



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



M/c

No.: CEA/PCD/ PTCC/KER-335/५२७-२९

Date: 26.08.2020


Subject: PTCC proposal of LILO of 400 kV (Quad) Kochi – Thrissur transmission line at Thrissur HVDC substation -regd.

Ref: (i) PGCIL Ref No. SRTS-II/PKD/LILO/C-336/822 dated 07.03.2020
(ii) BSNL Ref. No. SR-PTCC/SKL-2724/04 dated 03.08.2020
(iii) Southern Railway Ref No. W.384/3/4/567 dated 20.03.2020
(iv) Defense Ref. No. B/46937/Sigs 7(b)/2036 dated 22.07.2020

The PTCC proposal submitted vide ref. (i) has been examined. The LF induction on BSNL cables and Southern Railway telecom circuits, as per details furnished vide ref. (ii) and (iii) respectively, has been examined. The Soil Resistivity value has been taken as 15,000 Ohms-cm. Voltages likely to be induced on paralleling BSNL cables and Southern Railway telecom circuits under single line to ground fault condition are enclosed at Annex-I and Annex-II respectively. The screening factors as applicable have been considered. Defense has accorded NOC vide above ref. (iv) for this line (a copy enclosed at Annex-III).

Taking above into consideration, kindly take necessary action regarding issue of PTCC route approval.

Encl.: As above.


(Upendra Kumar)
26.08.2020
Chief Engineer

To,
The Divisional Engineer (PTCC), Southern Zone,
Bharat Sanchar Nigam Limited (BSNL),
O/o DET (PTCC), Inspection Circle,
1st Floor, Raj Bhavan Exchange,
No. 26, Sardar Patel Road, Guindy, Chennai-600032

M/c

Copy to:

1. General Manager (S&T), Southern Railway, Headquarters Office. Signal & Telecomm Branch, Chennai - 600003 – (with Annexure-II)
2. Dy. General Manager, PGCIL, Southern Region Transmission System-II, 400/220 kV Substation, Para-Cherottuveli Road, Vengodi Post, Elappully-Para, Palakkad District, Kerala - 678622

CEA Case No.: KER-885

Case No. SKL-2724		SSA: Thrissur				
PTCC Proposal for The Loop in Loop out line (LILO) of 400 KV (Quad) Kochi-Thrissur Transmission line at Thrissur HVDC Sub Station.						
Length: 0.618 p In:0.303 Kms Loop Out:0.315 Kms)						
SR value : 15000 Ω -cm type of BSNL cable: PIJF						
Sl.No.	Name of Telecom line	LOP In Kms	MC in Ohms	FC in AmPs	IV in Volts	
I MUNDUR EXCHANGE						
1	Exge - P 42 - DP4234C	}			IV Less than 430V	
2	Exge - P43 -DP4332C					
3	Exge - P44 -DP4449H					
4	Exge - P44 -DP4423C					
II KURIACHIRA EXCHANGE						
1	Exge - P22 - DP2201	}			IV less than 430V	
2	Exge - P26 - DP2601					
3	Exge - P23 - DP230					
4	Exge - P24 - DP240					
5	Exge - P79 - DP7901					
6	Exge - P28 - DP2806					
7	Exge - P88 - DP8801					
8	Exge - P86 - DP8603					
9	Exge - P83 - DP8301					
10	Exge - P33 - DP3301					
11	Exge - P81 - DP8101					
12	Exge - P87 - DP8706					
13	Exge - P30 - DP3001					
14	Exge - P29 - DP2901					
15	Exge - P80 - DP8033					
16	Exge - P25 - DP2575					
17	Exge - P36 - DP3601					
18	Exge - P71 - DP7101					
19	Exge - P66 - DP6601					
20	Exge - P78 - DP7801					
21	Exge - P82 - DP8201					
22	Exge - P32 - DP3201					
23	Exge - P76 - DP7621					
24	Exge - P77 - DP7701					
25	Exge - P85 - DP8502					
26	Exge - P89 - DP8901					
27	Exge - P72 - DP7201					
28	Exge - P73 - DP7301					
29	Exge - P84 - DP8401					
III OLLUR EXCHANGE						
1	Exge-P34-DP3401	}			IV Less than 430V	
2	Exge-P35-DP3501					

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 प्रतीक श्रीवास्तव / PRATEEK SRIVASTAVA
 सहायक निदेशक-II / Asstt. Director-II
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

