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आजादी का
अमृत महोत्सव

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. : GUJ-720 / 313-315
PTCC proposal of 400 kV D/C Wanakbori S/S – Soja transmission line (107.07 km)

Reference:		
S. No.	Reference No.	Dated
(i)	GETCO: CE(Project)/EE (Tr.-3)/1836	30.05.2016
(ii)	BSNL: IC/MBI/PTCC/GUJ-2352	21.05.2018

The PTCC proposal submitted vide reference (i) has been examined. Telecom details from Railway is pending. The LF induction on telecom cables of BSNL with respect to details furnished vide above reference (ii) and block & telecom circuits of Western Railway with respect to details present in Topographical map has been computed. The voltages likely to be induced on paralleling telecom cables of BSNL and block & telecom circuits of Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I & II respectively. The screening factors, as applicable, have been considered.

Telecommunication details from Defense are pending and the power authority has shown urgency for the charging of the line. In view of this take necessary action regarding issuance of provisional PTCC approval for subject transmission line.

Encl.: As above.

अचलेश कुमार मिश्रा
Director 30.03.20

To,

1.	Divisional Engineer (PTCC), Western Zone	BSNL, Inspection Circle, 3 rd Floor, D-Wing, BSNL Admin Building, Juhu Tara Road, Santacruz (West), Mumbai-400054.	
2.	GM(S&T)	Western Railway, Office of CSTE, S&T Dept., 5 th Floor, Station Building, Churchgate, Mumbai – 400020	Annex-II only With a request to inform this office if any sections other than in Annex-II are present in the vicinity of power line
3.	Chief Engineer (Project)	GETCO, Sardar Patel Vidyut Bhavan, Race Course, Vadodara - 390007	For info



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के.वि.प्रा. केस सं. : GUJ-720/313-315

पी.टी.सी.सी. प्रस्ताव 400 kV D/C Wanakbori S/S – Soja transmission line (107.07 km)

सन्दर्भ:

क्रमांक	सन्दर्भ सं.	दिनांक
(i)	GETCO: CE(Project)/EE (Tr.-3)/1836	30.05.2016
(ii)	BSNL: IC/MBI/PTCC/GUJ-2352	21.05.2018

संदर्भ (i) द्वारा प्रस्तुत पीटीसीसी प्रस्ताव की जांच की गई है। रेलवे से विवरण लंबित है। बीएसएनएल के टेलिकॉम केबलों पर निम्न आवृत्ति प्रेरण गणना उपरोक्त संदर्भ (ii) में दिए गए विवरणों के संबंध में पश्चिम रेलवे के ब्लॉक एवं टेलिकॉम सर्किटों पर निम्न आवृत्ति प्रेरण गणना topographical map में प्रस्तुत विवरण के आधार पर की गई है। सिंगल लाइन टू ग्राउंड फाल्ट अवस्था में समानांतर बीएसएनएल के टेलिकॉम केबलों एवं पश्चिम रेलवे के ब्लॉक एवं टेलिकॉम सर्किटों पर प्रेरित वोल्टेज क्रमशः अनुलग्नक -I एवं II में संलग्न है। स्क्रीनिंग कारक का मान यथानुरूप लिया गया है।

रक्षा प्राधिकरण से दूरसंचार विवरण लंबित हैं और बिजली प्राधिकरण ने लाइन की चार्जिंग के लिए तत्कालता दिखाई है। इसे देखते हुए विषयांकित पॉवर लाइन के लिए अनंतिम पीटीसीसी अप्रूवल जारी करने के संबंध में आवश्यक कार्रवाई की जाए।

संलग्न: ऊपरोक्त अनुसार

मधुकेतु शर्मा (H.E.)
30.03.22
निदेशक

To,

1.	Divisional Engineer (PTCC), Western Zone	BSNL; Inspection Circle, 3 rd Floor, D-Wing, BSNL Admin Building, Juhu Tara Road, Santacruz (West), Mumbai-400054.	
2.	GM(S&T)	Western Railway, Office of CSTE, S&T Dept., 5 th Floor, Station Building, Churchgate, Mumbai – 400020	Annex-II only With a request to inform this office if any sections other than in Annex-II are present in the vicinity of power line
3.	Chief Engineer (Project)	GETCO, Sardar Patel Vidyut Bhavan, Race Course, Vadodara - 390007	For info.

