



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

No.: CEA/PCD/ PTCC/GUJ-727/ 203 205

Date: 12.03.2020

Subject: - Induced voltage calculation in respect of 400 kV D/C Vadavi – Halvad transmission line-Reg.

Reference: -

- (i) GETCO Ref. No. CE (Project)/EE (Tr.-3.)/2207
(ii) BSNL Ref. No. IC/MBI/PTCC/GUJ-2453
(iii) Western Railway Ref. No. SG.158/28/12 (753)

Dated: 07.02.2017

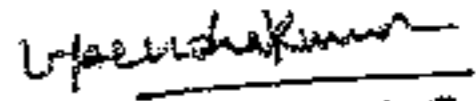
Dated: 21.05.2018

Dated: 20.06.2017

The PTCC proposal submitted vide ref. (i) has been examined. The low frequency induction on BSNL Telecom Lines and Railway Block and Communication circuits as per details furnished vide above cited references (ii) and (iii) respectively has been examined. The Average Soil Resistivity value has been taken as 10,000 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Lines under single line to ground fault condition are less than 430 V and voltages likely to be induced on paralleling Railway Block and Communication circuits are enclosed at Annex-I. The screening factors as applicable have been considered.

Telecommunication details from Defense are pending and the power authority has shown urgency for the charging of the line. In view of this kindly take necessary action regarding issuance of PTCC route approval for 400 kV D/C Vadavi – Halvad transmission line.

Encls.: As above.


12.03.2020
(Upendra Kumar)
Chief Engineer

To,
Divisional Engineer (PTCC), Inspection Circle,
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M/C

Contd.

ANNEXURE - I

Case No.: GUJ-727 Name of the Power line 400 KV D/C VADAVI - HALWAD LINE ON D/C TOWER			Map Scale : 1cm=500mts Total Length : 145.412 Km. S.R. Value : 10,000 Ohms-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

WESTERN RAILWAY

Ref. No: SG. 158 / 28 / 12 (753) DATED: 20-06-2017

Affected Blocks & Telcom Circuits Details

1	Viramgam - Jakhvada	Outside IV consideration Zone			0
2	Viramgam D - Jhund	12.3	0.0086	9827	85
3	Viramgam - Jaksi	3.0	0.0043	12400	54
4	Vani Road - Viramgam	3.3	0.0004	11379	5
5	Vani Road - Sabh Road	Outside IV consideration Zone			0
6	Chuli - Sukhpur	7.5	0.0034	12379	42
7	Sukhpur - Halved	9.5	0.0072	12600	91
8	Halved - Dhanala	2.7	0.0147	12931	190
9	Charodi - Jakyada	Outside IV consideration Zone			0
10	Viramgam D - Jhund	12.3	0.0086	9827	85
11	Jhund - Sadla	8.9	0.0180	8700	157
12	Sadla - Bajana	9.0	0.0191	9000	172
13	Bajana - Jatpipli	8.3	0.0194	9100	177
14	Jatpipli - Vasvada	11.8	0.0200	9600	192
15	Vasvada - Dhrangdhara	5.0	0.0038	10430	40
16	Dhrangdhara - Ghanshyamgadh	Outside IV consideration Zone			0
17	Ghanshyamgadh - Chuli	6.0	0.0015	10800	17
18	Chuli - Sukhpur	7.5	0.0034	12379	42
19	Sukhpur - Halvad	9.5	0.0072	12600	91
20	Bhankoda - Jaksi	Out of parallelism			0
21	Dhrangdhara - Surendranagar	Outside IV consideration Zone			0

Chief Engineer
 Central Power Directorate/C.P.D.
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 New Delhi