

I/29368/2023



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power Communication Development Division

CEA Case No. : KNK-961		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV DC line from existing 220/66 kV Chintamani substation to proposed 220/66 kV Srinivaspura substation (24.023 km)-regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3148/12289-93	08.02.2021
(ii)	KPTCL: CEE/SLDC/PTCC/F-3148/2761-63	22.06.2023
(iii)	BSNL: SR-PTCC/SKT 3177/05	25.01.2023
(iv)	South Western Railway: SG/SWR/PTCC/F-3148/2137	26.04.2021
(v)	Defense: B/46937/Sigs 7(b)/2383	28.05.2021

The PTCC proposal and related details submitted vide references (i) & (ii) have been examined. The LF induction on communication circuits of BSNL and South Western Railway with respect to details furnished vide above reference (iii) & (iv) 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 (v) above, DG Signals, MoD has issued No Objection Certificate (NOC) (enclosed as Annexure-III).

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
220/66 kV Srinivaspura SS	124.78	24	0.15	919.88	566.30	NIL	NIL

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 may be taken under intimation to this office.

Encl.: As above

emf
1.8.2023
Director

To,

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle, 1st Floor, Raj Bhavan Exchange No. 26, Sardar Patel Road, Guindy, Chennai-600032
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2.	PCSTE	South Western Railway, Rail Soudha, Gadag Road, Hubballi - 20	
3.	Chief Engineer, Electricity	KPTCL, State Load Despatch Centre, #28, R.C. Cross Road, Bangalore - 560009	Copy for information

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ANNEXURE-I

CEA Case No.: KNK-961			Map Scale : 1 cm= 500 m		
Name of the Power line: 220 kV DC line from existing 220/66 kV Chintamani substation to proposed 220/66 kV Srinivaspura substation			Total Length : 24.023 km		
			S.R. Value : 25,000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL Letter No: SR-PTCC/SKT 3177/05 Date: 25.01.2023					
I A	CHINTAMANI TELEPHONE EXCHANGE				
1.	CHINTAMANI TE to ANJANI TALKIES to NR EXTENSION (A-A1-A2)				
2.	CHINTAMANI TE to ANJANI TALKIES to ANJANI EXTENSION (A-A1-A3)				
3.	CHINTAMANI TE to ANJANI TALKIES to SHANI TEMPLE to PRABHAKAR LAYOUT (A-A1-A4-A5)				
4.	CHINTAMANI TE to ANJANI TALKIES to SHANI TEMPLE to KANAMPALLI (A-A1-A4-A6)				
5.	CHINTAMANI TE to ANJANI TALKIES to SHANI TEMPLE to KALLAHALLI (A-A1-A4-A7)				
6.	CHINTAMANI TE to CHELUR ROAD (A-A14)				
7.	CHINTAMANI TE to GAJANNA CIRCLE to POLYTECHNIC (A-A13-A12)				
8.	CHINTAMANI TE to GAJANNA CIRCLE to BAGEPALLI CIRCLE (A-A13-A15)				
9.	CHINTAMANI TE to KMD CHOULTRY to TIPPU NAHAR (A-A16-A10)				
	CHINTAMANI TE to KMD CHOULTRY to				

OUT OF PARALLELISM

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11.	CHINTAMANI TE to KMD CHOULTRY to KK MOTORS (A-A16-A12)	OUT OF PARALLELISM			
II S	SRINIVASPUR TELEPHONE EXCHANGE				
1.	SRINIVASPUR EXG TO BAIRAPALLI ROAD (S-S1)	IV LESS THAN 430 V			
2.	SRINIVASPUR EXG TO RAILWAY STATION ROAD (S-S2)				
3.	SRINIVASPUR EXG TO MULBAGAL CIRCLE (S-S3)				
4.	SRINIVASPUR EXG TO KOLLUR ROAD (S-S4)				
5.	SRINIVASPUR EXG TO KOLAR ROAD (S-S5)				

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ANNEXURE-II

CEA Case No.: KNK-961		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV DC line from existing 220/66 kV Chintamani substation to proposed 220/66 kV Srinivaspura substation		Total Length : 24.023 km			
		S.R. Value : 25,000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
SOUTH WESTERN RAILWAY Letter No: SG/SWR/PTCC/F-3148/2137 Date: 26.04.2021					
1.	Sidlaghatta - Chintamani	Out of parallelism			0
2.	Chintamani - Srinivaspura	21.9	0.0358	11842	424
3.	Srinivaspura - Kolar	2.5	0.0003	19540	6

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File No. CEA-PS-17-11(14)/15/2023-PCD

Annexure III

NRK-961

Tele : 23019746

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

B/46937/Sigs 7(b)/2383

18 May 2021

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

**PROPOSED 220KV DC LINE ON DC TOWERS FROM EXISTING 220/66KV SS AT
CHINTAMANI TO THE PROPOSED 220/66KV AT SRINIVASPURA IN
SRINIVASPURA TALUK KOLAR DISTRICT**

1. Refer your letter No CEE/SLDC/ PTCC/F-3148/12281-88 dt 08 Feb 2021 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide 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 Jeeff 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

