

I/25940/2023



सत्यमेव जयते



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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. : TN-703		
PTCC approval for 400 kV DC/MC line on DC/MC towers with quad moose conductor from existing Kamuthi 400/230-110 kV S/s to proposed Ottapidaram 400/230-110 kV S/s (71.64 kms)- regd.		
S. No	Reference No.	Dated
(i)	TANTRANSCO Letter No. 006395/SE/TR-I/EE/TSM//A1/F.PTCC/dt. 05.05.2022	05.05.2022
(ii)	TANTRANSCO E-mail	21.01.2023
(iii)	BSNL Letter No. SR-PTCC/STS 4080/05	25.07.2022
(iv)	Southern Railway Letter No. W.384/3/2/1222	28.05.2022
(v)	Defense Letter No. B/46937/Sigs 7(b)/2868	11.07.2022

The PTCC proposal submitted vide above reference (i) and (ii) has been examined. The LF induction on communication circuits of BSNL and Southern Railway with respect to details furnished vide above reference (iii) and (iv) respectively have been computed. The voltages likely to be induced on paralleling communication circuits of BSNL and Southern Railway 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 vide above reference (v) has issued No Objection Certificate (NoC).

EPR zone for the proposed substation is mentioned below:

Name of proposed substation	Half diagonal distance, D/2 (mts)	Fault Current I (kA)	Resistance of earth mat, 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 Ottapidaram	303.95	18.873	0.45	5699	3667	65	NA

As per the Telecom Details submitted by BSNL vide above reference (iii), Ottapidaram Telephone Exchange, Puthiaputhur Telephone Exchange and Kurukkuchalai Telephone Exchange are falling within the EPR contour of 430 V of proposed 400/230-110 kV Ottapidaram Substation.

Taking above into consideration, necessary action regarding issuance of provisional PTCC approval for the subject cited transmission line may be taken under intimation to this office.

Encl.: As above

Chief Engineer

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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, Headquarter Office, S&T Branch, Chennai – 600 003	Annexure-II
3.	Superintending Engineer/ Tr-I	5 th floor, TANTRANSCO HQ, 144, Anna Salai, Chennai – 600 002	For information

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ANNEXURE-I

CEA Case No.: TN-703			Map Scale : 1 cm= 500 m		
Name of the Power line: 400 kV DC/MC line on DC/MC towers with quad moose conductor from existing Kamuthi 400/230-110 kV S/s to proposed Ottapidaram 400/230-110 kV S/s.			Total Length : 71.64 kms		
			S.R. Value : 25000 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/STS 4080/05 Dated 25.07.2022					
<u>Affected Blocks & Telecom Circuits Details</u>					
I VIL Vilathikulam Telephone Exchange					
1	Exchange to DP0001		IV less than 430 V		
2	Exchange to DP002A		IV less than 430 V		
3	Exchange to DP002B		IV less than 430 V		
4	Exchange to DP0003		IV less than 430 V		
5	Exchange to DP0004		IV less than 430 V		
6	Exchange to DP0005		IV less than 430 V		
7	Exchange to DP0006		IV less than 430 V		
8	Exchange to DP0007		IV less than 430 V		
9	Exchange to DP0008		IV less than 430 V		
10	Exchange to DP0009	3.25	0.0584	11734	685
11	Exchange to DP0010	3.25	0.0593	11746	696
12	Exchange to DP0011	3.25	0.0603	11758	709
13	Exchange to DP0012	3.25	0.0603	11758	709
14	Exchange to DP0014		IV less than 430 V		
15	Exchange to DP0015		IV less than 430 V		
16	Exchange to DP0016		IV less than 430 V		
17	Exchange to P21 to DP2102		IV less than 430 V		
18	Exchange to P21 to DP2104		IV less than 430 V		
19	Exchange to P22 to DP2210		IV less than 430 V		
20	Exchange to P22 to DP2211		IV less than 430 V		
21	Exchange to P22 to DP2212		IV less than 430 V		
22	Exchange to P23 to DP2307		IV less than 430 V		
23	Exchange to P23 to DP2308	0.55	0.008	13125	105

