



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युतसंचारविकासप्रभाग

Power Communication Development Division



No. CEA/PCD/PTCC/GUJ-753/613-615

Date: 06.10.2020

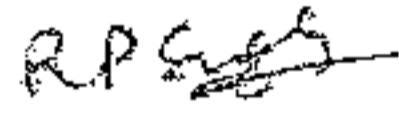
Subject: Induced Voltage calculation in respect of PTCC proposal for 400 kV LILO Line from Ist Ckt. Of 400 kV D/C Kosamba – Choraniya Line at 400 kV Sanand II S/S (GIDC) with ACSR Twin Moose Conductor, length = 44.95 kms.

Ref: (i) GETCO letter no. CE(Project(/EE(Tr.-3)/5949 dated 10.12.2018
(ii) BSNL letter no. IC/MBI/PTCC/GUJ-2462 dated 21.05.2018
(iii) Western Railway letter no. SG.158/28/12 (1028) dated 07.06.2019
(iv) Defense letter no. B/46937/Sigs 7(b)/1092 dated 30.07.2018

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 7,500 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.

for 
(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

Copy to:

- MIC
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.: GUJ-753	Map Scale: 1 cm = 500 meters			
DET (PTCC) Office Case No.:	Route Length: 44.95 km			
Railway Office Case No.:	Soil Resistivity: 7,500 Ohm-cm			
Name of Power Line: 400 kV LILO Line from Ist Ckt. Of 400 kV D/C Kosamba – Choraniya Line at 400 kV Sanand II S/S (GIDC) with ACSR Twin Moose Conductor				
Details from BSNL Side (As marked in the Topo Map furnished by BSNL)		Induced Voltage Calculations		
S. No.	Length of Parallelism (km)	Mutual Coupling (Ohms)	Fault Current (Amperes)	Induced Voltage (Volts)
1A	Out of IV Consideration Zone			
2A	Less Than 430 Volts			
1B	Out of IV Consideration Zone			
2B				
1C	Less Than 430 Volts			
2C				
1D	Out of Parallelism			
2D				
1E	Less Than 430 Volts			
1F	Out of IV Consideration Zone			
2F				
3F				

Prateek

प्रतीक श्रीवास्तव/SHRIWASTAVA
 सहायक निदेशक/Asst. Director
 विद्युत विभाग/Ministry
 भारत सरकार/India

ANNEXURE - II

Case No.: GUJ-753 Name of the Power line: 400 kV L.I.L.O Line from 1st Ckt. Of 400 kV D/C Kosamba - Choraniya Line at 400 kV Sanand II S/S (GIDC) with ACSR Twin Moose Conductor			Map Scale : 1cm=500mts Total Length : 44.95 km S.R. Value : 7,500 Ohms-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	IV Zone

WESTERN RAILWAY letter no. SG.158/28/12 (1028) dated 07.06.2019					
<u>Affected Blocks & Telcom Circuits Details</u>					
1	Hadala Bhal - Lothal Bhurki	Out of IV Consideration Zone			0
2	Lothal Bhurki - Koth Gangad				0

Prateek
 प्रतीक श्रीवास्तव / PRATEEK SRIVASTAVA
 सहायक निदेशक-II / Asstt. Director-II
 केन्द्रीय विद्युत प्राधिकरण / C. E. A.
 विद्युत मंत्रालय / Ministry
 भारत

90-753

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


B/46937/Sigs 7(b)/1092 /

30 Jul 2018

Gujarat Energy Transmission Corporation Ltd.
Chief Engineer (Project)
Sardar Patel Vidyut Bhavan,
Race Course, Vadodara-390 007

**SUBMISSION OF PROPOSAL FOR HV/EHV TRANSMISSION LINE OF GETCO
FOR PTCC APPROVAL FOR 400 KV LILO LINE FROM 1ST CIRCUIT OF 400KV
D/C KOSAMBA - CHORANIYA LINE AT 400 KV SANAND - II S/S (GIDC) WITH
ACSR TWIN MOOSE CONDUCTOR**

1. Reference your letter No CE(Project)/EE (Tr-3)/ 2522 dt 08 Mar 2018 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
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

Copy to :-

Director(PTCC)
Central Electricity Authority
Power Communication Development Division
NRPC Complex, 18-A, Shaheed Jeet Singh S Marg
Katwaria Sarai, New Delhi - 110016

- For information.

