



सत्यमेव जयते

भारत सरकार / Government of India

विद्युत मंत्रालय / Ministry of Power

केन्द्रीय विद्युत प्राधिकरण / Central Electricity Authority

**राष्ट्रीय विद्युत समिति / National Power Committee**

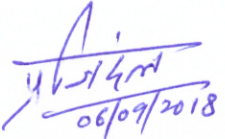
सं.: 4/एम.टी.जी.एस/रा.वि.स /के.वि.प्रा./2018/

दिनांक:06.09.2018

## सार्वजनिक सूचना

**विषय:** 'संचार प्रणाली की उपलब्धता पर दिशानिर्देश' का मसौदा पर हितधारकों और आम जनता से टिप्पणियों के सम्बन्ध में |

1. केन्द्रीय विद्युत विनियामक आयोग (अंतर-राज्य विद्युत संचरण के लिए संचार प्रणाली), विनियम, 2017 के विनियमन 7.3 (i) के अनुसार, राष्ट्रीय विद्युत समिति (रा.वि.स) को आरपीसी, एनएलडीसी, आरएलडीसी एवं अन्य हितधारकों के परामर्श से संचार की उपलब्धता पर दिशानिर्देश तैयार करने का कार्य सौंपा गया था |
2. तदनुसार, एनपीसी सचिवालय ने 'संचार प्रणाली की उपलब्धता पर दिशानिर्देश' का मसौदा तैयार किया है।
3. मसौदे दिशानिर्देश निम्नलिखित लिंक पर सीईए वेबसाइट पर उपलब्ध हैं:  
<http://www.cea.nic.in/npc.html>
4. 'संचार प्रणाली की उपलब्धता पर दिशानिर्देश' को अंतिम रूप देने के लिए 20 सितंबर 2018 तक मसौदे दिशानिर्देशों पर राज्यों / हितधारकों और आम जनता की टिप्पणियां आमंत्रित की जाती हैं।
5. टिप्पणी / इनपुट निम्नलिखित ईमेल पते पर भेजें : cenpc-cea@gov.in

  
06/09/2018

(प्रदीप जिंदल)

सदस्य सचिव(रा.वि.स)

केन्द्रीय विद्युत प्राधिकरण





सत्यमेव जयते

भारत सरकार / Government of India  
विद्युत मंत्रालय / Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण / Central Electricity Authority  
**राष्ट्रीय विद्युत समिति / National Power Committee**

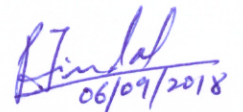
No.: 4/MTGS/NPC/CEA/2018/

Date:06.09. 2018

**PUBLIC NOTICE**

**Subject: Comments of stakeholders and public on the draft of 'Guidelines on Availability of Communication System'**

1. As per Regulation 7.3(i) of CERC (Communication System for Inter-State transmission of Electricity), Regulations, 2017, **National Power Committee (NPC)** has been entrusted to prepare 'Guidelines on Availability of Communication System' in consultation with RPCs, NLDC, RLDCs and other stakeholders.
2. Accordingly, NPC secretariat has prepared a draft of 'Guidelines on Availability of Communication System'.
3. The draft guidelines are available on CEA website on the following link: <http://www.cea.nic.in/npc.html>
4. The comments from states/stakeholders and general public are invited on the draft guidelines **by 20<sup>th</sup> September 2018** for finalizing the 'Guidelines on Availability of Communication System'.
5. The comments/inputs could be sent on the following email addresses: [cenpc-cea@gov.in](mailto:cenpc-cea@gov.in)

  
06/09/2018

**(Pardeep Jindal)**  
Member Secretary (NPC)  
Central Electricity Authority

**GUIDELINES  
ON  
AVAILABILITY OF COMMUNICATION SYSTEMS  
FOR  
INTER-STATE TRANSMISSION OF ELECTRICITY**

**DRAFT**

**AUGUST 2018  
NEW DELHI**

**NATIONAL POWER COMMITTEE DIVISION  
CENTRAL ELECTRICITY AUTHORITY**

## **GUIDELINES ON AVAILABILITY OF COMMUNICATION SYSTEM FOR INTER-STATE TRANSMISSION OF ELECTRICITY**

### **1. INTRODUCTION:**

1.1 As per regulation 7.3 (i) of Central Electricity Regulatory Commission (Communication System for Inter-State transmission of Electricity), Regulations, 2017, National Power Committee (NPC) has been entrusted to prepare Guidelines on Availability of Communication System in consultation with RPCs, NLDC, RLDC and other stakeholders.