3	Exge-P36-DP3601	IV less than 430V	
4	Exge-P37-DP3701		
5	Exge-P39-DP3901		
6	Exge-P32-DP3201		
7	Exge-P40-DP4001		
8	Exge-P46-DP4601		
9	Exge-P47-DP4701		
10	Exge-P53-DP5301		
11	Exge-P60-DP6001		
12	Exge-P71-DP7101		
13	Exge-P55-DP5501		
IV	POONKUNNAM EXCHANGE		
1	Exge -P01 - DP0101		IV less than 430V
2	Exge -P39 - DP3901		
3	Exge -P44 - DP4401		
4	Exge -P45 - DP4501		
5	Exge -P47 - DP4701		
6	Exge -P50 - DP5001		
7	Exge -P51 - DP5101		
8	Exge -P52 - DP5201		
9	Exge -P53 - DP5301		
10	Exge -P54 - DP5401		
11	Exge -P55 - DP5501		
12	Exge -P56 - DP5601		
13	Exge -P57 - DP5701		
14	Exge -P58 - DP5801		
15	Exge -P59 - DP5901		
16	Exge -P60 - DP6001		
17	Exge -P61 - DP6101		
18	Exge -P62 - DP6201		
19	Exge -P63 - DP6301		
20	Exge -P64 - DP6401		
21	Exge -P65 - DP6501		
22	Exge -P65 - DP65A01		
23	Exge -P66 - DP6601		
24	Exge -P67 - DP6701		
25	Exge -P68 - DP6801		
26	Exge -P69 - DP6901		
27	Exge -P70 - DP7001		
28	Exge -P71 - DP7101		
29	Exge -P72 - DP7201		
30	Exge -P73 - DP7301		
31	Exge -P73A - DP73A01		
32	Exge -P74 - DP7401		
33	Exge -P75 - DP7501		
34	Exge -P76 - DP7601		

35	Exge -P77 - DP7701			
36	Exge -P78 - DP7801			
37	Exge -P79 - DP7901			
38	Exge -P80 - DP8001			
39	Exge -P81 - DP8101			
40	Exge -P82 - DP8201			
41	Exge -P83 - DP8301	IV less than 430V		
42	Exge -P84 - DP8401			
43	Exge -P85 - DP8501			
44	Exge -P86 - DP8601			
45	Exge -P87 - DP8701			
46	Exge -P88 - DP8801			
47	Exge -P89 - DP8901			
48	Exge -P90 - DP9001			
49	Exge -P91 - DP9101			
50	Exge -P92 - DP9201			
51	Exge -P93 - DP9301			
52	Exge -P94 - DP9401			
53	Exge -P95 - DP9501			
V	KURICHIKKARA EXCHANGE			
1	Exge-DPIZ01	IV less than 430V		
2	Exge-P21-DPC102			
3	Exge-P22-DP228102			
4	Exge-P23-DP238102			
5	Exge-P24-DP2442			
6	Exge-P25-DP2542			
7	Exge-P26-DP-B31			
8	Exge-P27-DPC23			
9	Exge-P31-DP3157			
10	Exge-P32-DP3249			
11	Exge-P33-DP3301			
VI	MANNAMANGALAM EXCHANGE			
1	Exge - P 35 - DP3501	IV less than 430V		
2	Exge - P 31 - DP3101			
3	Exge - P 33 - DP3301			
4	Exge - P 32 - DP3201			
5	Exge - P 34 - DP3401			
6	Exge - P 41 - DP4101			
7	Exge - P 43 - DP4301			
8	Exge - P 44 - DP4401			
9	Exge - P 23 - DP2301			
10	Exge - P 21 - DP2101			
11	Exge - P 25 - DP2501			
12	Exge - P 45 - DP4501			
13	Exge - P 42 - DP4201			
14	Exge - P 24 - DP2401			

