

I/31446/2023



सत्यमेव जयते



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भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power Communication Development Division

CEA Case No. : GUJ-836		
Induced Voltage (IV) calculation for PTCC proposal of LILO of 220 kV S/C transmission line from 400 kV Charanka S/s (GETCO) to 220 kV Jakhotra PSS of M/s TSPPL at Babra PSS of TSPPL (3.37 km)		
S. No	Reference No.	Dated
(i)	M/s Torrent Solar Power Pvt Ltd: Torrent/PTCC/002	01.09.2022
(ii)	M/s Torrent Solar Power Pvt Ltd: TPL/JS/PTCC/2023/5899	03.05.2023
(iii)	BSNL: IC/MBI/PTCC/WGJ-130820235166-020620234977-010920224216-090820235178-190920235180-190920235179-130820235165-010920235208-130820235167-190920235290	19.09.2023
(iv)	Western Railway: SG.158/28/12/1341	21.07.2023
(v)	Defense: B/46937/Sigs 7(b)/3456	25.09.2023

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on communication circuits of BSNL and Western Railway with respect to details furnished vide above reference (iii) and (iv) respectively have been computed. The voltage likely to be induced on paralleling communication circuits of BSNL and Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I and Annexure-II respectively. The screening factors as applicable have been considered.

DG Signals, MoD, vide above reference (v) has issued their No Objection certificate (NOC) for charging of the line.

EPR zone for the proposed substation is mentioned below:

Name of the proposed Substation	Half diagonal distance , D/2 (mts)	Fault Current I (KA)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7kV	d (mts) at 10kV
220/33 kV Babra PSS of M/s TSU2PL	65.2	24	0.5	1754	1138	47	13
220/33 kV Jakhotra PSS of TSPPL	53.85	24	0.6	1749	1139	57	24

As per the details submitted by BSNL vide reference (iii) above, no telephone exchanges are falling in the EPR zone of the proposed substation.

Taking above into consideration, necessary action regarding issuance of PTCC approval for the subject cited transmission line may be taken under intimation to this office.

Encl.: As above

Director

I/31446/2023 To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM (S&T)	Western Railway, Office of PCSTE, S&T Dept., 5 th Floor, Station Building, Churchgate, Mumbai – 400 020	
3.	M/s Torrent Solar Power Pvt Ltd	Samanvay, 600, Tapovan, Ambawadi, Ahmedabad - 380015	Copy for information

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ANNEXURE-I

CEA Case No.: GUJ-836 Name of the Power line: LILO of 220 kV S/C transmission line from 400 kV Charanka S/s (GETCO) to 220 kV Jakhotra PSS of M/s TSPPL at Babra PSS of TSPPL			Map Scale : 1 cm= 500 m Total Length : 3.37 km S.R. Value : 10000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL: IC/MBI/PTCC/WGJ-130820235166-020620234977-010920224216-090820235178-190920235180-190920235179-130820235165-010920235208-130820235167-190920235290 Dated: 19.09.2023					
1	Charanka Mobile Tower BTS	IV calculation not required			
2	Sidhada Mobile Tower BTS				

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ANNEXURE-II

CEA Case No.: GUJ-836 Name of the Power line: LILO of 220 kV S/C transmission line from 400 kV Charanka S/s (GETCO) to 220 kV Jakhotra PSS of M/s TSPPL at Babra PSS of TSPPL			Map Scale : 1 cm= 500 m Total Length : 3.37 km S.R. Value : 10000 Ohm-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: SG.158/28/12/1341 Dated: 21.07.2023					
1	Vaghpura to Chhansara				Out of parallelism
2	Chhansara to Santalpur				Out of IV consideration zone