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

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CEA Case No. : RAJ-732		
Induced Voltage (IV) calculation for 765 kV D/C Bhadla-II to Sikar-II Transmission Line-Part-C [Length- 309.063km]– Regd.		
S. No	**Reference No.**	**Dated**
(i)	PGCIL**:** NI/Sikar/PASTL/PTCC/314	27.11.2023
(ii)	PGCIL**:** e-Mail	22.07.2024
(iii)	BSNL**:** DET/PTCC/ND/DV-10316/RAJ-1455/2023-2024/	29.02.2024
(iv)	North Western Railway: SG/158/NWR/PTCC/950	31.01.2024
(v)	Defense: B/46937/Sigs7(b)/3623	23.01.2024

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL & North Western Railway with respect to details furnished vide above reference (iii) & (iv) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL & North Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I & Annexure-II respectively. The screening factors as applicable have been considered. DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (v).

EPR zone for proposed S/S 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
765 kV Sikar-II Substation	659	50	0.037	2176	1216	N.A	N.A

As per the Telecom Details submitted by BSNL vide above reference (iii), no telephone exchange of BSNL is falling within the EPR zone of 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

Signed by Suman Kumar Maharana
Date: 23-07-2024 15:24:20

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Northern Zone	BSNL, O/o GM (North), QA & Inspection Circle D-Tax Building, Eastern Court, Janpath New Delhi-110001	Annexure-I
2.	GM (S&T) NWR	North Western Railway, Headquarter Office, Room No. 136, First Floor, Near Jawahar Circle, Jaipur - 302017	Annexure-II
3.	POWERGRID	POWERGRID , Sikar Rajasthan	Copy for information.

ANNEXURE-I

CEA Case No.: RAJ-732 **Name of the Power line**: 765 kV D/C Sikar-II to Bhadla-II Transmission Line Part-C**.**	**Map Scale :** 1 cm= 500 m **Total Length :** 309.063 km **S.R. Value :** 10000 Ohm-cm

S.No.	Telecom. Details	Length of Paralleli sm in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL: DET/PTCC/ND/DV-10316/Raj-1455/2023-24 Dated 29.02.2024					
Affected Blocks & Telecom Circuits Details					
1.	BAP to Khidrat				
2.	Kanji ki Sid flyover to Kanji ki sid village				
3.	Khindasar to Dasari				
4.	Khindasar to Bhelu				
5.	Khindasar to Nandra				
6.	Dharnak to Sathika				
7.	Nathusar to Sathika				
8.	Nathusar to Pachu				
9.	Pachu to Kishnasar				IV Less than 430V
10.	Pachu to Nokha				
11.	Nokha to Kakku				
12.	Kakku to Sadhuna				
13.	Kakku to Hansanar				
14.	Kakku to Shekhsar				
15.	Dawa to Silwa				
16.	Silwa to Bandhra				
17.	Nokha to Charkara				
18.	Kakku to Swaroopsa				
19.	Nokha to Birmsar				
20.	Thawariya to Mainsar				

21.	Dawa to Charkana	IV Less than 430V			
22.	Sribalaji to Jodyasi				
23.	Chilla to Satheran				
24.	Rohini to Shyamsar				
25.	Jodyasi to Ambeliyasa				
26.	Kameriya to Akora				
27.	Jhareli to Sulparia				
28.	Anwaliyasar to Jaliansar				
29.	Nibmbi Jodha to Ratau				
30.	Ratau to Papot				
31.	Ladnu to Didwana				
32.	Didwana to Losal				
33.	Dayalpura to Choti Beri				
34.	Dayalpura to Supka				
35.	Lalgarh to Badsar				
36.	Lalgarh to Jogalsar				
37.	Jogalsar to Kalyansar				
38.	Karnota to Bhasina				
39.	Bhasina to Mudra				
40.	Dukia to Khatu				
41.	Khandela to Doodhwalo				
42.	Badhali ki to Palsana				
43.	Palsana City to Prithvipura	5.0	0.00074	26700	20
44.	Losal to Jana	IV Less than 430V			
45.	NTR – TJ to Sangalia				
46.	Dhod to Gunathu				
47.	Gunathu to Mandoli				
48.	Ranoli to Ramgarh	7.5	0.0142	27100	385
49.	BSNL Ex. to Ramgarh				

50.	BSNL Ex. To Ramgarh	IV Less than 430V
51.	BSNL Ex. to Danta	
52.	Danta to Bus Stand	
53.	Danta to Danta	
54.	Palsana to Palsana	
55.	Palsana to Namta	
56.	Ranoli NH- 52 to Ranoli Bus	
57.	Ranoli NH- 52 to Ranoli	
58.	Ranoli NH- 52 to Shishu	

ANNEXURE-II

CEA Case No.: RAJ-732 **Name of the Power line**: 765 kV D/C Sikar-II to Bhadla-II Transmission Line Part-C**.**	**Map Scale :** 1 cm= 500 m **Total Length :** 309.063 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.
North Western Railway: SG/158/NWR/PTCC/950 Dated 31.01.2024					
Affected Blocks & Telecom Circuits Details					
1.	Nokhra to Sird	5.5	0.0018	28000	50
2.	Sird to Bap	5.0	0.012	29000	348
3.	Bap to Malar	Out of Parallelism			
4.	Badwasi to Alai	Out of Parallelism			
5.	Alai to Chilo	Out of Parallelism			
6.	Chilo to Nokha	2.0	0.003	22500	68
7.	Khatu to Khunkhuna	1.75	0.00036	22200	8
8.	Khunkhuna to Didwana	Out of Parallelism			
9.	Didwana to Ladnu	2.5	0.003	15200	46
10.	Baori Thikaria to Palsana	2.5	0.00047	29500	139
11.	Palsana to Sikar	Out of Parallelism			