



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**

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<b>CEA Case No. : KNK-1004</b>		
<b>Induced Voltage (IV) calculation in respect of PTCC proposal for 220kV D/C line from 400/220kV Hiremallanahole SS to proposed 220/66kV Bharamasagara (Ajjappanahalli) SS in Chitradurga (27.757 km)- regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	KPTCL: CEE/SLDC/PTCC/F-3416/2947-55	28.06.2022
(ii)	KPTCL: CEE/SLDC/PTCC/CEA/F-3416/5217-19	19.09.2023
(iii)	KPTCL: CEE/SLDC/PTCC/CEA/F-3416/4062-64	04.10.2024
(iv)	KPTCL: CEE/SLDC/PTCC/CEA/F-3416/6997-99	21.01.2025
(v)	KPTCL: Email EMD Parameters	09.07.2025
(vi)	BSNL: SR-PTCC/SKT 4122/05	02.02.2023
(vii)	South Western Railway: SG/SWR/PTCC/F-3416/2389	25.08.2022
(viii)	Defense: B/46937/Sigs 7(b)/2935	06.09.2022

The PTCC proposal submitted vide above references (i) to (v) has been examined. The LF induction on Block and Telecom circuits of BSNL with respect to details furnished vide above reference (vi) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. SWR has issued NOC vide reference (vii) above.

ADG (Telecommunications) has issued No Objection Certificate (NOC) vide reference (viii) above (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 (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
220/66kV Bharamasagara (Ajjappanahalli) SS, Chitradurga	129.46	30	0.28	2362	1520	25	NA

As per the details submitted by BSNL vide reference (vi) 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 <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.	Member(Power), KPTCL	Chief Engineer Electricity, SLDC #28, Race Course Road, Bengaluru-560009	Copy for information

**ANNEXURE-I**

<b>CEA Case No.:</b> KNK-1004			<b>Map Scale</b> : 1 cm= 500 m		
Name of the Power line: 220kV D/C line from 400/220kV Hiremallanahole SS to proposed 220/66kV Bharamasagara (Ajappanahalli) SS in Chitradurga			<b>Total Length</b> : 27.757 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>

**BSNL Letter No:** SR-PTCC/SKT 4122/05      **Dated** 02.02.2023

**Jagalur Telephone Exchange**

A-A1	Jagalur Exge to Pillar No.5	IV less than 430V
A-A2-A3	Jagalur Exge to LIC to Pillar No.1	
A-A2-A4	Jagalur Exge to LIC to Pillar No.2	
A-A2-A5	Jagalur Exge to LIC to Pillar No.3	
A-A2-A6	Jagalur Exge to LIC to Pillar No.4	

**Kamandalagundi Telephone Exchange**

B-B1	Kamandalagundi Exge to Mallapura	Out of Parallelism
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**Devikere Telephone Exchange**

C-C1-C2	Devikere Exge to Devikere Bus stand to KGB Bank	Out of Parallelism
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**Bharamasagara Telephone Exchange**

D-D1	Bharamasagara Exge to Rangavvanahalli Road	Out of Parallelism
D-D2	Bharamasagara Exge to Gallorahatti Road	

Tele: 23019746

**Annexure II Directorate General of Signals**

Signals 7

General Staff Branch

Integrated HQ of MoD, (Army)

DHQ PO, New Delhi - 110011

KNK-1004

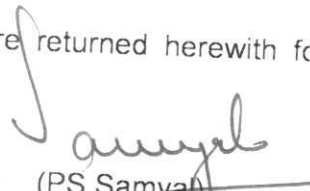
B/46937/Sigs 7(b)/2935/

06 Sep 2022

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

**PTCC PROPOSAL FOR CONSTRUCTION OF 220KV DC LINE ON DC/MC TOWERS  
FROM EXISTING 400/220KV HIREMALLANAHOLE SS IN JAGALURU TALUK,  
DAVANAGERE DISTRICT TO THE PROPOSED 220/66KV BHARAMASAGARA  
(AJJAPPANAHALLI) SS IN CHITRADURGA TALUK AND DISTRICT**

1. Refer your letter No CEE/SLDC/PTCC/F-3416/-2947-55 dt 28 Jun 2022 (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.

  
(PS Samyal)  
Col  
GSO 1 (Comn)  
for ADG T

**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

sh Prateek  
12/9  
28/9

