



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

CEA Case No. : KNK-982		
Induced Voltage (IV) calculation in respect of PTCC proposal of 400 kV SC line from 400/220 kV RS at Mylasandra to 400/220 kV RS at Dommasandra by partially using the existing 400 kV Somanahalli – Kolar (PGCIL) SC line corridor (in B/W T.No. 605 to T.No. 563) (Length: 15.754 km)- regd.		
S. No	Reference No.	Dated
(i)	KPTCL: CEE/SLDC/PTCC/F-3273/8447-55	16.11.2021
(ii)	KPTCL: Email	20.11.2025
(iii)	BSNL: SR-PTCC/SKT-3662/2	03.07.2024
(iv)	South Western Railway: SG/SWR/PTCC/F-3273/2262	07.07.2022
(v)	Defense: B/46937/Sigs 7(b)/2664	28.01.2022

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

DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (v) (attached 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 (k A)	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
400/220 kV Dommasandra SS	97.16	47.25	0.19	1931	1245	27	NA

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 (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 nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5 th Block, 9 th Main, 47 th 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

CEA Case No.: KNK-982			Map Scale : 1 cm= 500 m		
Name of the Power line :400 kV SC line from 400/220 kV RS at Mylasandra to 400/220 kV RS at Dommasandra by partially using the existing 400 kV Somanahalli – Kolar (PGCIL) SC line corridor			Total Length : 15.754 km		
			S.R. Value : 30000 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-3662/2 **Dated** 03.07.2024

Dommasandra Exch (DMS)					
DMS-D1	Exch – Delhi Public School	1.68	0.028	21560	604
DMS-D2	Exch – Gopasandra	1.58	0.011	16512	182
DMS-D3	Exch - Heggondanahalli	1	0.039	6797	265
Sarjapura Exch (SJP)					
SJP-S1	Exch – Sompura	IV less than 430V			
SJP-S2	Exch - Billapura				
Narayanghata Exch (NRG)					
NRG-1	Exch – Ramasagara	IV less than 430V			
NRG-2	Exch – Muthanallur Village				
NRG-3	Exch - Gopasandra				
Hebbagodi Exch (HBG)					
HBG-H1	Exch – Hebbagodi	IV less than 430V			
HBG- H2	Exch – Huskur Cross				
HBG-H3	Exch – Srinidhi Hotel				
HBG-H4	Exch - Chandapura				

ANNEXURE-II

CEA Case No.: KNK-982		Map Scale: 1 cm= 500 m			
Name of the Power line :400 kV SC line from 400/220 kV RS at Mylasandra to 400/220 kV RS at Dommasandra by partially using the existing 400 kV Somanahalli – Kolar (PGCIL) SC line corridor		Total Length: 15.754 km			
		S.R. Value: 30000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

SWR Letter No: SG/SWR/PTCC/F-3273/2262 Dated 07.07.2022					
1.	KSR Bengaluru - Nayandahalli	Outside IV consideration zone			
2.	KSR Bengaluru – Yesvantpur				
3.	Baiyyappanahalli - Karmelaram	1.83	0.0009	11556	10
4.	Karmelaram - Heelalige	3.11	0.0063	18282	115
5.	Heelalige – Anekal Road	Outside IV consideration zone			

Annexure III

Tele : 23019746

KNK-982

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


B/46937/Sigs 7(b)/2664

28 Jan 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 400KV SC QUAD MOOSE
TRANSMISSION LINE FROM EXISTING 400/220KV RS AT
MYLASANDRA (UNDER CONSTRUCTION) TO THE PROPOSED 400/220KV RS
AT DOMMASANDRA BY PARTIALLY USING THE EXISTING 400KV
SOMANAHALLI-KOLAR (PGCIL) SC LINE CORRIDOR (IN B/W T.NO 605 TO
T.NO. 563) IN ANEKAL TALUK & BENGALURU URBAN DISTRICT**

1. Refer your letter No CEE/SLDC/ PTCC/F-3273/-8447-55 dt 16 Nov 2021 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheet received vide your letter mentioned above.
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

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

for information

Dir
Use
21/2

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9-2-22