

NC ER

Implementation Guide for the Communication Systems Requirements

César Clause

System Operation European Stakeholder Committee
14 December 2018

NC ER – Implementation Guide for the Communication Systems Requirements

Retrospect of SO ESC meeting, September 13, 2018 in Brussels:

- **Implementation Guide for the Communication Systems Requirements** – draft version was presented:
 - The implementation guide provides the TSOs general view and understanding about the necessary requirements and equipment needed for an efficient and secure communication (voice and data communication).
 - The implementation guide provides support for all TSOs and relevant stakeholders in order to be able to comply with NC ER.

Status Update:

On 10 October 2018 ENTSO-E System Operations Committee **approved** the Implementation Guide for the Communication Systems Requirements and agreed to submit the document to ACER.

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Review process of Implementation Guide for the Communication Systems Requirements:

- The document will be **reviewed** at the latest in **2023** after Art. 41 on NC ER (Communication Systems) has to be implemented according to Art. 55 of NC ER (...Article 41... shall apply from 18 December 2022)

Specific topic of **satellite communication**

- Satellite communications have limits that need to be taken into account :
 - Capacity of the satellite network to support all the traffic
 - overload in case of emergency ?
 - system dependencies with ground system
- These limitations need to be considered and specific satellite system to be used needs to be agreed on by concerned parties

Access to the Implementation Guide for the Communication Systems Requirements:

- The document will be available shortly on ENTSO-E website

NC ER – Overview of technical requirements for communication systems (voice and data)

- EQUIPMENT REDUNDANCY

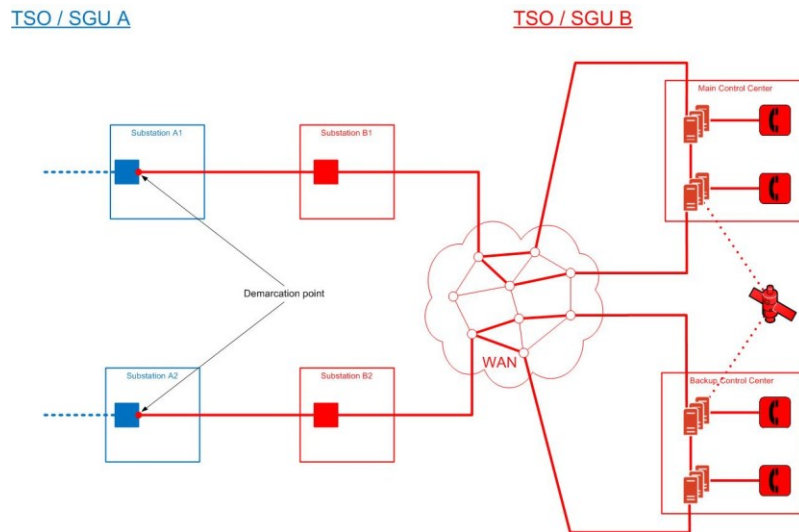


Figure 1: direct redundant communication infrastructure

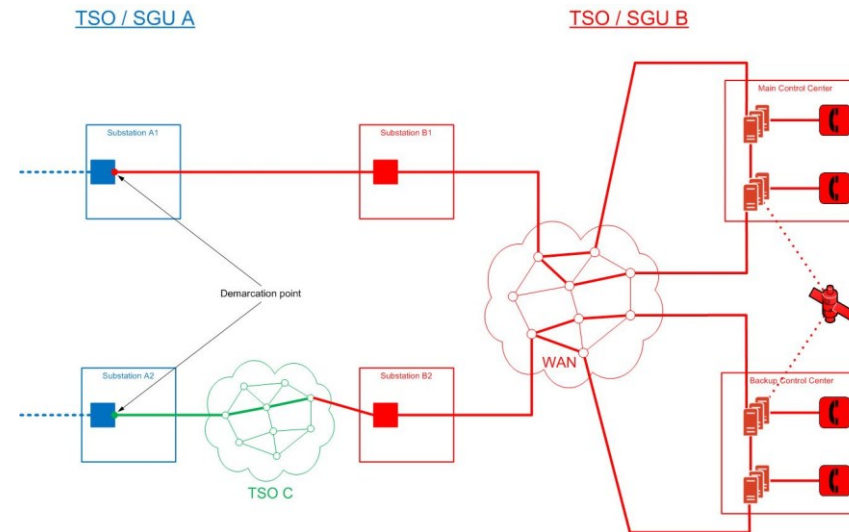


Figure 2: redundant communication infrastructure via a third party.

- BACKUP POWER SUPPLY of minimum 24 hours in order to assure all parties can be contacted
- USER INTERFACE to guarantee identification of the incoming calls (only relevant for voice communication)

Special arrangement for **type A or B Power Generating Modules** relevant for restoration

- DATA COMMUNICATION system sufficient enough (no need of voice communication)
- It is of utmost importance that relevant operator (DSO or TSO) is able to **directly control** these units.