

I/29395/2023



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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<b>CEA Case No.: HRA-248</b>		
<b>Induced Voltage (IV) calculation for PTCC proposal of 400 kV D/C Babai (RRVNL) to Bhiwani (PG) Transmission Line [Length- 110.964 km]– Regd.</b>		
<b>Reference:</b>		
<b>S. No.</b>	<b>Reference No.</b>	<b>Dated</b>
(i)	NRSSXXXVI Transmission Limited Letter No: NRSS/2022-23/61	22.09.2022
(ii)	NRSSXXXVI Transmission Limited e-mail	11.07.2023
(iii)	BSNL: DET/PTCC/ND/DV-10204/Raj-1416/2023-2024	29.05.2023
(iv)	North Western Railway : SG/158/NWR/PTCC/895	14.10.2022
(v)	Defense : B/46937/Sigs 7(b)/3044	08.12.2022

The PTCC proposal submitted vide reference (i) & (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL and North Western Railway with respect to details furnished vide above reference (iii) & (iv) respectively, has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL and 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).

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

**Encl.:** As above.

**Director**

**To,**

1.	Divisional Engineer (PTCC), Northern Zone	BSNL O/o PGM (N), QA & Inspection Circle, D-Tax Building, Eastern Court, Janpath, New Delhi	
2.	GM (S&T)	North Western Railway, Headquarter Office, Room No. 136, First Floor, Near Jawahar Circle, Jaipur - 302017	
3.	NRSSXXXVI Transmission Limited	94, Pocket-4, Sector-11 Dwarka, New Delhi, 110075	Copy for information

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ANNEXURE-I

<b>CEA Case No.: HRA-248</b>		<b>Map Scale : 1 cm= 500 m</b>			
<b>Name of the Power line: 400 kV D/C Babai (RRVPNL) to Bhiwani (PG) Transmission Line.</b>		<b>Total Length : 110.964 km</b>			
		<b>S.R. Value : 30000 Ω-cm</b>			
<b>S.No.</b>	<b>Telecom. Details</b>	<b>Length of Parallelism in Km.</b>	<b>Mutual Coupling in Ohms.</b>	<b>Effective Fault current in Amps.</b>	<b>I.V in Volts.</b>
BSNL Letter No: DET/PTCC/ND/DV-10204/Raj-1416/2023-2024 Date: 29.05.2023					
<b><u>Affected Blocks &amp; Telecom Circuits Details</u></b>					
1	Bhiwani to Roopgarh Village	IV Less than 430 V			
2	Dalanwas to Madhogarh				
3	Dalanwas to Gadarwas				
4	Satnali to Nawar	4.6	0.082	23760	1948
5	Mehar to Basai	IV Less than 430 V			
6	Mehar to Sihou	IV Less than 430 V			
7	Basai to Ilqakha	4.4	0.095	15800	1501
8	Basai to Kisanpur	4.4	0.115	15780	1815
9	Mehar to Goni	3.4	0.036	15950	574
10	Mehar to Rampur	IV Less than 430 V			
11	Rampur to Tyanda				
12	Rampur to Dadakin				
13	Rampur to Nagpura				
14	Pacheri to Buirr				
15	Pacheri to Pacheri Khurd				
16	Pacheri Kalan to Rasoolpur				
17	Rasoolpur to Dhana				
18	Buhana to Jhawha				
19	Buhana to Hasas				
20	Buhana to Buhana				
21	Buhana to Mainpuri				
22	Kuharawas to Jharrrd				
23	Kuharawas to Kuharawas				

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ANNEXURE-II

CEA Case No.: HRA-248 Name of the Power line: 400 kV D/C Babai (RRV PNL) to Bhiwani (PG) Transmission Line.			Map Scale : 1 cm= 500 m Total Length : 110.964 km S.R. Value : 30000 Ω-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 Letter No: SG/158/NWR/PTCC/895 Date: 14.10.2022

Affected Blocks & Telecom Circuits Details

1	Bawani Khera to Bhiwani bypass cabin	-Out of Parallelism-			
2	Bhiwani bypass cabin to Bhiwani Junction	-Out of Parallelism-			
3	Bhiwani Junction to Manheru	4.0	0.0041	26950	110
4	Manheru to Charkhi Dadri	-Out of Parallelism-			
5	Nim Ka Thana to Maonda	2.0	0.0003	27800	8
6	Maonda to Jhilo	4.0	0.0012	23390	28
7	Jhilo to Dabla	7.5	0.0055	22620	124
8	Dabla to Nizampur	9.5	0.0346	18033	624
9	Nizampur to Amarpur Jorasi	0.75	0.0004	15800	06
10	Amarpur Jorasi to Narnaul	-Out of Parallelism-			
11	Sohansara to Satnali	-Out of Parallelism-			
12	Satnali to Zerpur Pali	5.2	0.0006	19960	12
13	Zerpur Pali to Mahendragarh	-Out of Parallelism-			