1.2 The relevant provisions in the CERC (Indian Electricity Grid Code) Regulations, 2010 and Central Electricity Authority (CEA) (Technical Standards for Connectivity to the Grid), Regulations, 2007 in respect of Communication System as follows:

1.2.1 **Regulation 4.6.2 of the Indian Electricity Grid Code (IEGC)** stipulates that *'Reliable and efficient speech and data communication systems shall be provided to facilitate necessary communication and data exchange, and supervision/ control of the grid by the RLDC, under normal and abnormal conditions. All Users, STUs and CTU shall provide Systems to telemeter power system parameter such as flow, voltage and status of switches/ transformer taps etc. in line with interface requirements and other guideline made available by RLDC. The associated communication system to facilitate data flow up to appropriate data collection point on CTU's system shall also be established by the concerned User or STU as specified by CTU in the Connection Agreement. All Users/STUs in coordination with CTU shall provide the required facilities at their respective ends as specified in the Connection Agreement.'*

1.2.2 **Regulation 6(3) of the CEA (Technical Standards for Connectivity to the Grid)** stipulates that *'the requester and user shall provide necessary facilities for voice and data communication and transfer of online operational data, such as voltage, frequency, line flows and status of breaker and isolator position and other parameters as prescribed by the appropriate load dispatch centre.'*

## **2. DEFINITIONS:**

2.1 Words and expressions used in this methodology shall have the same meaning assigned in the Electricity Act, Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulation ,2007, CEA (Technical Standards for Communication System in Power Sector) Regulations, 2018, CERC (Indian Electricity Grid Code) Regulations, 2010 & (Communication System for Inter-State transmission of Electricity), Regulations, 2017 and amendments thereof.

2.2 Other words have been explained as per the context in these guidelines.

## **3. SCOPE AND APPLICABILITY:**

3.1 As per Regulation 5. (i) of CERC (Communication System for Inter-State transmission of Electricity), Regulations, 2017, *“These regulations shall apply to the communication infrastructure to be used for data communication and tele -protection for the power system at National, Regional and inter-State level and shall also include the power system at the State level till appropriate regulation on Communication is framed by the respective State Electricity Regulatory Commissions.”*

3.2 As such, in case of ISTS i.e. for the communication system to be provided at RLDCs/NLDC, these guidelines shall be applicable for CTU and in case of State Transmission System i.e. for the communication system to be provided at SLDC, these guidelines shall be applicable to the respective State Transmission Utility (STU).

[The CTU (or STU as the case may be) shall have back to back co-ordination/agreement with transmission licensees, generators, dedicated transmission line owners for providing power system communication on their network]

## **4. TREATMENT OF COMMUNICATION SYSTEM OUTAGES:**

4.1 Outage time of communication system elements (i.e. channels) due to acts of God and force majeure events beyond the control of the communication provider shall be considered as deemed available. However, onus of satisfying the Member Secretary, RPC that element outage was due to aforesaid events shall rest with the communication provider.

4.2 Any outage of duration less than or equal to 1 minute in a time-block shall be treated as deemed available provided such outages are not more than 10 times in a day.

(Explanation: (a) If a channel is out for a duration of more than 1 minute in a time-block, the channel shall be considered out for the whole time-block. (b) If a channel is out for a duration up to 1 minute in a time-block, and such outages are more than 10 times in a day, then such outages shall not be exempted under 4.2 of the guidelines and all the time-blocks with such outages shall be considered outages).

## **5. METHODOLOGY FOR COMPUTATION OF AVAILABILITY OF COMMUNICATION SYSTEM:**

5.1 Availability of Communication System ( $A_{CS}$ ) shall be calculated as under:

$$A_{CS} = \frac{\sum_{i=1}^N (A_i)}{N}$$

Where -  $N$  is total number of communication channels which is based on the requirement of RLDCs/NLDC and the same would be decided in consultation with respective RPCs/NPC.

-  $A_i$  is Availability of  $i^{th}$  Channel which shall be calculated as given in 5.2 (b)

5.2(a) If a channel is out for some time in a particular time-block as defined in IEGC (presently 15 minutes), for calculation of availability of communication system, it would be considered as not available during the whole block.

5.2(b) Availability of  $i^{th}$  Channel ( $A_i$ ) shall be arrived as under:

$$A_i = \frac{B_T - B_{Ni}}{B_T} \times 100$$

Where  $B_T$  is Total number of time-blocks in a month

$B_{Ni}$  is the total number of time-blocks, in which  $i^{th}$  channel was not available after considering deemed availability status of 4.1.

$$B_{Ni} = B_{ANi} - B_{Gi},$$

Where-  $B_{ANi}$  is absolute number of time-blocks in which the  $i^{th}$  channel was 'not available' on account of any reason after due consideration of provisions under 4.2.

-  $B_{Gi}$  is Number of time-blocks out of  $B_{ANi}$ , in which  $i^{th}$  channel was 'not available' on account of act of god as specified in 4.1 above.

[For example, if there are 2880 time-blocks ( $B_T$ ) in a month, and a particular channel is not available for a total of 70 ( $B_{ANi}$ ) time-blocks; and out of this, this channel was not available for 20 ( $B_{Gi}$ ) time-block due to act of god, then-  $B_{Ni} = 70 - 20 = 50$ , and  $A_i = (2880 - 50) / 2880 = 98.26\%$ ]

\*\*\*