Annex - I

CEA Office Case No.----- GUS-720	Map scale- 1 Cms = 500 Meters
DET (PTCC) Office Case No. 2352	Route Length- 107.07 KMS
Railway Office Case No.	Soil Resistivity- 3000 Ω-cm
Name of Power Line: 400 KV WANAKBORI - SOJA TRANSMISSION LINE WITH AL-59 CONDUCTOR.	

DETAILS FROM BSNL SIDE		DETAILS FROM POWER COMPANY			
Sl.No.	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts
1 SEVALIYA EXCHANGE					
1A	Sevaliya Exch.-Post Office-400*1 P				
2A	Sevaliya Exch.-sevaliya Gam Pillar-400*1 P				
3A	Sevaliya Exch.-Police station-400*1 P				
4A	Sevaliya Exch.-Market Gate-200*1 P				
5A	Sevaliya Exch.-Pillar 25-200*2 P				
6A	Sevaliya Exch.-Avdhut Pillar 22-200*2 P				
7A	Sevaliya Exch.-Rampur100*1 P				
2 VANGROLI EXCHANGE					
1B	Vangroli Exch.-Pillar 21 Gam -200*1 P				
2B	Vangroli Exch.-Bhalada Gam -50*1 P				
3 VANODA EXCHANGE					
1C	Vanoda Exch.-Local- Pillar 21---100*5 P				
2C	Vanoda Exch.-Local---20*1 P				
4 WTPS EXCHANGE(WANAKBORI THARMAL)					
1D	WTPS Ex.-Local-400*3 P				
2D	WTPS Ex.-Local-200*7 P				
5 VADASINOR(BALASINOR) EXCHANGE					
1E	Vadasinor Ex.-Local-1200*2 P				
2E	Vadasinor Ex.-Local-800*1 P				
3E	Vadasinor Ex.-Local-400*1 P				
6 VADADLA EXCHANGE					
1F	Vadadla Ex.- Local-100*1 P				
2F	Vadadla Ex.- Local-50*2 P				

IV less than 480 V

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प्रतीक श्रीवास्तव / PRATEEK SHRIWASTAVA
 सहायक निदेशक-II / Asst. Director-II
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

DET (PTCC) Office Case No. 2352

Railway Office Case No.

Route Length- 107.07 KMs

Name of Power Line: 400 KV WANAKBORI - SOJA TRANSMISSION LINE WITH AL-59 CONDUCTOR.

Soil Resistivity-

DETAILS FROM BSNL SIDE

DETAILS FROM POWER COMPANY

Sl.No.	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts				
7 FAGWEL EXCHANGE									
1G	Fagwel Ex.-Local-100*1 P								
2G	Fagwel Ex.-Local-50*1 P								
8 ANTISAR EXCHANGE									
1H	Antisar Exch- Local--200*1 P								
2H	Antisar Exch- Local--100*1+50*1 P								
9 KAPADVANJ EXCHANGE									
1I	Kapadvanj Exch.- Local--800*2 P								
2I	Kapadvanj Exch.- Local--200*2 P								
3I	Kapadvanj Exch.- Local--100*3 P								
10 THAWAD EXCHANGE									
1J	Thawad Exch.-Local-200*1 P								
2J	Thawad Exch.-Local-100*2 P								
11 VYASVASNA EXCHANGE									
1K	Vyasvasna Exch-Local-100*1 P							IV less than 480V	
2K	Vyasvasna Exch-Local-50*2 P								
3K	Vyasvasna Exch-Zevla-50*2 P								
4K	Vyasvasna Exch-Laduj-50*2 P								
12 NIRMALI EXCHANGE									
1L	Nirmali Exch.-Local--200*1 P								
2L	Nirmali Exch.-Local--100*1+50*1 P								
13 KEVARIA EXCHANGE									
1M	Kevaria Exch.-Local- --100*2P								
2M	Kevaria Exch.-Local- --50*4P								
14 ATARSUMBA EXCHANGE									
1N	Atarsumba Ex.-Local-400*1 P								
2N	Atarsumba Ex.-Local-200*1 P								
3N	Atarsumba Ex.-Local-50*1 P								
4N	Atarsumba Ex.-Karkria-50*1 P								
5N	Atarsumba Ex.-Ukardi-50*1 P								
15 DEVKARN NA MUVADA EXCHANGE									
10	Devkarn na Muvada Ex.-Local-200*2 P								
11	Devkarn na Muvada Ex.-Local-200*2 P								

