



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**

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<b>CEA Case No. : GUJ-895</b>		
<b>Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C line from 220 kV Welspun Switch yard to 400/220 kV PGCIL Switchyard at Bhimasar, Kutch (20 km)- regd.</b>		
<b>S. No</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	Welspun: WLL/PTCC/CR 14072024	14.07.2024
(ii)	Welspun : Email_ EMD Parameters	09.10.2025
(iii)	BSNL: IC/MBI/PTCC/Offline GUJ-3091	21.07.2025
(iv)	Western Railway: SG.158/28/12/1409	30.08.2024
(v)	Defense: B/46937/Sigs 7(b)/4088	15.10.2024

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) & (iv) respectively have been computed. The voltage likely to be induced on paralleling communication cables of BSNL and Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I & II respectively. The screening factors as applicable have been considered.

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

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 kV Welspun switch yard	221.33	32	0.076	1030	607	NA	NA

As per the details submitted by BSNL vide reference (iii) 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 <sup>st</sup> floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM (S&T)	Western Railway, O/o PCSTE, S&T Dept., 5 <sup>th</sup> Floor, Station Building, Churchgate, Mumbai - 400020	
3.	Director (Welspun Living Ltd)	Welspun House, 6 <sup>th</sup> Floor , Kamala City, Senpati Bapat Marg , Lower Parel ( West) , Mumbai - 400013	Copy for information

**ANNEXURE-I**

<b>CEA Case No.:</b> GUJ-895 <b>Name of the Power line:</b> 220 kV D/C line from 220 kV Welspun Switch yard to 400/220 kV PGCIL Switchyard at Bhimasar, Kutch			<b>Map Scale</b> : 1 cm= 500 m <b>Total Length</b> : 20 km <b>S.R. Value</b> : 50000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>BSNL Letter No. IC/MBI/PTCC/Offline GUJ-3091 Date: 21.07.2025</b>					
<b>ANJAR EXCHANGE</b>					
1A	Anjar Exch. – Local-8008*1 P	0.29	0.0006	5795	3
2A	Anjar Exch. – Local- 400+200*1	IV less than 430V			
3A	Anjar Exch. – Local – 400 + 400*1 p				
4A	Anjar Exch. – Local – 400 + 200 + 100*1 p				
<b>ADIPUR EXCHANGE</b>					
1B	Adipur Exch. – Local – 400*1 P	Out of Parallelism			
2B	Adipur Exch. – Local 400+200*1 P				
3B	Adipur Exch. – Local 800+400*1 P				
4B	Adipur Exch. – Local – 400+200*1 P				
5B	Adipur Exch. – Local – 400+100*1 P	IV less than 430V			

**ANNEXURE-II**

CEA Case No.: GUJ-895 Name of the Power line: 220 kV D/C line from 220 kV Welspun Switch yard to 400/220 kV PGCIL Switchyard at Bhimasar, Kutch		Map Scale : 1 cm= 500 m Total Length : 20 km S.R. Value : 50000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>WESTERN RAILWAY Letter No. SG.158/28/12/1409 Date: 30.08.2014</b>					
1	Chirai - Bhimasar	3.4	0.0073	20226	148
2	Bhimasar – Gandhidham Cabin	4.6	0.0033	15784	52
3	Gandhidham Cabin B – Gandhidham Jn	Out of Parallelism			
4	Gandhidham Jn - Adipur	0.828	0.00029	16751	5
5	Adipur - Anjar	0.997	0.00075	18041	14
6	Anjar - Ratnal	1.89	0.0012	19360	23
7	Gandhidham Jn. - Gandhidham A	Outside IV consideration zone			
8	Gandhidham A - Shirva				

Annexure III

Directorate General of Signals  
Signals 7  
General Staff Branch *GUJ-895*  
Integrated HQ of MoD, (Army)  
DHQ PO, New Delhi - 110011

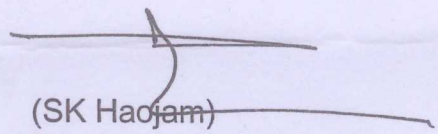
B/46937/Sigs 7(b)/4088/

15 Oct 2024

Welspun Living Limited  
Welspun House, 6<sup>th</sup> Floor, Kamala City  
Senapati Bapat Marg, Lower Parel (West)  
Mumbai-400 013

**PTCC PROPOSAL OF 220KV D/C TRANSMISSION LINE ON 220KV D/C TOWER (O/H) WITH AL 59 MOOSE CONDUCTOR (61/3.50) FROM 220KV WELSPUN SWITCH YARD TO EXISTING 400/220KV PGCIL SWITCHYARD AT BHIMASAR, KUTCHH, GUAJARAT**

1. Refer your letter No WLL/PTCC/CR 14072024 dt 14 Jul 2024 (copy att).
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.

  
(SK Haqjam)  
Lieutenant Colonel  
General Staff Officer Grade 1 (Communication)  
for Additional Director General (Telecommunication)

**Enclosures** : As above

**Copy to :-**

✓ Chief Engineer, PSCD Division  
Central Electricity Authority  
Room No 702 (North Wing)  
Sewa Bhawan, R.K. Puram, Sector-1  
New Delhi-110066

The DET(PTCC), Northern Zone  
O/o PGM (North), QA & Inspection Circle,  
Bharat Sanchar Nigam Limited  
D-Tax Building, Eastern Court, Janpath  
New Delhi-110001

}  
- for information

Central Electricity Authority  
PSCD Division  
Diary No. *1337*  
Date .....

*Dr. Anshu (DD)*  
*28/10*