REGULATION (EU) 2017/2196
establishing a network code on electricity emergency and restoration

CEP-ER, Guidelines and Network Codes implementation in the Energy Community
TECHNICAL WORKSHOP - Vienna, 5 May 2022
The Emergency and Restoration network code lays down the requirements on the
management by TSOs and coordination of system operation across the Energy Community in the emergency, blackout and restoration states.

**Scope**
- transmission systems, distribution systems and interconnections in the Energy Community (between CPs and with MSs)
- electricity market service providers – security (defence), restoration and balance services, NEMOs
- significant grid users (SGUs) – generating modules, demand modules, microgrids, redispatching aggregators, HVDC systems

**Principles**
- transparency, proportionality, non-discrimination, market-based mechanisms
- use of European standards and technical specifications
- respect of technical, legal, personal safety and security constraints,
- respect of (national) responsibilities assigned to relevant TSOs
- consultation with relevant DSOs

**TSO procedures**
- for consultations (before real-time, real-time), for coordinated execution (real-time), for consistency of regionally coordinated measures

Underlying purposes
- safeguarding operational security
- preventing the propagation of an incident to avoid widespread disturbance and blackout
- allow for the efficient and rapid restoration of the electricity system
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| Planning criteria | • design criteria (security limits, generation / load capabilities, SGU priorities, system performance – TSO, DSO)  
| • design principles (minimum impact, economic efficiency, proportionality, safety – not provoking emergency)  
| • procedures for implementation [deadlines] and activation of the Plans, inter-TSO assistance and coordination |
| System Defence Plan - measures | • automatic control schemes (under-frequency, over-frequency, voltage collapse)  
| • manual management procedures (frequency deviation, voltage deviation, power flow, active power assistance, load disconnection) |
| Restoration Plan – measures | • re-energization procedures – top-down / bottom-up (voltage / frequency deviations - island operation - resynchronization), activation criteria,  
| • frequency management procedure – frequency leader (frequency deviation / synchronous area splitting)  
| • resynchronization procedure – resynchronization leader, resynchronization strategy |
| Market criteria | • rules [deadlines] for suspension and restoration of market activities (harmonized)  
| • procedures for market activities suspension and restoration, procedure for communication  
| • rules [deadlines] for imbalance settlement in case of market suspension |
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General principles

- mandatory information exchanges between the stakeholders,
- setup of communication systems
- emergency tools and facilities – transfer procedures
- compliance testing for stakeholders (generation modules, demand-response modules, HVDC systems, demand disconnection systems, communication systems, emergency tools and facilities)
- compliance testing plans (system defence and restoration, communication systems) [deadlines]
- monitoring of the implementation

Specific adjustments

- automatic (low frequency) demand disconnection scheme [ANNEX] – pursuant to Continental Europe
- role of ENTSO-E – coordination in monitoring the implementation (ECS) – compliant with the GLs
- derogations (Georgia) – exempted from Articles 15, 29 and 33 (frequency control, appointment of frequency and resynchronization leader) – else compliant with SO GL
Thank you for your attention!

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