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 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

CEA Office Case No.-----		Map scale- 1 Cms = 500 Meters			
DET (PTCC) Office Case No. 2352		Route Length- 107.07 KMs			
Railway Office Case No.		Soil Resistivity- 1000 Ohm/cm			
Name of Power Line: 400 KV WANAKBORI - SOJA TRANSMISSION LINE WITH AL-59 CONDUCTOR.					
DETAILS FROM BSNL SIDE			DETAILS FROM POWER COMPANY		
Sl.No.	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts
16 JINDVA EXCHANGE					
1P	Jindva Ex.- Local-200*2 P				
2P	Jindva Ex.- Local-200*1 P				
3P	Jindva Ex.- Local-200*1 P				
17 LIHORA EXCHANGE					
1Q	Lihora Ex.-Local-200*2 P				
2Q	Lihora Ex.-Local-200*2 P				
18 RAKHIAL EXCHANGE					
1R	Rakhial Exch- Local--400*1 P			IV less than	930 V
2R	Rakhial Exch- Local--400*1 P				
3R	Rakhial Exch- Local--200*2 P				
19 PATNAKUWA EXCHANGE					
1S	Patnakuwa Exch.- Local--400*1 P				
2S	Patnakuwa Exch.- Local--200*2 P				
20 HALISA EXCHANGE					
1T	Halisa Exch.-Local-400*1 P				
2T	Halisa Exch.-Local-200*1 P				
3T	Halisa Exch.-Local-200*2 P				

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 सहायक निदेशक-II / Asst. Director-II
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 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

CEA Office Case No.-----
 DET (PTCC) Office Case No. 2352
 Railway Office Case No.
 Name of Power Line: 400 KV WANAKBORI - SOJA TRANSMISSION LINE WITH AL-59 CONDUCTOR.

Map scale- 1 Cms = 500 Meters

Route Length- 107.07 KMs

Soil Resistivity-

DETAILS FROM BSNL SIDE

DETAILS FROM POWER COMPANY

Sl.No.	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts
21 CHANDRALA EXCHANGE					
1U	Chandrala Exch-Local-200*2 P	}			
2U	Chandrala Exch-Local-200*2 P				
22 CHHALA EXCHANGE					
1V	Chhala Exch.-Local--400*2+100*3 P	}			
2V	Chhala Exch.-Local--400*1+100*3 P				
3V	Chhala Exch.-Local--400*1+200*2 P				
23 JAKHORA EXCHANGE					
1W	Jakhora Exch.-Local- --400*1 +100*3P	}		IV less than 430 V	
2W	Jakhora Exch.-Local- --200*1 +100*2P				
24 SARA EXCHANGE					
1W1	Sardra exch.- local- 400*1+200*1 p	}			
2W1	Sardra exch.- local- 400*1+100*2 p				
3W1	Sardra exch.- local- 100*2 p				
24 RANDHEJA EXCHANGE					
1X	Randheja Ex.-Local-1200*1+400*3+200*2 P	}			
2X	Randheja Ex.-Local-400*2+200*2+100*4 P				
3X	Randheja Ex.-Local-400*1+200*1+100*1 P				
25 PIPLAJ EXCHANGE					
1Y	Piplaj Ex.-Local-400*1+100*3 P	}			
2Y	Piplaj Ex.-Local-200*1+100*2 P				
3Y	Piplaj Ex.-Local- 100*1 P				
26 MOTI SIHOLI EXCHANGE					
1Z	Motisiholi Ex.- Local-200*2+100*4 P	}			
2Z	Motisiholi Ex.- Local-200*2+100*4 P				
3Z	Motisiholi Ex.- Local-200*2+200*2 P				
4Z	Motisiholi Ex.- Local-50*1 P				
27 SARDHAV EXCHANGE					
1A1	Sardhav Ex.-Local-200*3+100*4 P	}			
2A1	Sardhav Ex.-Local-200*3+100*3 P				

