



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पावर कम्युनिकेशन डवलपमेंट प्रभाग
Power Communication Development Division

सं.: के.वि.प्रा./PCD/PTCC/AND-667/2067-69 दिनांक:31.08.2018

The Divisional Engineer Telecom,
PTCC, T&D circle, BSNL,
No.26, 1st floor, Raj Bhavan Exchange,
Sardar Patel Road,
Guindy, Chennai-600032

Subject: Induced Voltage Calculation in respect of PTCC proposal for 220 kV DC line from 400/220 kV SS Podili to proposed 220/132 kV substation at Kandukuru in Prakasam Dist.

Reference: i) BSNL letter no. SR-PTCC/SAP-1765/08 dated 11.07.2018
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRAP201665 RTD dated 28.07.2017
iii) Defense letter no. B/46937/Signs 7(b)/611 dated 18.08.2017


Sir,

The instant PTCC proposal has been examined. The low frequency induction on telecom cables of BSNL and Block & Telecom Circuits of South Central Railway; with respect to details furnished vide above reference has been computed. The average Soil Resistivity (SR) value has been taken as 70,000 Ohm-cm, as intimated by the Power Authority (APTRANSCO). The voltages likely to be induced on paralleling telecom cables of BSNL and Block & Telecom circuits of South Central Railway circuits under Single Line to Ground (SLG) fault condition have been computed and are enclosed at Annex-I & II respectively. The screening factors, as applicable, have been considered. Vide Ref. (iii) above, the Defense authority have issued No Objection Certificate (NOC) (a copy is enclosed at Annex-III).

Taking above into consideration, kindly take necessary action to issue PTCC route approval.

Encl.: As above

M/C

Yours faithfully,

(Naresh Bhandari)
Chief Engineer

Copy to:

- GM(S&T), South Central Railway, Head Quarters Office, Signal & Telecomm Branch, Rail Nilayam, Secunderabad-500025 (Annexure II only).
- Chief Engineer, Construction, APTRANSCO, Vidyut Soudha, Hyderabad-500082



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सं. के.वि.प्रा. /पीसीडी /पीटीसीसी /एएनडी-667/2067-69 दिनांक: 31.08.2018

डिवीजनल इंजीनियर टेलीकॉम (पीटीसीसी),
क्यू ए एंड इन्स्पेक्शन (टी एंड डी) सर्कल, बीएसएनएल,
1 तल, राज भवन एक्सचेंज,
नं 26, सरदार पटेल रोड,
गुडंडी, चेन्नई -600032

विषय: 400/220 केवी पोडिली उपकेन्द्र से प्रस्तावित 220/132 केवी कन्दुकुरु उपकेन्द्र (प्रकासम जिला) तक 220 केवी डीसी लाइन का पीटीसीसी प्रस्ताव - प्रेरित वोल्टेज गणना।

- संदर्भ: i) बीएसएनएल का पत्र संख्या SR-PTCC/SAP-1765/08 दिनांक 11.07.2018
ii) दक्षिण मध्य रेलवे पत्र संख्या/SG.85/4/3/PTCC/SCRAP201665 RTD दिनांक 28.07.2017
iii) रक्षा पत्र संख्या B/46937/Signs 7(b)/611/ दिनांक 18.08.2017

महोदय,

तत्काल पीटीसीसी प्रस्ताव की जांच की गई है। दक्षिण मध्य रेलवे के ब्लॉक एवं दूरसंचार सर्किट और बीएसएनएल के दूरसंचार केबलों पर कम आवृत्ति प्रेरण; संदर्भ के अनुसार प्रस्तुत विवरण के संबंध में गणना की गई है। औसत मादक प्रतिरोधकता (एसआर) मूल्य को 70,000 ओम-सेमी लिया गया है, जैसा कि बिजली प्राधिकरण (एपीट्रानस्को) द्वारा सूचित किया गया है। बीएसएनएल के दूरसंचार केबलों और दक्षिण मध्य रेलवे के ब्लॉक एवं दूरसंचार सर्किटों पर प्रेरित वोल्टेज की गणना की गई है और अनुलग्नक- I और II में क्रमशः संलग्न हैं। संदर्भ (iii) ऊपर के द्वारा रक्षा प्राधिकरण ने एनओसी जारी किया है (प्रतिलिपि अनुलग्नक- III में संलग्न है)।

यह ध्यान में रखते हुए, पीटीसीसी स्ट अनुमोदन के लिए आगे की कार्यवाही करें।

संलग्न : उपरोक्त अनुसार

आपका साभारी,
नरेश भंडारी
(नरेश भंडारी)
मुख्य अभियन्ता

कॉपी:

- (i) जीएम (एसएंडटी), दक्षिण मध्य रेलवे, मुख्यालय कार्यालय, सिग्नल और टेलीकाम शाखा, रेल निलयम, सिक्कराबाद - 500025 (अनुलग्नक II केवल)
(ii) मुख्य अभियन्ता, निर्माण, एपीट्रानस्को, विद्युत सौधा, हैदराबाद -500082

ANNEXURE - I

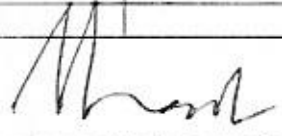
Case No.: AND-667					
Name of the Power Line : <u>220 KV DC Line from 400/220 KV SS Podili to proposed 220/132 KV SS at Kandukuru in Prakasam Dist</u>		Map Scale : 1 सेमी=500 मीटर Length of line : 56.992 कि.मी. Average Soil Resistivity : 70,000 Ohm-cm			
S No.	Telecom Details	Length of Parallelism (km)	Mutual Coupling (ohms)	Fault Current (Amps)	Induced Voltage (Volts)