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24	Exchange to P23 to DP2309	0.85	0.0199	13065	260
25	Exchange to P23 to DP2310	1.85	0.0236	12754	301
26	Exchange to P23 to DP2311	1.85	0.0236	12754	301
27	Exchange to P23 to DP2312	1.85	0.0236	12754	301
28	Exchange to P24 to DP2401	IV less than 430 V			
29	Exchange to P24 to DP2404	IV less than 430 V			
30	Exchange to P25 to DP2501	IV less than 430 V			
31	Exchange to P25 to DP2507	IV less than 430 V			
32	Exchange to P26 to DP2603	IV less than 430 V			
33	Exchange to P26 to DP2604	IV less than 430 V			
34	Exchange to P26 to DP2605	IV less than 430 V			
35	Exchange to P26 to DP2606	IV less than 430 V			
36	Exchange to P26 to DP2607	IV less than 430 V			
37	Exchange to P26 to DP2608	IV less than 430 V			
38	Exchange to P26 to DP2609	IV less than 430 V			
39	Exchange to P26 to DP26010	IV less than 430 V			
40	Exchange to P26 to DP2611	IV less than 430 V			
41	Exchange to P26 to DP2612	IV less than 430 V			
42	Exchange to P27 to DP2701	IV less than 430 V			
43	Exchange to P27 to DP2702	IV less than 430 V			
44	Exchange to P27 to DP2703	IV less than 430 V			
45	Exchange to P27 to DP2704	IV less than 430 V			
46	Exchange to P27 to DP2705	IV less than 430 V			
47	Exchange to P27 to DP2706	IV less than 430 V			
48	Exchange to P27 to DP2707	IV less than 430 V			
49	Exchange to P27-to DP2708	IV less than 430 V			
II NGL Nagalapuram Telephone Exchange					
1	Exchange to P23 to DP2312	IV less than 430 V			
2	Exchange to P23 to DP2313	IV less than 430 V			
3	Exchange to P23 to DP2314	IV less than 430 V			
4	Exchange to P23 to DP2315	IV less than 430 V			
5	Exchange to P23 to DP2318	IV less than 430 V			
6	Exchange to P23 to DP2319	IV less than 430 V			
7	Exchange to P23 to DP2320	IV less than 430 V			

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8	Exchange to P23 to DP2321	IV less than 430 V
9	Exchange to P23 to DP2326	IV less than 430 V
10	Exchange to P23 to DP2327	IV less than 430 V
11	Exchange to P23 to DP2328	IV less than 430 V
12	Exchange to P23 to DP2329	IV less than 430 V
III OTP Ottapidaram Telephone Exchange		
1	Exchange to P21 to DP2102B	IV less than 430 V
2	Exchange to P21 to DP2103A	IV less than 430 V
3	Exchange to P21 to DP2105B	IV less than 430 V
4	Exchange to P21 to DP2107	IV less than 430 V
5	Exchange to P21 to DP2108	IV less than 430 V
6	Exchange to P21 to DP2113	IV less than 430 V
7	Exchange to P22 to DP2201	IV less than 430 V
8	Exchange to P22 to DP2202	IV less than 430 V
9	Exchange to P22 to DP2209	IV less than 430 V
10	Exchange to P22 to DP2210	IV less than 430 V
11	Exchange to P31 to DP3106	IV less than 430 V
12	Exchange to P31 to DP3106B	IV less than 430 V
13	Exchange to P41 to DP4101A	IV less than 430 V
14	Exchange to P41 to DP4103	IV less than 430 V
15	Exchange to P41 to DP4111	IV less than 430 V
16	Exchange to P41 to DP4135	IV less than 430 V
17	Exchange to P41 to DP4139	IV less than 430 V
18	Exchange to P41 to DP4152	IV less than 430 V
IV KUL Kulathur Telephone Exchange		
1	Exchange to DP 0002	IV less than 430 V
2	Exchange to DP 0003	IV less than 430 V
3	Exchange to DP 0005	IV less than 430 V
4	Exchange to DP 0008	IV less than 430 V
5	Exchange to DP 0010	IV less than 430 V
6	Exchange to to DP 0011	IV less than 430 V
7	Exchange to DP 0016	IV less than 430 V
8	Exchange to DP 0022	IV less than 430 V
9	Exchange to DP 0030	IV less than 430 V

