

I/31447/2023



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. : TN-723		
Induced Voltage (IV) Calculation for PTCC proposal of 33 kV DC OH line for Feeder No. 1 & 2 on RSJ Pole with HTLS Gap – ACSR and AL59 Panther conductor from 220/33 kV JSW Tuticorin – B S/s at Arungulam village to proposed 33 kV Wind Power unit substation tapping point TUT-919 (Length: 17.8 km)		
S. No	Reference No.	Dated
(i)	JSWREL/33kV-PTCC/DC-01	04.03.2023
(ii)	BSNL: SR-PTCC/STN 5037/05	21.07.2023
(iii)	Southern Railway: W.384/3/6/30(TN)	13.07.2023
(iv)	Defense: B/46937/Sigs 7(b)/3277	11.08.2023

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

GM (S&T), Southern Railway vide above reference (iii) and DG Signals, MoD, vide above reference (iv) (Annexure-II) have 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
230/33 kV JSW Tuticorin B Wind Power PSS-B of M/s JSW Renew Energy Ltd at Arungulam village, Vilathikulam	92.84	42	0.0985	800	498	NA	NA
33 kV Wind Power unit substation	8.93	18.75	0.334	121	77	NA	NA

I/31447/2023

As per the details submitted by BSNL vide reference (ii) 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

To,

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle,1st Floor, Raj Bhavan Exchange No. 26, Sardar Patel Road, Guindy, Chennai-600032	
2.	M/s JSW Renew Energy Limited	JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai – 400 051	For information

I/31447/2023

ANNEXURE-I

CEA Case No.: TN-723		Map Scale : 1 cm= 500 m			
Name of the Power line: 33 kV DC OH line for Feeder No. 1 & 2 on RSJ Pole with HTLS Gap – ACSR and AL59 Panther conductor from 220/33 kV JSW Tuticorin – B S/s at Arungulam village to proposed 33 kV Wind Power unit substation tapping point TUT-919		Total Length : 17.8 km			
		S.R. Value : 20000 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: SR-PTCC/STN 5037/05 Dated: 21.07.2023

ETTAYAPURAM TELEPHONE EXCHANGE

1	EXGE to DP.0001				
2	EXGE to DP.0002				
3	EXGE to DP.0004				
4	EXGE to DP.0012				
5	EXGEto P.21 to DP.2103				
6	EXGE to P.22 to DP.2214				
7	EXGE to P.22 to DP.2214				
8	EXGE to P.22 to DP.2216				
9	EXGE to P.22 to DP.2218				
10	EXGE to P.22 to DP.2220				
11	EXGE to p.23 to DP.2306				
12	EXGE to P.23 to DP.2307				
13	EXGE to P.23 to DP.2309				
14	EXGE to P.23 to DP.2312				
15	EXGE to P.23 to DP.2315				
16	EXGE to P.23 to DP.2316				
17	EXGE to P.23 to DP.2318				

IV less than 430 V

I/31447/2023

18	EXGE to P.23 to DP.2319				
19	EXGE to P.24 to DP.2431				
20	EXGE to P.24 to DP.2432				
21	EXGE to P.25 to DP.2519				
22	EXGE to p.25 to DP.2520				
23	EXGE to P.25 to DP.2521A				IV less than 430 V
24	EXGE to P.25 to DP.2523A				
25	EXGE to P.25 to DP.2525				
26	EXGE to P.25 to DP.2526A				
27	EXGE to P.25 to DP.2528				
28	EXGE to P.25 to DP.2530				
29	EXGE to P.25 to DP.2531A				
30	EXGE to P.25 to DP.2539				
31	EXGE to P.25 to DP.2540	1.6	0.04396	8621	379
32	EXGE to P.25 to DP.2541A				
33	EXGE to P.25 to DP.2542				IV less than 430 V
34	EXGE to P.25 to DP.2543A				
35	EXGE to P.25 to DP.2543B				
VILATHIKULAM TELEPHONE EXCHANGE					
1	EXGE to P.26 to DP.2609				
2	EXGE to P.26 to DP.26010				
3	EXGE to P.26 to DP.2611				
4	EXGE to P.26 to DP.2612				Out of parallelism
5	EXGE to P.26 to DP.2631A				
6	EXGE to P.26 to DP.2631B				
7	EXGE to P.26 to DP.2632A				
8	EXGE to P.26 to DP.2636A				