



सत्यमेव जयते



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

CEA Case No.: GUJ-1070		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220 kV SC line on DC towers from NTPC REL PSS-1 (Jamambardi) to 400/220 kV PGCIL SS at Jam Khambaliya (51.38 km)- regd.		
S. No	Reference No.	Dated
(i)	NTPC: NTPC REL/JJWEP/25-26/11-07	19.11.2025
(ii)	NTPC: NTPC REL/JJWEP/25-26/05-17	05.05.2025
(iii)	NTPC: Email	18.12.2025
(iv)	BSNL: IC/MBI/PTCC/GUJ-3067	21.06.2025
(v)	Western Railway: SG.158/28/12/1533	30.06.2025
(vi)	Defense: B/46937/Sigs 7(b)/4779	11.09.2025

The PTCC proposal submitted vide above references (i), (ii) and (iii) has been examined. The LF induction on Block and Telecom circuits of Western Railway with respect to details furnished vide above reference (v) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET (PTCC), WZ, Mumbai has issued NOC vide reference (iv) above.

ADG (Telecommunications) has issued No Objection Certificate (NOC) vide reference (vi) above (attached as Annexure –II).

EPR Zones for proposed substation are mentioned below.

Name of the proposed SS	Half Diagonal Distance, D/2 (mts)	Fault Current, I (kA)	Resistance of earthmat, R (Ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220/33 kV Switchyard (PSS-1), NTPC REL	75.8	50	0.4558	3942	2582	171	97

As per the details submitted by BSNL vide reference (iv) above, no telephone exchange is falling in the EPR zone of the proposed substation.

Taking above into consideration, necessary action for issuance of PTCC route approval (RAC) shall be taken under intimation to this office in the stipulated period as specified in PTCC Manual and subsequent CLPTCC meetings.

As per the decision taken in 111th and 112th CLPTCC meeting, necessary instructions for “Deemed Energization approval” shall be specified while issuing RAC.

Encl.: As above

Chief Engineer,

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Juhu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM (S&T)	Western Railway, O/o PCSTE, S&T Dept., 5 th Floor, Station Building, Church gate, Mumbai – 400020	
3.	M/s NTPC Renewable Energy Limited	NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New – Delhi - 110003	Copy for information

ANNEXURE-I

CEA Case No.: GUJ-1070 Name of the Power line: 220 kV SC line on DC towers from NTPC REL PSS -1 (Jamambardi) to 400/220 kV PGCIL SS at Jam Khambaliya			Map Scale : 1 cm= 500 m Total Length : 51.38 km S.R. Value : 15000 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 Letter No: SG.158/28/12/1533 Dated 30.06.2025					
1.	Bhanvad – Gop Jam	1.328	0.00013	16009	2
2.	Gop Jam – Lalpur Jam	6.389	0.0078	14549	113


Directorate General of Signals (Signals-7)
General Staff Branch
Integrated HQ of MoD (Army)
DHQ PO, New Delhi -11

B/46937/Sigs-7(b)/4779 dt 11 Sep 2025

NTPC Renewable Energy Ltd.
Lalpur Site Office, Post: Lalpur-361 170
District Jamnagar (Gujarat)

**PTCC APPROVAL OF M/S NTPC RENEWABLE ENERGY LIMITED
(NREL) 500 MW WIND POWER PROJECT, NAME OF LINE: - 220 KV
SC/DC & MC LINE ON SC/DC AND MC TOWER FROM M/S NTPC
RENEWABLE ENERGY LTD (NTPC REL) POOLING SUBSTATION TO
400/220 KV PGCIL SUBSTATION AT JAM KHAMBALIYA-51.38 KM**

1. Ref your letter No. NTPC REL/JJWEP/25-26/05-17 dt 05 May 2025.
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheet received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.


(Puneet Lakhanpal)
Lieutenant Colonel
General Staff Officer Grade- (Communication)
for Additional Director General(Telecommunication)



Encls: As above

Copy to:-

Chief Engineer, PSCD Division
Central Electricity Authority
Room No 702 (North Wing)
Sewa Bhawan, RK Puram, Sector-1
New Delhi-110 066

HQ Southern Comd (Sigs)

For Info pl.