapura in Dharwad, Belagavi (125.252 km)- regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	KPTCL: CEE/SLDC/PTCC/F-3232/5530-40	30.08.2021
(ii)	BSNL:SR-PTCC/SKT 3527/2	19.03.2024
(iii)	Railway: SG/SWR/PTCC/F-3232/2214	30.09.2021
(iv)	Defense: B/46937/Sigs7(b)/2544	21.10.2021

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 reference (ii) & (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 & II respectively. The screening factors as applicable have been considered. Vide reference (iv) above, DG Signals, MoD has issued No Objection Certificate (NOC) (enclosed as Annexure-III).

As both substations are existing, therefore EPR calculations are not warranted. 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 Telecom (PTCC), Southern Zone	BSNL, Inspection Circle, 2nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5th Block, 9th Main, 47th Cross ,Bangalore-560041	
2.	PCSTE/SWR	Principal Chief Signal & Telecom Engineer, Rail Soudha, Gadag Road, Hubballi-580020	
2.	Member(Power), KPTCL	Chief Engineer Electricity, SLDC #28, Race Course Road, Bengaluru-560009	Copy for information

**ANNEXURE-I**

<b>CEA Case No.:</b> KNK-973 Name of the Power line: 220kV DC line from existing 220/110kV Bidnal SS to existing 220/110kV Mahalingapura			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 125.252 km <b>S.R. Value</b> : 25,000 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>

**BSNL Letter No:** SR-PTCC/SKT 3527/2      **Dated** 19.03.2024

<b>1.</b>	<b>Amargol Telephone Exchnage (A) (F-3232)</b>				
A-A1	AMARGOL TE TO KSFC	IV less than 430V			
A-A2	AMARGOL TE TO KARANATAKA SERICULTURE				
A-A3	AMARGOL TE TO APMC				
<b>2.</b>	<b>BANKAPUR CHOWK TE (B) (F-3232)</b>				
B-B1	BANKAPUR CHOWK TE TO ISLAMPUR BRIDGE	IV less than 430V			
B-B2	BANKAPUR CHOWK TE TO INDIRA NAGAR				
B-B3	BANKAPUR CHOWK TE TO GABBUR				
<b>3.</b>	<b>SHANTI NAGAR TE (S) (F-3232)</b>				
S-S1	SHANTI NAGAR TE TO VIVEKANANDA NAGAR	IV less than 430V			
S-S2	SHANTI NAGAR TE TO BENGARI				
S-S3	SHANTI NAGAR TE TO GOPANKOPPA				
S-S4	SHANTI NAGAR TE TO BASAVESHWAR PARK				
S-S5	SHANTI NAGAR TE TO MADHURA COLONY				
<b>4.</b>	<b>VIDYANGAR TE (V) (F-3232)</b>				
V-V1	VIDYANAGAR TE TO HOSUR	IV less than 430V			
V-V2	VIDYANAGAR TE TO TIMBER YARD				

V-V3	VIDYANAGAR TE TO UNKAL	
V-V4	VIDYANAGAR TE TO SHIRPUR PARK	
<b>5.</b>	<b>KRISHNAPUR TE (K) (F-3232)</b>	
K-K1	KRISHNAPUR TE TO KARWAR ROAD	IV less than 430V
K-K2	KRISHNAPUR TE TO KARWAR TO RAYANAL	
K-K3	KRISHNAPUR TE TO KARWAR ANAND NAGAR	
K-K4	KRISHNAPUR TE TO KARWAR TO OLD HUBLI	
K-K5	KRISHNAPUR TE TO KARWAR TO ARAVIND NAGAR	
<b>6.</b>	<b>LINGARAJ NAGAR TE (L) (F-3232)</b>	
L-L1	LINGARAJ NAGAR TE TO ACCHAVVAN COLONY	IV less than 430V
L-L2	LINGARAJ NAGAR TE TO BHAIKDEV VAKOPPA	
L-L3	LINGARAJ NAGAR TE TO PATRAKARTA COLONY	

**ANNEXURE-II**

<b>CEA Case No.:</b> KNK-973 Name of the Power line: 220kV DC line from existing 220/110kV Bidnal SS to existing 220/110kV Mahalingapura SS			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 125.252 km <b>S.R. Value</b> : 25,000 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>South Western Railway Letter No: SG/SWR/PTCC/F-3232/2214 Dated 30.09.2021</b>					
1.	Hubli South – Hubli C	2.4	0.0081	27442	222
2.	Hubli East – Hubli West	5.8	0.0134	25765	345
3.	Hubli C - Unkal	4.95	0.0012	26056	31
4.	Hubli East – Hubli C	3	0.015	27207	408
5.	Hebsur - Kusugal	0.85	0.0002	26514	5
6.	Hubli East - Kusugal	0.9	0.0004	26715	10
7.	Hubli West - Unkal	1.3	0.0002	25765	5

Annexure III

Tele : 23019746

**KNK-973**  
Directorate General of Signals  
Signals - 7  
General Staff Branch  
Integrated HQ of MoD, (Army)  
DHQ PO, New Delhi - 110011

B/46937/Sigs 7(b)/2544

21 Oct 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 2<sup>ND</sup> CIRCUIT ON DC TOWERS  
FROM EXISTING 220/110KV BIDNAL SS TO EXISTING 220/110KV  
MAHALINGAPURA IN DHARWAD, BELAGAVI AND BAGALKOT DISTRICT**

1. Refer your letter No CEE/SLDC/PTCC/F-3232/-5530-40 dt 30 Aug 2021 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheets received under your above mentioned letter.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

*ab*  
(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/o PGM (North), QA & Inspection Circle,  
D-Tax Building, Eastern Court, Janpath  
New Delhi-110001

for information

1045  
02/12/21

*st setm*  
PTCC-WF  
02/12/21