


ACER

 Agency for the Cooperation
of Energy Regulators

System Operation – past, present, future

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**WS on the implementation of SO GL and NC ER
E-Control, Vienna, 30 May 2017**

Framework Guidelines on Electricity System Operation

- Published on 2 December 2011
- NCs' objectives:
 - » The network codes for System Operation shall elaborate on relevant subjects that should be coordinated between TSOs, as well as between TSOs and Distribution System Operators and with significant grid users, where applicable.
 - » The network codes for System Operation shall ensure provision of an efficient functioning of the interconnected transmission systems to support all market activities.

Framework Guidelines on Electricity System Operation

- NCs' areas and levels of harmonisation:

	Operational Security	Operational Planning & Scheduling	Load-Frequency-Control	Staff Training & Certification	Emergency & Restoration	New Applications
To operate the electrical system in a safe, secure, effective and efficient manner		(A)			(A)	
To apply same principles for different systems		(C1)				
To enable the integration of innovative technologies		(A)				(X)
To make full use of information and communication technologies				(B)		

Policy Options:

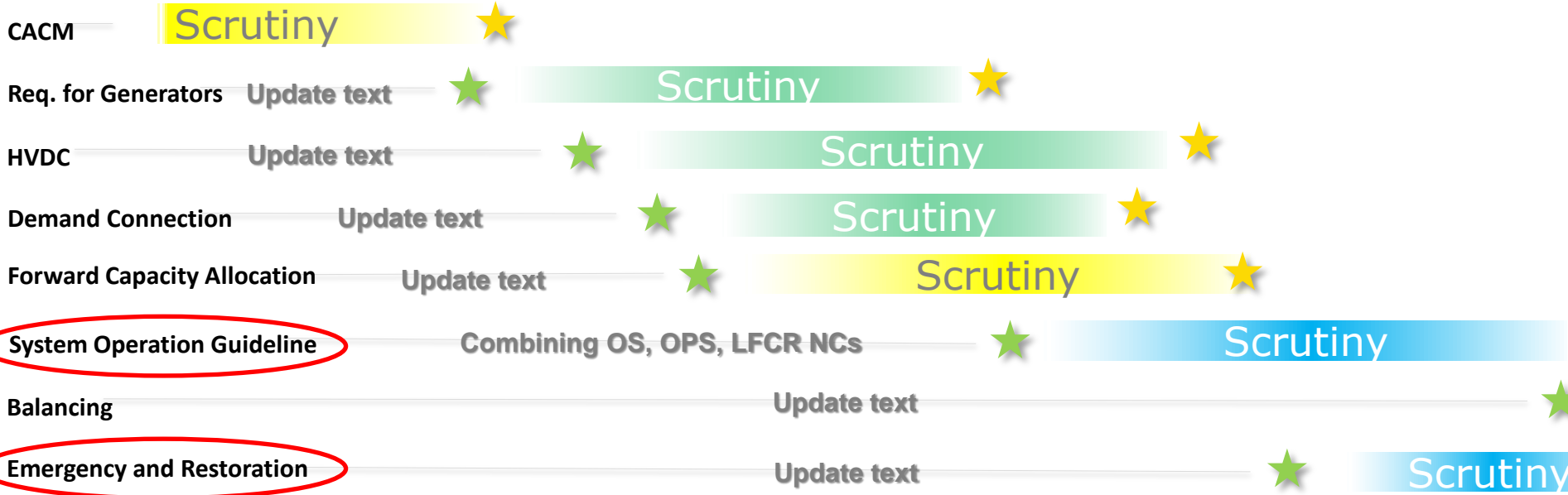
- (A) Standardisation at synchronous area level
- (B) Partly standardisation at EU level
- (C) Full EU-wide harmonisation with detailed framework
- (X) Foster innovation so as to address future challenges

Market

Grid Connection

System Operation

' 15 | Q1 2015 | Q2 | Q3 | Q4 | Q1 2016 | Q2 | Q3 | Q4 | ' 17



★ Voting ★ Adoption

Challenging implementation (1)

- SO GL
 - » 3 all NRAs approvals*
 - » 7 regional NRAs approvals*
 - » 9+ individual NRA approvals**
- NC ER
 - » 7 individual NRA approvals **

*depending on how TSOs will choose to submit their proposals

** depending on the MS implementation

Challenging implementation (2)

- When applying the Regulation, Member States, competent authorities, and system operators shall:
 - » (a) apply the principles of proportionality and non-discrimination;
 - » (b) ensure transparency;
 - » (c) apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
 - » (d) ensure TSOs make use of market-based mechanisms as far as possible, to ensure network security and stability;
 - » (e) respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;
 - » (f) consult with relevant DSOs and take account of potential impacts on their system; and
 - » (g) take into consideration agreed European standards and technical specifications.

Challenging implementation (3)

Content-wise:

- Development and approval of terms and conditions or methodologies of TSOs:
 - » methodology for coordinating operational security analysis (Article 75; SO GL);
 - » methodology for each synchronous area for the definition of minimum inertia (Article 39(3)(b); SO GL);
 - » common provisions for each capacity calculation region for regional operational security coordination (Article 76; SOGL);
 - » scope of data exchange with significant grid users (Article 40(5); SOGL);
 - » minimum activation period to be ensured by FCR providers (Article 156(10); SO GL).

Challenging implementation (4)

Content-wise:

- Setting up of Regional Security Coordinators in all regions and making them fully competent in 5 core functions
- TSOs regional coordination on system defence and restoration plans
 - » Consistency of designs
 - » Top-down re-energisation strategy

Time-wise:

- Many requirements share same deadlines, e.g.:
 - » development and approval of methodologies, conditions and values included in the synchronous area and LFC block operational agreements (Articles 118 and 119; SO GL)

Implementation Monitoring (1)

- Obligations for ACER and ENTSO-E in Electricity Regulation
- European Stakeholder Committees
 - » Co-organized by ACER and ENTSO-E
 - » Market, Grid Connection, System Operation*
 - » Open to associations representing pan-European views or interests
 - » Objectives:
 - Inform decision-making processes
 - Contribute to implementation monitoring
 - Platform to discuss and share views with stakeholders on the NC implementation

**<https://www.entsoe.eu/major-projects/network-code-implementation/stakeholder-committees/Pages/default.aspx#ops>*

Implementation Monitoring (2)

- European Stakeholder Committees
 - » Active Library
 - National implementation processes with available documents
 - Future mapping of non-exhaustive requirements per each MS

What is next?

- Commission's Clean Energy package ("Winter Package")
 - » Released on 30 November 2016
 - » Legislative proposals cover energy efficiency, renewable energy, the design of the electricity market, security of electricity supply, governance rules for the Energy Union, etc.
- Amendments of the NCs and GLs

**Thank you for
your attention!**

www.acer.europa.eu