	15	Exge - P 22 - DP2201	} IV less than 430V	
	16	Exge - P 28 - DP2801		
	17	Exge - P 27 - DP2701		
VII	KANNARA (PATTIKKAD) EXCHANGE			
	1	Exge-P21-DP2101	} IV less than 430V	
	2	Exge-P22-DP2201		
	3	Exge-P23-DP2301		
	4	Exge-P24-DP2401		
	5	Exge-P25-DP2501		
	6	Exge-P30-DP3001		
	7	Exge-P31-DP3101		
	8	Exge-P32-DP3201		
	9	Exge-P33-DP3301		
	10	Exge-P34-DP3401		
	11	Exge-P41-DP4101		
	12	Exge-P41A-DP41A01		
	13	Exge-P41B-DP41B01		
	14	Exge-P42-DP4201		
VIII	VALAKKAVU EXCHANGE			
	1	Exge - P 21 - DP2101	} IV less than 430V	
	2	Exge - P 22 - DP2201		
	3	Exge - P 23 - DP2301		
	4	Exge - P 24 - DP2401		
	5	Exge - P 25 - DP2501		
	6	Exge - P 26 - DP2601		
	7	Exge - P 27 - DP2701		
	8	Exge - P 28 - DP2801		
	9	Exge - P 29 - DP2901		
	10	Exge - P 30 - DP3001		
	11	Exge - P 31 - DP3101		
	12	Exge - P 32 - DP3201		
	13	Exge - P 33 - DP3301		
	14	Exge - P 34 - DP3401		
	15	Exge - P 35 - DP3501		
	16	Exge - P 36 - DP3601		
	17	Exge - P 37 - DP3701		
	18	Exge - P 39 - DP3801		
IX	OCB EXTERNAL EXCHANGE			
	1	Exge - P 21 - DP01	} IV less than 430V	
	2	Exge - P 22 - DP01		
	3	Exge - P 70 - DP01		
	4	Exge - P 71 - DP01		
	5	Exge - P 72 - DP01		
	6	Exge - P 78 - DP01		
	7	Exge - P 98 - DP01		
	8	Exge - P 26 - DP01		

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 श्रीमान् श्रीमान् प्रदीप कुमार सेवस्तवा
 सहायक निदेशक (अवर) Director-II
 बिजुल विभाग Ministry of Power
 भारत सरकार Govt. of India

9	Exge - P33 - DP01			
10	Exge - P34 - DP01			
11	Exge - P97 - DP01			
12	Exge - P25 - DP01			
13	Exge - P67 - DP01			
14	Exge - P96 - DP01			
15	Exge - P52 - DP01			
16	Exge - P59 - DP01			
17	Exge - P73 - DP01			
18	Exge - P28 - DP01			
19	Exge - P29 - DP01			
20	Exge - P37 - DP01			
21	Exge - P50 - DP01			
22	Exge - P51 - DP01			
23	Exge - P53 - DP01			
24	Exge - P54 - DP01			
25	Exge - P58 - DP01			
26	Exge - P27 - DP01			
27	Exge - P30 - DP01			
28	Exge - P35 - DP01			
29	Exge - P38 - DP01			
30	Exge - P39 - DP01			
31	Exge - P55 - DP01			
32	Exge - P60 - DP01			
33	Exge - P37 - DP01			
34	Exge - P31 - DP01			
35	Exge - P66 - DP01			
36	Exge - P76 - DP01			
37	Exge - P77 - DP01			
38	Exge - P80 - DP01			
39	Exge - P82 - DP01			
40	Exge - P20 - DP01			
41	Exge - P32 - DP01			
42	Exge - P61 - DP01			
43	Exge - P74 - DP01			
44	Exge - P75 - DP01			
45	Exge - P79 - DP01			
46	Exge - P90 - DP01			
47	Exge - P91 - DP01			
48	Exge - P99 - DP01			
49	Exge - P23 - DP01			
50	Exge - P24 - DP02			
51	Exge - P40 - DP01			
52	Exge - P64 - DP01			
53	Exge - P81 - DP01			
54	Exge - P43 - DP01			

IV less than 430 V

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प्रतीक श्रीकांत PRATEEK SRIVASTAVA
 सहायक निदेशक II / Asst Director-II
 केन्द्रीय विद्युत निदेशक / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
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55	Exge - P44 - DP01				
56	Exge - P45 - DP01				
57	Exge - P57 - DP01				
58	Exge - P68 - DP01				
59	Exge - P41 - DP01				
60	Exge - P46 - DP01				
61	Exge - P49 - DP01	}	IV	less than	430V
62	Exge - P56 - DP01				
63	Exge - P62 - DP01				
64	Exge - P42 - DP01				
65	Exge - P47 - DP01				
66	Exge - P48 - DP01				
67	Exge - P69 - DP01				
X	MANNUTHY EXCHANGE				
1	Exge-P70-DP01				
2	Exge-P71-DP71-01				
3	Exge-P75A-DP01				
4	Exge-P75B-DP01				
5	Exge-P72-DP01				
6	Exge-P66-DP01				
7	Exge-P65-DP01				
8	Exge-P76A-DP01				
9	Exge-P76B-DP01				
10	Exge-P73-DP01	}	IV	less than	430V
11	Exge-P74-DP01				
12	Exge-P68-DP01				
13	Exge-P67-DP01				
14	Exge-P79A-DP01				
15	Exge-P79B-DP01				
16	Exge-P81-DP01				
17	Exge-P91-DP01				
18	Exge-IZ64-DP01				
19	Exge-P78-DP01				
20	Exge-P80-DP80-01				
21	Exge-P84-DP01				
22	Exge-P90-DP01				
23	Exge-P87-DP01				
24	Exge-P88-DP01				
25	Exge-P83-DP01				
26	Exge-P82-DP01				
27	Exge-P86-DP01				
28	Exge-P85-DP01				
29	Exge-P77-DP01				
30	Exge-P89-DP01				
31	Exge-P92-DP01				
XI	PEECHI (VELANGANUR) EXCHANGE				