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प्रतीक श्रीवास्तव / PRATEEK SHRIWASTAVA
 सहायक निदेशक-II / Asst. Director-II
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

CEA Office Case No.-----		Map scale- 1 Cms = 500 Meters			
DET (PTCC) Office Case No. 2352		Route Length- 107.07 KMs			
Railway Office Case No.		Soil Resistivity-			
Name of Power Line: 400 KV WANAKBORI - SOJA TRANSMISSION LINE WITH AL-59 CONDUCTOR.					
DETAILS FROM BSNL SIDE			DETAILS FROM POWER COMPANY		
Sl.No	Name of the Telecom line/Cable	Length of parameter in KM	Mutual coupling in Ohms	Fault Current in Amp	Induce Voltage in Volts
28 MANSa EXCHANGE					
1B1	Mansa Exch-Local-800*3 P	}			
2B1	Mansa Exch-Local-800*1 +400*1 P				
3B1	Mansa Exch-Local- 400*1 P				
4B1	Mansa Exch-Local- 200*1 P				
5B1	Mansa Exch-Local- 100*3 P				
29 BORU EXCHANGE					
1C1	Boru Exch.-Local--100*3 P	}	IV	less than	
2C1	Boru Exch.-Local--100*2 P				
30 NARDIPUR EXCHANGE					
1D1	Nardipur Exch.-Local- -800*1P	}		430 V	
2D1	Nardipur Exch.-Golthara -200*1P				
3D1	Nardipur Exch.-Soja -200*2+100+50*2 P				
4D1	Nardipur Exch.-Paliyad-400+100+50*1 P				
5D1	Nardipur Exch.-Kotha-100*3 P				
6D1	Nardipur Exch.-Mokhasan-100*3 +100+50 P				
31 DELWA EXCHANGE					
	Delwa Exch.-Local- -100*3P	}			
	Delwa Exch.-Local- -100*2 P				

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प्रमुख अभियंता/POWER OF INDIA
सहायक निदेशक-II/Asst. Director-II
केन्द्रीय विद्युत प्राधिकरण/C.E.A.
विद्युत मंत्रालय/Ministry of Power
भारत सरकार /Govt. of India
नई दिल्ली/New Delhi

ANNEXURE-II

CEA Case No.: GUJ-720
Name of the Power line: 400 kV D/C Wanakbori S/S – Soja
 transmission line

Map Scale : 1 cm=500 m
Total Length : 107.07 km
S.R. Value : 3,000 Ω-cm

S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
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WESTERN RAILWAY (IV calculation done based on topographical map)
Affected Blocks & Telecom Circuits Details

S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
1	Makakhad - Limbodra				
2	Limbodra - Vasan				0
3	Vasan – Randheja	4.2	0.0017	14000	24
4	Kherol - Rakhiyal	0.8	0.0002	14000	3
5	Rakhiyal – Jaliya Math				0
6	Jaliya Math – Dahegam				0
7	Kapadvanj - Vadali				0
8	Vadali - Kashipura				0
9	Sevaliya – Timba Road				0

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प्रमुख अभियंता/Chief Engineer
 सहायक अभियंता-II/Asst. Engineer-II
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.
 विद्युत मंत्रालय/Ministry of Power
 भारत सरकार/Govt. of India
 नई दिल्ली/New Delhi