



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युतसंचार विकास प्रभाग

Power Communication Development Division

No. CEA/PCD/PTCC/GUJ-769/616-618

Date: 06.10.2020

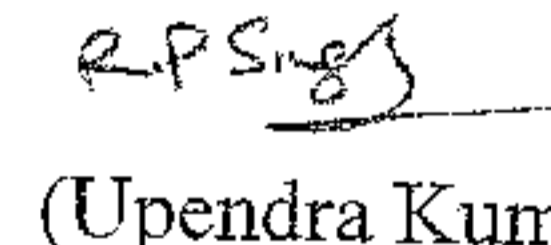
Subject: Induced Voltage calculation in respect of PTCC proposal of 220 kV D/C Botad – Choraniya line with AL-59 conductor, length – 51.62 kms.

- Ref:** (i) GETCO letter no. CE(Project/EE(Tr.-3)/2863 dated 14.09.2018
(ii) BSNL letter no. IC/MBI/PTCC/GUJ-2731 dated 10.10.2019
(iii) Western Railway letter no. SG.158/28/12/ (1033) dated 18.06.2019
(iv) Defense letter no. B/46937/Sigs 7(b)/1299/ dated 07.02.2019

GETCO submitted the subject proposal vide above cited reference (i). The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above cited references (ii) and (iii) respectively has been examined. The Soil Resistivity value has been taken as 5,000 Ohms-cm, as per data submitted by the Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Cables and Railway Telecommunication circuits under single line to ground fault condition are enclosed at Annex-I&II respectively. The screening factors as applicable have been considered. Defense has accorded NOC vide above Ref.(iv) for the above line (a copy enclosed at Annex-III).

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

Enclosures.: As above.


(Upendra Kumar)
Chief Engineer

To,
Divisional Engineer (PTCC), Inspection Circle,
Bharat Sanchar Nigam Limited (BSNL),
3rd Floor, D-Wing, BSNL Admin Building
Juhu Tara Road, Santacruz (West), Mumbai-400054

MIC

Copy to:

1. GM(S&T), Office of CSTE, Western Railway, S&T Dept. , 5th Floor, Station Building, Churchgate, Mumbai – 400020 (Only Annex-II).
2. Chief Engineer(Projects), GETCO, Sardar Patel Vidyut Bhavan, Race Course, Vadodara – 390007.

CEA Office Case No.----- GUI-789		Map scale- 1 Cms = 500 Meters			
DET (PTCC) Office Case No. 2731		Route Length- 51.62 KMS			
Railway Office Case No.		Soil Resistivity- 500 Ohm/Cm			
Name of Power Line: 220 KV D/C Botad - Choraniya Line with AI-59 Conductor.					
DETAILS FROM BSNL SIDE			DETAILS FROM POWER COMPANY		
Sl.No.	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts
1 BHAMBHAN EXCHANGE					
1A	Bhambhan Exch.- Local- 200*1 P	}	}	}	}
2A	Bhambhan Exch.- Local- 50*1 P				
3A	Bhambhan Exch.- Tajpar- 50*1 P				
2 LATHIDAD EXCHANGE					
1B	Lathidad Exch.- Local - 200*1 P	}	}	}	}
2B	Lathidad Exch.- Local - 50*1 P				
3B	Lathidad Exch.- Kariani - 50*2 P				
3 BOTAD EXCHANGE (RSU)					
1C	Botad(RSU)- Local- 50*1 P	}	}	}	}
2C	Botad(RSU)- Local- 50*1 P				
4 SALINGPUR EXCHANGE					
1D	salingpur Exch.- Local- 100*1 P	C 430V			
5 KHAMBDA EXCHANGE					
1E	Khambda Exch.- Local- 100*1 P	- OUT OF U CONSIDERATION ZONE			
6 JALIA EXCHANGE					
1F	Jalia Exch.- Local- 200*1 P	}	}	}	}
2F	Jalia Exch.- Local- 100*1 P				
3F	Jalia Exch.- Local- 50*1 P				
7 LIMBDI EXCHANGE					
1G	limbdi Exch.(OLD) - limbdi Exch.(N)-1200*3 P	}	}	}	}
2G	limbdi Exch.(OLD) - limbdi Exch.(N)-800*1 P				
3G	Limbdi Exch.(NEW)- Local-200*2 P	}	}	}	}
4G	Limbdi Exch.(NEW)- Local-400*1 P				
5G	Limbdi Exch.(NEW)- Local-200*1 P	}	}	}	}
6G	Limbdi Exch.(OLD)- Local-100*2 +50*4 P				
7G	Limbdi Exch.(OLD)- Local-100*2 P	- OUT OF PARALLELISM			
8G	Limbdi Exch.(OLD)- Local-400*1 P	}	}	}	}
9G	Limbdi Exch.(OLD)- Local-200*1 P				

Prateek

परीक्षा श्रीवास्तव/PRATEEK
 सहायक निदेशक-II/2000
 केन्द्रीय विद्युत प्राधिकरण
 दिल्ली

ANNEXURE - II

Case No.: GUJ-769 Name of the Power line: 220 kV D/C Botad – Choraniya line with AL-59 conductor			Map Scale : 1cm=500mts Total Length : 51.62 km S.R. Value : 5,000 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 letter no. SG.158/28/12 (1033) dated 18.06.2019					
Affected Blocks & Telcom Circuits Details					
1	Ranpur – Kundali	---Outside IV consideration zone---			0
2	Kundali – Botad				0
3	Botad – Lathilad				0
4	Lathilad – Ningala				0
5	Botad – Sarangpur Road	1.75	0.000295	8500	3
6	Wadhwan City – Limbdi	---Outside IV consideration zone---			0
7	Limbdi - Chuda	3.25	0.00129	9800	13

Prateek

प्रतीक श्रीकांत/PRATEEK SRIVASTAVA
सहायक निदेशक-II / Assit. Director-II
केन्द्रीय विद्युत प्राधिकरण / C.E.A
विद्युत मंत्रालय / Ministry of P.
भारत सरकार /
नई दिल्ली

Tele : 23019746

G.U.T-769

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

B/46937/Sigs 7(b)/1299/

03 Feb 2019

I/C Chief Engineer (Project)
Gujarat Energy Transmission Corporation Ltd
Sardar Patel Vidyut Bhawan
Race Course, Vadodara - 390 007

**SUBMISSION OF PROPOSALS FOR HV/EHV TRANSMISSION LINES OF GETCO FOR PTCC
APPROVAL OF 220KV D/C BOTAD-CHORANIYA LINE WITH AL-59 CONDUCTOR**

1. Ref your letter No CE (Project)/EE (Tr.-3)/2863 dt 14 Sep 2018 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(Handwritten signature)

(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.

Sh. Reddy, DD

*via A
STEELER JETA ICFE
18.02.19*

(Handwritten signature)

20/12/18

(Circular stamp with date 15/2/2019)