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 प्रतीक श्रीमस्तवा / PRATEEK SRIMASTAVA
 सहायक निरीक्षक / Asstt. Director-II
 केन्द्रीय विद्युत आयोग / C.E.A.
 विद्युत विभाग / Ministry of Power
 भारत सरकार / Govt. of India

	1	Exge-P01-DP0101	}	IV less than 430V		
	2	Exge-P21-DP2101				
	3	Exge-P22-DP2201				
	4	Exge-P30-DP3001				
	5	Exge-P31-DP3101				
	6	Exge-P32-DP3201				
	7	Exge-P33-DP3301				
	8	Exge-P34-DP3401				
XII	CHEMBUKKAVU EXCHANGE					
	1	Exge-P20-DP20	}	IV less than 430V		
	2	Exge-P21-DP21				
	3	Exge-P22-DP22				
	4	Exge-P23-DP23				
	5	Exge-P24-DP24				
	6	Exge-P25-DP25				
	7	Exge-P26-DP26				
	8	Exge-P27-DP27				
	9	Exge-P28-DP28				
	10	Exge-P29-DP29				
	11	Exge-P30-DP30				
	12	Exge-P31-DP31				
	13	Exge-P32-DP32				
	14	Exge-P33-DP33				
	15	Exge-P34-DP34				
	16	Exge-P35-DP35				
	17	Exge-P36-DP36				
	19	Exge-P37-DP37				
	20	Exge-P38-DP38				
	22	Exge-P39-DP39				
	23	Exge-P40-DP40				
	25	Exge-P41-DP41				
	26	Exge-P42-DP42				
	27	Exge-P43-DP43				
	28	Exge-P44-DP44				
	29	Exge-P45-DP45				
	30	Exge-P46-DP46				
	31	Exge-P47-DP47				
	32	Exge-P48-DP48				
	33	Exge-P49-DP49				
	34	Exge-P50-DP50				
	35	Exge-P51-DP51				
	36	Exge-P55-DP55				
	37	Exge-P56-DP56				
	38	Exge-P58-DP58				
	39	Exge-P59-DP59				
	40	Exge-P63-DP63				

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प्रतिभा श्रीवास्तव - PRATIBHA SRIVASTAVA
 सहायक निदेशक-II, वस्तु. Director-II
 केन्द्रीय विद्युत आयोग/C.E.A.
 विद्युत विभाग/Ministry of Power
 भारत सरकार - Govt. of India
 नई दिल्ली - New Delhi

41	Exge-P64-DP64			
42	Exge-P65-DP65			
43	Exge-P67-DP67			
44	Exge-P68-DP68			
45	Exge-P69-DP69			
46	Exge-P70-DP70			
47	Exge-P71-DP71			
48	Exge-P72-DP72			
50	Exge-P73-DP73			
51	Exge-P74-DP74			
52	Exge-P75-DP75	}	IV less than 430V	
53	Exge-P76-DP76			
54	Exge-P77-DP77			
55	Exge-P78-DP78			
56	Exge-P80-DP80			
57	Exge-P81-DP81			
58	Exge-P82-DP82			
59	Exge-P84-DP84			
60	Exge-P85-DP85			
61	Exge-P86-DP86			
62	Exge-P87-DP87			
63	Exge-P88-DP88			
64	Exge-P91-DP91			
65	Exge-P92-DP92			
66	Exge-P93-DP93			
67	Exge-P94-DP94			
XIII VANIYAMPARA EXCHANGE				
1	Exge-P21-DP2101	}	IV less than 430V	
2	Exge-P22-DP2201			
3	Exge-P23-DP2301			
XIV MULAKUNNATHUKAVU EXCHANGE				
1	Exge - P20 - DP 20A2	}	IV less than 430V	
2	Exge - P 21 - DP 21C2			
3	Exge - P 22 - DP 22B2			
4	Exge - P 23 - DP 23A2			
5	Exge - P 24 - DP 24B2			
6	Exge - P 25 - DP 25B2			
7	Exge - P 26 - DP 26A2			
8	Exge - P 27 - DP 27C2			
9	Exge - P 28 - DP 28B2			
10	Exge - P 29 - DP 29C2			
11	Exge - P 30 - DP 30B2			
12	Exge - P 31 - DP 31B2			
13	Exge - P 32 - DP 32A2			
14	Exge - P 33 - DP 33B2			
15	Exge - P 36 - DP 36A2			

