

I/28791/2023



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



ONE EARTH - ONE FAMILY - ONE FUTURE

CEA Case No. : TN-704		
Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of 400 kV Karaikudi – Pugalur Feeder-II line at proposed 400/230/110 kV Vellalaviduthi SS (83.378 km) - regd.		
S. No	Reference No.	Dated
(i)	TANTRANSCO: 010979/SE/TR-I/EE/TSM/AEE/F.PTCC	18.08.2022
(ii)	BSNL: SR-PTCC/STN 4370/05	29.05.2023
(iii)	Southern Railway: W.384/3/2/1223	29.08.2022
(iv)	Defense: B/46937/Sigs 7(b)/2997	17.10.2022

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL and Southern Railway with respect to details furnished vide above references (ii) and (iii) respectively have been computed. The voltage likely to be induced on paralleling communication cables of BSNL and Southern 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 (iv) 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
400/230/110 kV Vellalaviduthi SS	106.8	30	0.9	6602	4331.3	305.3	181.6

As per the details submitted by BSNL vide reference (ii) above, no telephone exchanges are falling in the EPR zone of the proposed substations.

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

Director

To,

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle, 1st Floor, Raj Bhavan Exchange No. 26, Sardar Patel Road, Guindy, Chennai-600032	
2.	General Manager (S&T)	Southern Railway, Head Quarters Office, S&T Branch, Chennai - 600003	
3.	Superintending Engineer, Transmission-I	TANTRANSCO, 5 th Floor, TANTRANSCO HQ, 144, Anna Salai, Chennai - 600002	Copy for information

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ANNEXURE-I

CEA Case No.: TN-704			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of 400 kV Karaikudi – Pugalur Feeder-II line at proposed 400/230/110 kV Vellalaviduthi SS			Total Length : 83.378 km		
			S.R. Value : 100000 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/STN 4370/05 Date: 29.05.2023					
I	KALLAKOTTAI TELEPHONE EXCHANGE				
1	EXGE – BTS	IV calculation not required			
II	GANDHARVAKOTTAI TELEPHONE EXCHANGE				
1	Exge Installations	IV less than 430 V			
2	EXGE – P.21				
3	EXGE – P.22				
4	EXGE – P.23				
5	EXGE – P.31				
6	EXGE – P.32				
III	KEERANUR TELEPHONE EXCHANGE				
1	EXGE – P.25 @ Kulathur	IV calculation not required			
IV	KEERANUR TELEPHONE EXCHANGE				
1	EXGE – BTS	IV calculation not required			
V	ODUHAMPATTY TELEPHONE EXCHANGE				
1	EXGE – BTS	IV calculation not required			
VI	MELATHANIAM TELEPHONE EXCHANGE				
1	Exge Installations	IV calculation not required			
VII	MARAVAMADHURAI TELEPHONE EXCHANGE				
1	EXGE - BTS	IV calculation not required			

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ANNEXURE-II

CEA Case No.: TN-704			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of 400 kV Karaikudi – Pugalur Feeder-II line at proposed 400/230/110 kV Vellalaviduthi SS			Total Length : 83.378 km		
			S.R. Value : 100000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
SOUTHERN RAILWAY Letter No: W.384/3/2/1223 Date: 29.08.2022					
Affected Block & Telecom Circuits					
1	Kumarapuram – Keeranur	Out of parallelism			0
2	Keeranur – Vellanur	7.5	0.0222	8198	182

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

TN-704

B/46937/Sigs 7(b)/2997/

17 Oct 2022

Superintending Engineer/Transmission-I &
 Secretary/Power, SLPTCC
 TamilNadu Transmission Corporation
 5th Floor, TANTRANSCO HQ,
 144, Anna Salai, Chennai-600 002

PTCC ROUTE APPROVAL FOR THE ERECTION OF 400KV DC LINE ON DC TOWERS WITH QUAD MOOSE CONDUCTOR BY MAKING LILO OF KARAUKUDY-PUGALUR FEEDER-II AT PROPOSED VELLALVIDUTHI 400/230-110KV SS-REG

1. Refer your letter No Lr. No. 010979/SE/TR-I/EE/TSM//AEE/F.PTCC/ dt 18 Aug 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.

(Signature)
 (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

- for information

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

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