



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-791/239-241

Date: 12.06.2020

Subject: - Induced voltage calculation in respect of 400 kV S/C transmission line on D/C ACSR twin moose conductor from existing 400 kV Varsana S/S to M/s Gaya Solar (Bihar) Pvt. Ltd.-Reg.

Reference: -

- | | |
|--|-------------------|
| (i) GETCO Ref. No. CE (Project)/EE (Tr.-3.)/301 | Dated: 06.01.2020 |
| (ii) BSNL Ref. No. IC/MBI/PTCC/GUJ-2820 | Dated: 22.01.2020 |
| (iii) Western Railway Ref. No. SG.158/28/12 (1133) | Dated: 22.01.2020 |

The PTCC proposal submitted vide ref: (i) has been examined. The low frequency induction on BSNL Telecom circuits and Railway Block 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 50,000 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom circuits and Railway Block communication 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.

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 provisional PTCC route approval for 400 kV S/C transmission line on D/C ACSR twin moose conductor from existing 400 kV Varsana S/S to M/s Gaya Solar (Bihar) Pvt. Ltd.

Encls.: As above.

Upendra Kumar
12.06.2020
(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

mlc

CEA Office Case No.---407-791	Map scale- 1 Cms = 500 Meters
DET (PTCC) Office Case No. 2820	Route Length- 17.86 KMs
Railway Office Case No.	Soil Resistivity- 35252.63 Ohm/CM ³
Name of Power Line : 400 KV S/C Line on D/C ACSR Twin Moose Conductor with 1 - OPGW & 1 Earth Wire from existing 400 KV Varsana S/S to M/s Gaya Solar (Bihar) Pvt. Ltd..	

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	BHIMASAR EXCHANGE				
1A	Bhimasar Exch. - Local--100*1+ 50*1 P		}		IV less than: 430V
2A	Bhimasar Exch. -LOCAL--20*1 P				
3A	Bhimasar Exch. -Pasuda--50*1 P				
4A	Bhimasar Exch. -Local--50*1+10 P				
5A	Bhimasar Exch. -Padana--50*1+10 P				
6A	Bhimasar Exch. -Ajapar--50*1 P				
2	DUDHAI EXCHANGE				
1B	Dudhai Exch.-Local - 200*1 P		}		
2B	Dudhai Exch.- Amarapar- 100*1 P				
3B	Dudhai Exch.- Dhanakda - 100*1 P				

Signature & Seal of Concern SDE/DET

LSK
12/08/20

ANNEXURE – II

Case No.: GUJ-791 Name of the Power line: 400 kV S/C transmission line on D/C ACSR twin moose conductor from existing 400 kV Varsana S/S to M/s Gaya Solar (Bihar) Pvt. Ltd.		Map Scale : 1cm=500mts Total Length : 17.86 Km. S.R. Value : 50,000 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 (1133)				DATED: 22.01.2020	
<u>Affected Blocks & Telcom Circuits Details</u>					
1	Chirai-Bhimasar	0.5	0.00014	14120	2
2	Bhimasar-Gandhidham	0.6	0.00012	14288	2

LRK
12/06/20