

I/28633/2023



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. : UP-609		
Induced Voltage (IV) calculation for PTCC proposal of LILO of one circuit of 400 kV Ataur-Indirapuram D/C Transmission Line at 400 kV Noida Sec-123 GIS S/S [Length-10.177 km] - Regd.		
S. No	Reference No.	Dated
(i)	PG/NR-1/Mbgh/TL/	11.01.2023
(ii)	NR1/MBGH/PGYTL/PTCC	26.05.2023 & 22.06.2023
(iii)	BSNL: DET/PTCC/ND/DV-10170/UP-1109/2022-2023	18.04.2023
(iv)	Northern Railway: 342-SIG/1/PTCC/2022-23/01/02	31.01.2023
(v)	Defense: B/46937/Sigs7(b)/3212	07.03.2023

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on Block and Telecom circuits of BSNL and Northern Railway with respect to details furnished vide above reference (iii) & (iv) respectively have been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL and Northern 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 have issued No Objection Certificate (NOC) vide reference (v).

Taking the 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

*Dir. J. B.*  
Director 28.6.2023

To,

1.	Divisional Engineer (PTCC), Northern Zone	BSNL, O/o GM (North), QA & Inspection Circle D-Tax Building, Eastern Court, Janpath, New Delhi	
2.	Executive Director (NR-I), POWERGRID	POWERGRID RHQ, NR-I, Faridabad	

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ANNEXURE-I

CEA Case No.: UP-609			Map Scale : 1 cm= 500 m		
Name of the Power line: LILO of one circuit of 400 kV Ataur-Indirapuram D/C Transmission Line at 400 kV GIS S/S Noida Sec-123.			Total Length : 10.177 km		
			S.R. Value : 30,000 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: DET/PTCC/ND/DV-10170/UP-1109/2022-2023 Dated 18.04.2023

Affected Blocks & Telecom Circuits Details**BSNL Assets**

1.	BSNL TE Sec 71 Noida	IV less than 430 V
2.	BSNL TE Sec 64 Noida	
3.	BTS Sorkha	
4.	BTS A-48, Sec-63, Noida	
5.	BTS Yarrow Apartments, Sec-62, Noida	
6.	BTS B-88, Sec-60, Noida	

**BSNL Lines**

1.	A 180/63 to H154, 400 pair, 1 km	IV less than 430 V
2.	C 145/63 to B1A/64, 400 pair, 1.8 km	
3.	B1A/64 to B1A/64, 400 pair, 0.1 km	
4.	G42/63 to C 195/63, 400 pair, 0.5 km	
5.	F 466/63 to C 195/63, 400 pair, 0.4 km	
6.	A 82 to A 180/63, 200 pair, 0.3 km	
7.	A 108 to A 180/63, 200 pair, 1.2 km	
8.	D 211 to A 180/63, 200 pair, 0.8 km	
9.	A 2/65 to C 195/63, 200 pair, 0.4 km	
10.	Police Chowk to C 195/63, 200 pair, 1.2 km	
11.	E 228 to C 195/63, 200 pair, 1.3 km	

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12.	A-Block to Sec-71, 200 pair, 1.4 km
13.	B-Block to Sec-71, 200 pair, 1.4 km
14.	Tata Falled to Sec-71, 200 pair, 0.7 km
15.	Sai Aptt. to Sec-71, 200 pair, 0.8 km
16.	Jagriti Aptt. to Sec-71, 200 pair, 0.8 km
17.	Metro Aptt. To Sec-71, 200 pair, 0.6 km
18.	G 252/63 to C 195/63, 100 pair, 0.6 km
19.	G 336/63 to C 195/63, 100 pair, 0.7 km
20.	J 2/63 to C 195/63, 100 pair, 1.4 km
21.	Hammer to IOC, 200 pair, 1 km
22.	Rajaniti to IOC, 200 pair, 0.8 km
23.	Dabur to IOC, 400 pair, 0.6 km
24.	B-Block to Sec-58, 200 pair, 0.4 km
25.	E 1/55 to Sec 58, 200 pair, 0.6 km
26.	C28/56 to Sec 58, 400 pair, 0.6 km
27.	Sec 57 to Sec 58, 400 pair, 0.4 km
28.	SG 58 to Sec 58, 400 pair, 0.6 km
29.	Sec 60 to Sec 58, 400 pair, 0.6 km
30.	SG 58 to Sec 58, 200 pair, 0.6 km
31.	Parsants to Sec 58, 200 pair, 0.6 km
32.	Satibd to Sec 58, 400 pair, 0.6 km
33.	Sec 19 to Gate-1, Sec-21, 800 pair, 1 km
34.	Sec 19 to F Block, Sec-21, 800 pair, 0.9 km
35.	Sec 19 to B Block, Sec-25, 800 pair, 1 km
36.	Sec 20 to NFL Colony, Sec24, 400 pair, 0.6 km
37.	Sec 29 to Nithari, Sec 31, 400 pair, 1 km
38.	Sec 33 to A-1, Sec-35, 800 pair, 1 km
39.	Sec 33 to Satya Hospital, Sec-34, 1600 pair, 0.6 km

IV less than 430 V

IV less than 430 V

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**ANNEXURE-II**

CEA Case No.: UP-609		Map Scale : 1 cm= 500 m			
Name of the Power line: LILO of one circuit of 400 kV Ataur-Indirapuram D/C Transmission Line at 400 kV GIS S/S Noida Sec-123.		Total Length : 10.177 km			
		S.R. Value : 30,000 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.
Northern Railway: 342-SIG/1/PTCC/2022-23/01/02 Dated 31.01.2023					
<b><u>Affected Blocks &amp; Telecom Circuits Details</u></b>					
<b>New Delhi – Ghaziabad Section</b>					
1.	New Delhi R/S to Tilak Bridge R/S	Out of IV consideration zone			
2.	Tilak Bridge R/S to Anand Vihar R/S	Out of IV consideration zone			
3.	Anand Vihar R/S to Sahibabad R/S	0.8	0.0003	16850	5
4.	Sahibabad R/S to Ghaziabad R/S	2.5	0.0084	17300	145
<b>Ghaziabad-ChipyanaBuzurg Section</b>					
1	Ghaziabad R/S to ChipyanaBuzurg R/S	2.0	0.003	16570	50
<b>Ghaziabad-Hapur Section</b>					
1	Ghaziabad R/S to Mahrauli R/S	1.2	0.0014	17810	25
2	Mahrauli R/S to Dasna R/S	Out of IV consideration zone			
3	Dasna R/S to Pikhuwa R/S	Out of IV consideration zone			
<b>Delhi – Sahibabad Section</b>					
1	Delhi R/S to Shahdara R/S	Out of IV consideration zone			
2	Shahdara R/S to Sahibabad R/S	Out of IV consideration zone			
<b>Ghaziabad-Meerut City Section</b>					
1	Ghaziabad R/S to Guldhar R/S	3.0	0.002	17800	36
2	Guldhar R/S to Muradnagar R/S	Out of IV consideration zone			