



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत संचार विकास प्रभाग

Power Communication Development Division

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CEA Case No. : KNK-980		
Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of 220KV Shivamogga-Shantigrama DC line to proposed 220/110/66KV RS at Dudda in Hassan district (3.23 km) - regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3266/7808-16	04.11.2021
(ii)	KPTCL: CEE/SLDC/PTCC/F-3266/7817-22	04.11.2021
(iii)	KPTCL: CEE/SLDC/PTCC/F-3266/10263-65	23.03.2023
(iv)	KPTCL: CEE/SLDC/PTCC/F-3266/6188-90	18.01.2024
(v)	KPTCL: CEE/SLDC/PTCC/F-3266/2464-67	07.08.2024
(vi)	KPTCL : Email Earth Mat design Parameters	07.07.2025
(vii)	CEA Email: Reminder	27.05.2025
(viii)	CEA Scrutiny Letter : CEA-PS-17-11(14)/16/2023-PCD Division	01.03.2023
(ix)	BSNL: SR-PTCC/SKT3651/04	21.01.2023
(x)	South Western Railway : SG/SWR/PTCC/F-3266/2253	22.12.2021
(xi)	Defense: B/46937/Sigs 7(b)/2648	24.12.2021

The PTCC proposal submitted vide above references (i) to (viii) have been examined. The LF induction on Block and Telecom circuits of BSNL and South Western Railway with respect to details furnished vide above reference (ix) & (x) respectively has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL & South Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I & Annexure II respectively. Screening factors as applicable has been considered.

ADG (Telecommunications) has issued No Objection Certificate (NOC) vide reference (xi). (enclosed as Annexure III)

EPR details for the proposed substation is given below.

Name of the 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
220/110/66KV RS at Dudda	133.68	30	0.18	1545	977	NA	NA

As per the details submitted by BSNL vide reference (ix) above, Dudda telephone exchange is 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.

**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/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**

<b>CEA Case No.:</b> KNK-980		<b>Map Scale</b> : 1 cm= 500 m			
Name of the Power line: LILO of 220KV Shivamogga-Shantigrama DC line to proposed 220/110/66KV RS at Dudda		<b>Total Length</b> : 3.23 km			
		<b>S.R. Value</b> : 30000 Ohm-cm			
<b>BSNL Letter No.</b> SR-PTCC/SKT3651/04 <b>Date:</b> 21.01.2023					
<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>1</b>	Dudda Exg to SBM	IV less than 430V			
<b>2</b>	Dudda Exg to HDCC	0.475	0.0089	27725	247

**ANNEXURE-II**

<b>CEA Case No.:</b> KNK-980 Name of the Power line: LILO of 220KV Shivamogga-Shantigrama DC line to proposed 220/110/66KV RS at Dudda		<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 3.23 km <b>S.R. Value</b> : 30000 Ohm-cm			
<b>South Western Railway Letter No. SG/SWR/PTCC/F-3266/2253 Date: 22.12.2021</b>					
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
1	HAS-KRVL	Out of parallelism			
2	KRVL-BGPA	2.89	0.0115	27330	314
3	BGPA-HHT	Out of parallelism			

Tele : 23019746

Annexure III

KNR 980

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

B/46937/Sigs 7(b)/2648

24 Dec 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 PROPOSED 220KV LILO LINE  
ON MC TOWERS FROM EXISTING 220KV SHIVAMOGGA-SHANTIGRAMA DC  
(M1) LINE TO THE PROPOSED 220/110/66KV RS AT DUDDA IN HASSAN  
TALUK & DISTRICT**

1. Refer your letter No CEE/SLDC/ PTCC/F-3266/-7808-16 dt 04 Nov 2021 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheets received vide your above mentioned letter.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(Rakesh Kumar)  
Lt Col  
GSO 1 (Comn)  
for SO-in-C

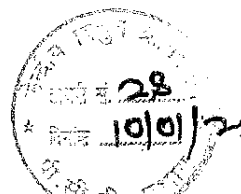
**Enclosures** : (As above)

**Copy to :-**

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

- for information

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



31 3/1/21  
MTC-41