

I/33872/2024



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

CEA Case No. : KNK-995		
Induced Voltage (IV) calculation in respect of PTCC proposal of 220KV DC line from existing 400/220KV BTPS at Kudatini to proposed 220/110KV GIS Station at Somasamudra in Ballari district (20.387 km) - regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3345/12215-23	15.02.2022
(ii)	KPTCL: CEE/SLDC/PTCC/F-3345/5214-16	19.09.2023
(iii)	BSNL: SR-PTCC/SKT3842	05.08.2023
(iv)	South Western Railway : SG/SWR/PTCC/F-3345/2328	25.04.2022
(v)	Defense: B/46937/Sigs 7(b)/2781	06.04.2022

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL and South Western Railway with respect to details furnished vide above reference (iii) & (iv) 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. DG Signals, MoD and have issued No Objection Certificate (NOC) vide reference (v) (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
220/110KV Somasamudra Station at Ballari	155.2	28	0.12	1058	647	NA	190.2

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

I/33872/2024 To,

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle, 2 nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5 th Block, 9 th Main, 47 th Cross, Bangalore-560041
2.	Member(Power) SLPTCC	Chief Engineer Electricity, SLDC #28, Race Course Cross Road, Bengaluru - 560009
3.	PCSTE/SWR	Rail Soudha, Gadag Road, Hubballi-580020

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ANNEXURE-I

CEA Case No.: KNK-995 Name of the Power line: 220KV DC line from existing 400/220KV BTPS at Kudatini to proposed 220/110KV GIS Station at Somasamudra in Ballari district		Map Scale : 1 cm= 500 m Total Length : 20.387 km S.R. Value : 25000 Ohm-cm			
BSNL Letter No. SR-PTCC/SKT3842 Date: 05.08.2023					
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
1	BTPS Exchange to BTPS technical building	IV less than 430V			
2	BTPS Exchange to syndicate Bank				
3	Kuditini Exchange to SBI bank Kuditini				
4	Kuditini Exchange to PGB Bank Kuditini				

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ANNEXURE-II

CEA Case No.: KNK-995 Name of the Power line: 220KV DC line from existing 400/220KV BTPS at Kudatini to proposed 220/110KV GIS Station at Somasamudra in Ballari district		Map Scale : 1 cm= 500 m Total Length : 20.387 km S.R. Value : 25000 Ohm-cm			
South Western Railway Letter No. SG/SWR/PTCC/F-3345/2328 Date: 25.04.2022					
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
1	GNR-TNGL	Out of parallelism			
2	TNGL-DAJ	0.95	0.0012	24361	28
3	DAJ-KDN	6.4	0.023	18280	415
4	KDN-BYC	14.15	0.0086	14033	121
5	BYC-BAY	Out of parallelism			
6	BNHT-TNGL	Out of parallelism			

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KNK-995

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)/2781

06 Apr 2022

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 220KV DC LINE FROM THE
EXISTING 400/220KV BTPS AT KUDATINI TO THE PROPOSED 220/110KV
RECEIVING STATION AT SOMASAMUDRA IN BALLARI TALUK & DISTRICT**

1. Refer your letter No CEE/SLDC/PTCC/F-3345/-12215-23 dt 15 Feb 2022 (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.


(Suresh Pal Choyal)
Lt Col
GSO 1 (Coord)
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

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