BSNL DETAIL					
Ref. No: SR-PTCC/SAP-1765/08 DATED: 11-07-2018					
Kandukuru Exchange					
1	Exchange to Oguru road				
2	Exchange to Kanigiri road				
3	Exchange to Pamur road				
4	Exchange to Kanigiri road				IV LESS THAN 430 V
5	Exchange to Pamur road				
6	Exchange to Kanigiri road				
7	Exchange to Pamur road	2.1	0.0642	8000	514
8	Exchange to Oguru road				
9	Exchange to Kanigiri road				IV LESS THAN 430 V
10	Exchange to Palukur road				
11	Exchange to Oguru road	2.35	0.0718	8000	574
12	Exchange to Kanigiri road				
13	Exchange to Pamur road				
14	Exchange to Kanigiri road				IV LESS THAN 430 V
15	Exchange to Kanigiri road				
16	Exchange to Kanigiri road				
Ponnaluru Exchange					
1	Exchange to Kanigiri road				
2	Exchange to Kanigiri road				IV LESS THAN 430 V
2A	Exchange to Kanigiri road				
3	Exchange to Kanigiri road				
4	Exchange to Kandukur road	6.8	0.204	5500	1122
5	Exchange to Kanigiri- road				IV LESS THAN 430 V
Venkupalem Exchange					
1	Exchange to Kanigiri road				OUT OF PARALLELISM
2	Exchange to Kandukur road				IV LESS THAN 430 V
3	Exchange to Kandukur road				OUT OF PARALLELISM
Kamepalli Exchange					
1	Exchange to Patchava road				
2	Exchange to Tangutur road				
3	Exchange to Tangutur road				IV LESS THAN 430 V
4	Exchange to Tangutur road				

ANNEXURE - I

Case No.: AND-667					
Name of the Power Line : <u>220 KV DC Line from 400/220 KV SS Podili to proposed 220/132 KV SS at Kandukuru in Prakasam Dist</u>		Map Scale : 1 सेमी=500 मीटर Length of line : 56.992 कि.मी. Average Soil Resistivity : 70,000 Ohm-cm			
S No.	Telecom Details	Length of Parallelism (km)	Mutual Coupling (ohms)	Fault Current (Amps)	Induced Voltage (Volts)

Petluru Exchange					
1	Exchange to Podili road	IV LESS THAN 430 V			
2	Exchange to Podili road				
3	Exchange to Kondapiroad				
Pokuru Exchange					
1	Exchange to Vrkota road	OUT OF PARALLELISM			
2	Exchange to Kandukur road				
3	Exchange to Vrkota road				
Uppalapadu Exchange					
1	Exchange To Goginenivaripalam	IV LESS THAN 430 V			
2	Exchange To Veluru				
3	Exchange To Kalamalla				
Kellampalli Exchange					
1	Exchange To Agraharam	IV LESS THAN 430 V			
2	Exchange To Sivarayunipeta				
3	Exchange To Pennuru	IV LESS THAN 430 V			
4	Exchange To Gundla Samudram				
Marripudi Exchange					
1	Exchange To Kuchipudi	OUT OF PARALLELISM			
2	Exchange To Regalagadda				


 सहायक अभियन्ता/JNI of Engineer
 के.एस. भवन, प्रो. ए.ए.ए.ए.ए.
 सेवा भवन, जार. वि. गुण,
 Sewa Bhavan, R.K. Puram,
 नई दिल्ली-66/New Delhi-66

Case No.: AND-667					
Name of the Power Line : <u>220 KV DC Line from 400/220 KV SS Podili to proposed 220/132 KV SS at Kandukuru in Prakasam Dist</u>		Map Scale : 1 सेमी=500 मीटर Length of line : 56.992 कि.मी. Average Soil Resistivity : 70,000 Ohm-cm			
S No.	Telecom Details	Length of Parallelism (km)	Mutual Coupling (ohms)	Fault Current (Amps)	Induced Voltage (Volts)

SOUTH CENTRAL RAILWAY DETAIL					
Ref. No SG.85/4/3/PTCC/SCRAP201665 RTD dated 28.07.2017					
1	Tettu (TTU) – Ulavapadu (UPD)	OUTSIDE IV CALCULATION CONSIDERATION ZONE			0
2	Ulavapadu (UPD) – Singarayakonda (SKM)				0
3	Singarayakonda (SKM) – Tanguturu (TNR)				0

Chief Engineer
Seva Bhawan, Rail Forum,
New Delhi-65/New Delhi-05

Tele : 23019746

Directorate General of Signals
 Signals 7
 General Staff Branch
 Integrated HQ of MoD, (Army)
 DHQ PO, New Delhi - 110011


B/46937/Sigs 7(b)/611/

18 Aug 2017

The Director (PTCC)
 Central Electricity Authority,
 18-A, Shaheed Jeet Singh Marg,
 NREB Complex, Katarwaria Sarai,
 New Delhi - 110066

**ERECTION OF 220KV DC LINE FROM 400/220KV SS PODILI TO PROPOSED
 220/132KV SUBSTATION AT KANDUKURU IN PRAKASAM DISTRICT.**

1. Please Transmission Corporation of Andhra Pradesh Ltd, Hyderabad letter No CPT 330/DE III/PM/220kv Kandukuru Line/D.No.359/2017 dt 12 Jul 2017.
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.


 (AV Umdekar)
 Lt Col
 GSO 1 (Comn)
 for SO-in-C

Enclosures (As above)

Copy to :-

Chief Engineer (Construction)
 Vidyut Soudha, Hyderabad - 500082

- for information wrt letter under reference.