Network Codes in the area of system operation

Florence Forum
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Presentation outline

System operation approach

Development of the Network Codes

Next steps

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What is missing?

- **The current rules for system operation mostly address TSO or TSO-TSO issues. Rules for other system users need to be addressed**
- **TSOs exercise different levels of generation control and have different contractual relations with DSOs, generators, HVDCs and other system users**
- **Existing rules are not enforceable towards system users other than TSOs**
- **Common rules for interoperability between synchronous systems do not exist yet**

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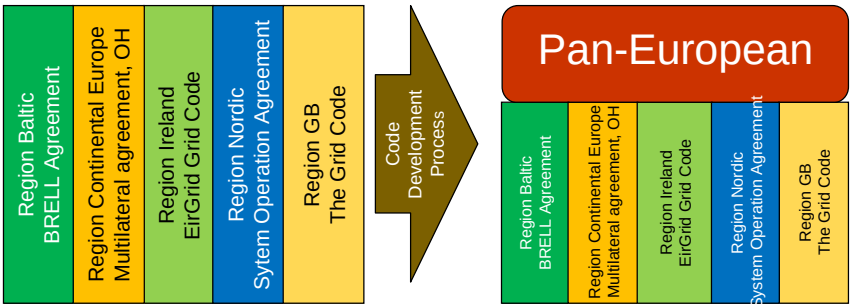
System Operation approach

FROM

Separate regional agreements and codes

TO

General interregional and harmonised regional codes



- **Pan-European Network Codes should stay concise and general (the "what")**
- **The more detailed Network Codes (the "how") should be requested at the synchronous level**
- **The existing detailed regional rules should be "integrated" in the Network Codes and by this become a legal reference**

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Preparatory phase
Draft NC on Operational security (1)

What?

Topic
1. States of system operation
2. Congestion and active power management
3. Voltage control and reactive power management
4. Short-circuit currents management
5. Power system stability management
6. Contingency assessment and handling
7. System protection
8. Frequency quality
9. Operational testing, monitoring and investigation
10. Operational training and certification

Why?

- Achieve common pan-European principles
- State basics for Operational security
- Increase coordination of System operation
- Include all Stakeholders in System operation

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Preparatory phase
Draft NC on Operational security (2)

Code includes

- Normal operational security issues
- States of system operation
- Contingency assessment (Risk analysis)
- Data exchange
- Testing and monitoring
- Training and certification

Code excludes

- Emergency operations
- Capacity calculation
- IT communication infrastructure and data standards

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Preparatory phase
Draft NC on Operational security (3)

Mostly general requirements

- Express pan-European harmonisations of “What”
- Open for future developments
- Open for regional & national implementations
- Legally stable

More detailed requirements

- May result in unprofitable harmonisations of “How”
- As a pan-European law difficult to adjust to future developments

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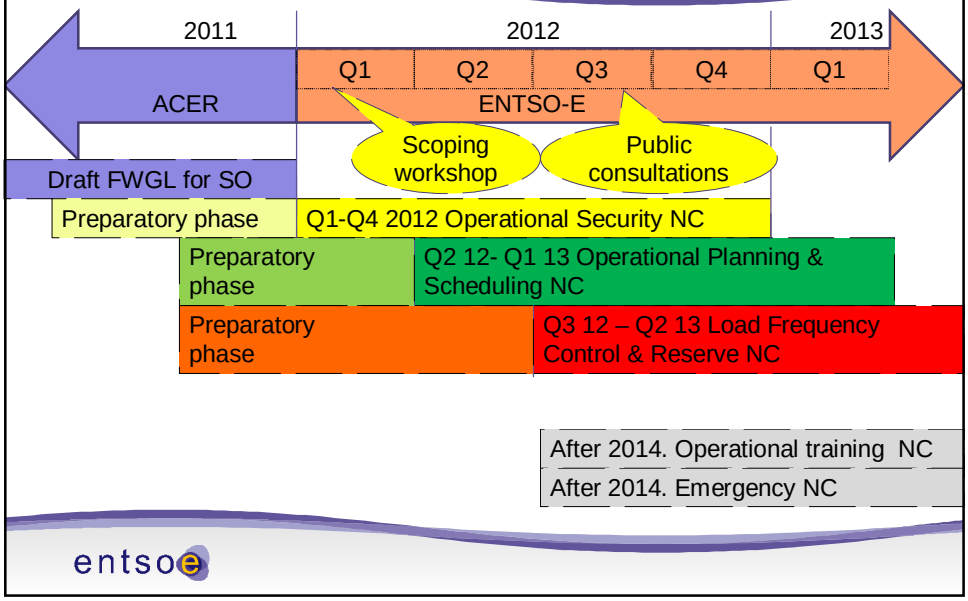
The next steps – ENTSO-E plan



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