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10	Exchange to P23 to DP2307A	IV less than 430 V
11	Exchange to P23 to DP2309A	IV less than 430 V
12	Exchange to P24 to DP2404	IV less than 430 V
13	Exchange to P24 to DP2406	IV less than 430 V
14	Exchange to P24 to DP2410	IV less than 430 V
15	Exchange to P24 to DP2411	IV less than 430 V
16	Exchange to P24 to DP2412	IV less than 430 V
V PUA Puthiapputhur Telephone Exchange		
1	Exchange to DP 0001	Out of parallelism
2	Exchange to DP 0028	Out of parallelism
3	Exchange to DP 007B	Out of parallelism
4	Exchange to DP 0015	Out of parallelism
5	Exchange to P23 to DP2301	Out of parallelism
6	Exchange to P22 to DP2205	IV less than 430 V
7	Exchange to P22 to DP2206	IV less than 430 V
8	Exchange to P22 to DP2207	IV less than 430 V
9	Exchange to P31 to DP3117	IV less than 430 V
10	Exchange to P31 to DP3136	IV less than 430 V
11	Exchange to P31 to DP3127	Out of parallelism
12	Exchange to P31 to DP3128	Out of parallelism
13	Exchange to P31 to DP3107	IV less than 430 V
14	Exchange to P31 to DP3133	Out of parallelism
15	Exchange to P31 to DP3132A	Out of parallelism
16	Exchange to P21 to DP2116	Out of parallelism
17	Exchange to P21 to DP2118	Out of parallelism
18	Exchange to P21 to DP2135	Out of parallelism
VI EPV Eppodumvenran Telephone Exchange		
1	Exchange to DP 0001	IV less than 430 V
2	Exchange to DP 0010	IV less than 430 V
3	Exchange to DP 0011	IV less than 430 V
4	Exchange to DP 0009	IV less than 430 V
5	Exchange to DP 0008	IV less than 430 V
6	Exchange to DP 0016	IV less than 430 V
7	Exchange to DP 0026	IV less than 430 V

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8	Exchange to DP 0027A	IV less than 430 V			
9	Exchange to DP 0046	IV less than 430 V			
10	Exchange to DP 0047B	IV less than 430 V			
11	Exchange to DP 0048	IV less than 430 V			
12	Exchange to DP 0051	IV less than 430 V			
13	Exchange to DP 0045	IV less than 430 V			
VII SVG Sivagnanapuram Telephone Exchange					
1	Exchange to DP 0001A	IV less than 430 V			
2	Exchange to DP 0005A	IV less than 430 V			
3	Exchange to DP 0012	IV less than 430 V			
4	Exchange to DP 0013	Out of parallelism			
5	Exchange to DP 0020A	Out of parallelism			
6	Exchange to DP 0020B	Out of parallelism			
7	Exchange to DP 0026B	IV less than 430 V			
VIII KRC Kurukkuchalai Telephone Exchange					
1	Exchange to P22 to DP2212	1.1	0.0126	17732	223
2	Exchange to P22 to DP2213	2	0.0251	17358	436
3	Exchange to P22 to DP2252A	Out of parallelism			
4	Exchange to P23 to DP2306	Out of parallelism			
5	Exchange to P23 to DP2312	Out of parallelism			
6	Exchange to P23 to DP2316	0.25	0.0203	17654	358
7	Exchange to P31 to DP3112	2.45	0.0495	16897	836
8	Exchange to P31 to DP3113	2.2	0.0516	16897	872
9	Exchange to P41 to DP4105	2.9	0.0196	17174	337
10	Exchange to P41 to DP4110	2.7	0.0187	17086	319
11	Exchange to P41 to DP4130	3.2	0.0203	17292	351
12	Exchange to P41 to DP4133	3.2	0.0203	17292	351

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ANNEXURE-II

CEA Case No.: TN-703 Name of the Power line: 400 kV DC/MC line on DC/MC towers with quad moose conductor from existing Kamuthi 400/230-110 kV S/s to proposed Ottapidaram 400/230-110 kV S/s.		Map Scale : 1 cm= 500 m Total Length : 71.64 kms S.R. Value : 25000 Ohm-cm			
S. No.	Telecom. Details	S. No.	Telecom. Details	S. No.	Telecom. Details
Southern Railway Letter No. W.384/3/2/1222 Dated 28.05.2022					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Vanchi Maiyachchi Junction to Tattaparai		Out of parallelism		
2	Tattaparai to Milavittan		Out of parallelism		

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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)/2868

11 Jul 2022

Superintending Engineer/Transmission-I&
Secretary/Power, SLPTCC
Tamil Nadu Transmission Corporation
5th Floor, TANTRANSCO Main Building
144, Anna Salai, Chennai-600 002

**PTCC PROPOSAL-ERECTION OF 400KV DC/MC LINE ON DC/MC TOWERS WITH
QUAD MOOSE CONDUCTOR FROM EXISTING KAMUTHI 400/230KV-110KV SS TO
PROPOSED OTTAPIDARAM 400/230-110KV SS-REG**

1. Refer your letter No 006395/SE/TR-I/EE/TSM/A1/F.PTCC/ dt 05 May 2022 (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.


(SP 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