16	Exge - P 37 - DP 37A2				
17	Exge - P 38 - DP 38A2				
18	Exge - P 39 - DP 39B2				
19	Exge - P 41 - DP 41D2				
20	Exge - P 42 - DP 42A2				
21	Exge - P 43 - DP 43A2				
22	Exge - P 50 - DP 50A2				
23	Exge - P 51 - DP 51A2	} IV less than 430V			
24	Exge - P 52 - DP 52B2				
25	Exge - P 53 - DP 53B2				
26	Exge - P 54 - DP 54C2				
27	Exge - P 55 - DP 55A2				
28	Exge - P 56 - DP 56A2				
29	Exge - P 57 - DP 57B2				
30	Exge - P 61 - DP 61A2				
31	Exge - P 62 - DP 62A2				
32	Exge - DP 00A2				
XV	PUNNAMPARAMBU EXCHANGE				
1	Exge - P 21 - DP2120B	} IV less than 430V			
2	Exge - P 22 - DP2208A				
3	Exge - P 23 - DP2301A				
4	Exge - P 24 - DP2404A				
5	Exge - P 26 - DP2620B				
6	Exge - P 28 - DP2818B				

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प्रतीक श्रीवास्तव / PRATEEK SHIVASTAVA
सहायक निदेशक-II / Asst. Director-II
केन्द्रीय विद्युत प्राधिकरण / C.E.A.
विद्युत मंत्रालय / Ministry of Power
भारत सरकार / Govt. of India
नई दिल्ली

ANNEXURE - II

<p>Case No.: KER-335 Name of the Power line: LILO of 400 kV (Quad) Kochi - Thrissur transmission line at Thrissur HVDC substation</p>	<p>Map Scale : 1cm=500mts Total Length : 0.618 km Loop In: 0.303 km. Loop Out: 0.315 km S.R. Value : 15,000 Ohms-cm</p>
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S.No	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I/V in Volts.
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Southern Railway					
Ref. No. W.384/3/4/567 dated 20.03.2020					
1	Thrissur (TCR) -- Pungunam (PNQ)		Out of Parallelism		0
2	Pungunam (PNQ) - Mulankunaatukavu (MGK)	0.3	0.0001	12000	1

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प्रतीक श्रीनिवास प्रसाद ब्रह्मराष्ट्र
 Director-II
 Chief Engineer / C.E.A.
 Fault Analysis / Department of Power
 Southern Railway
 Thrissur

Tele : 23019746

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

B/46937/Sigs 7(b)/2036

Jul 2020

Dy. General Manager
Power Grid Corporation of India Limited
Southern Region Transmission System-II
400/220kV Substation, Para-Cherottuvelli Road,
Vengodi Post, Elappully-Para,
Palakkad District, Kerala, Pin-678 622

**PROPOSAL FOR PTCC CLEARANCE FOR LOOP-IN LOOP-OUT LINE (LILO/TAPPING LINE)
OF 400KV (QUAD) KOCHI-THRISSUR TRANSMISSION LINE AT THRISSUR HVDC
SUBSTATION**

1. Ref your letter No SRTS-II/PKD/LILO/C-336/822 dt 07 Mar 2020 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your above mentioned letter.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(A Rawat)
Maj
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 Jeet Singh Marg
Katwaria Sarai, New Delhi - 110016

for information

Divisional Engineer Telegraph (PTCC)
O/o GM (North); BSNL, QA & Inspection Circle,
CTS Compound, Africa Avenue Road,
Netaji Nagar, New Delhi-110023