

Network Code Operational Security

2nd Edition

ENTSO-E Stakeholders Information Meeting
Brussels, 16/09/2013

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Highlights

- **Summary of ACER suggestions**
- **NC OS adjustments**
- **Prospects and next steps**

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Summary of ACER reasoned opinion of 28.05.2013

I. Coherence & compatibility with other network codes

II. National scrutiny → *NRA involvement*

III. Performance indicators → *„per country“*

IV. Information exchange → *DSO & SGU proportionality*

V. Scope → *non-interconnected systems*

VI. Drafting quality

... all in all ...

NC OS broadly in line with FG; PI only subject-matter issue

The key priorities for adjustments of the Code

The „final product“ to meet the EC expectations for comitology

The adjustments to give ACER basis for a final recommending opinion

Consider additional DSOs' concerns wherever possible

NO compromising on Operational Security

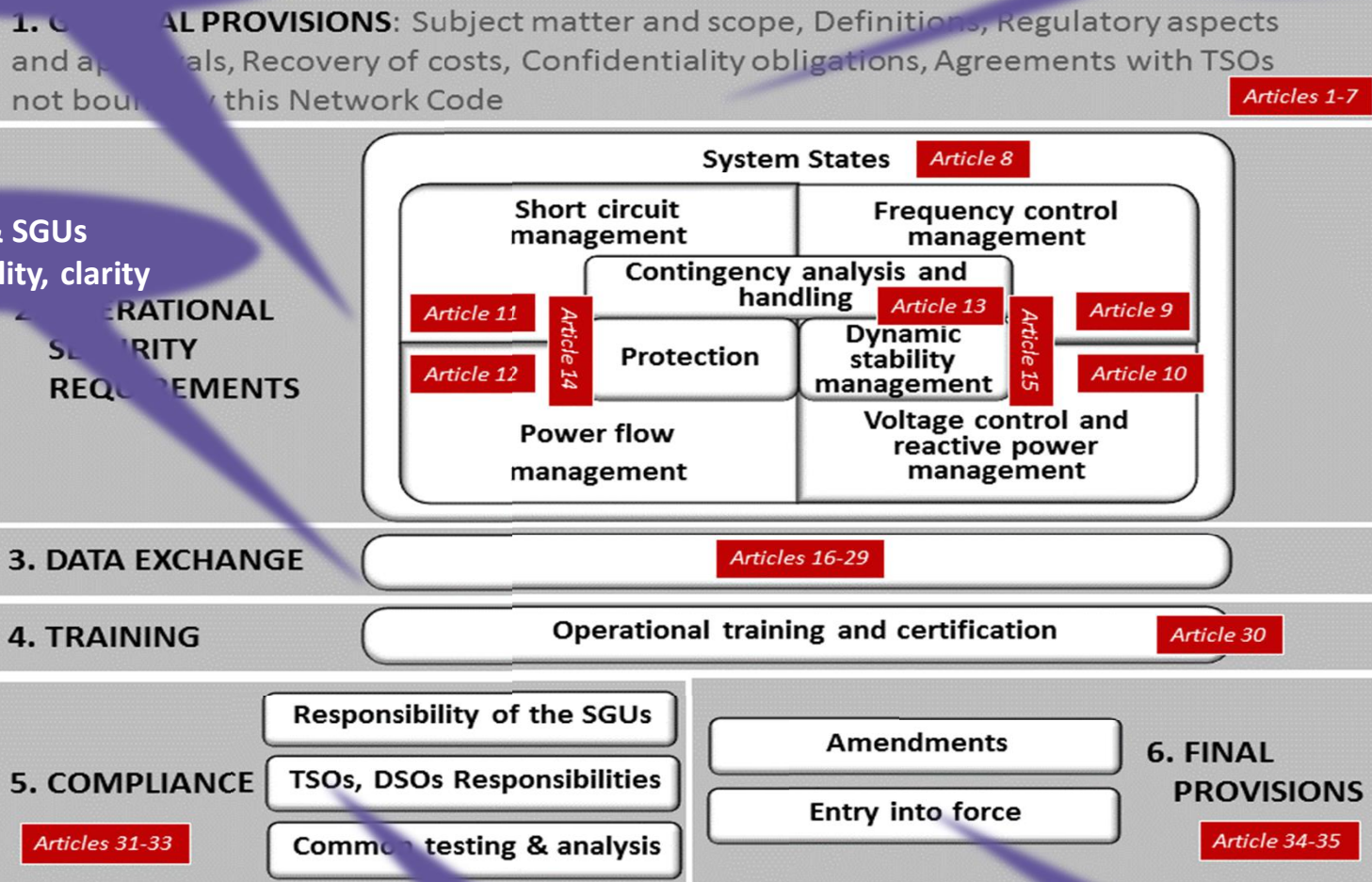
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- Summary of ACER suggestions
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Summary of what / where has been adjusted in the Code

Specific coherence with OPS
& LFCR, no „best endeavour“,
SGU & DSO issues

General coherence all
NC: national scrutiny,
scope & Definitions



DSOs' & SGUs
proportionality, clarity

I. Coherence & compatibility of network codes

- **Recitals (↓, not legally binding)**

Removed explanatory ones, Recitals 4-6 agreed with DSOs, Added Recital 10 on MS powers and NRA involvement, added 24 on CACM

- **Article 1(3) & 1(4) on multiple TSOs added, for all codes, Removed Article 1(5) on nuclear safety and updated 1(7) on good industry practice**
- **Article 2: removed definitions of Business Continuity Plan (explanation in Art. 8(16)), Time to Restore Frequency (→ NC LFCR) and refined def's of SGU, Synchronous Area and Virtual Tie-Line**

I. Coherence & compatibility of network codes *(cont'd)*

- “ Article 3 **Regulatory aspects**: removed part of Art. 3(3) and Art. 3(5) on nuclear safety to avoid redundancy
- “ Article 5 **Recovery of costs**: remove 5(4) compliance test costs
- “ Article 7 amended with 7(3) for cases when **Agreement pursuant to 7(1) and 7(2)** cannot be implemented
- “ Article 35. adjusted accordingly

II. National scrutiny

Article 4 **Regulatory approvals** → amended with

- “ Art. 4(2)(d) on **criteria for requesting compliance test**
- “ Art. 4(2)(e) on **high priority SGU** cf. Art. 32(10)
- “ Art. 4(2)(f) on **SGU data provision exemptions** cf. Art. 26(2)

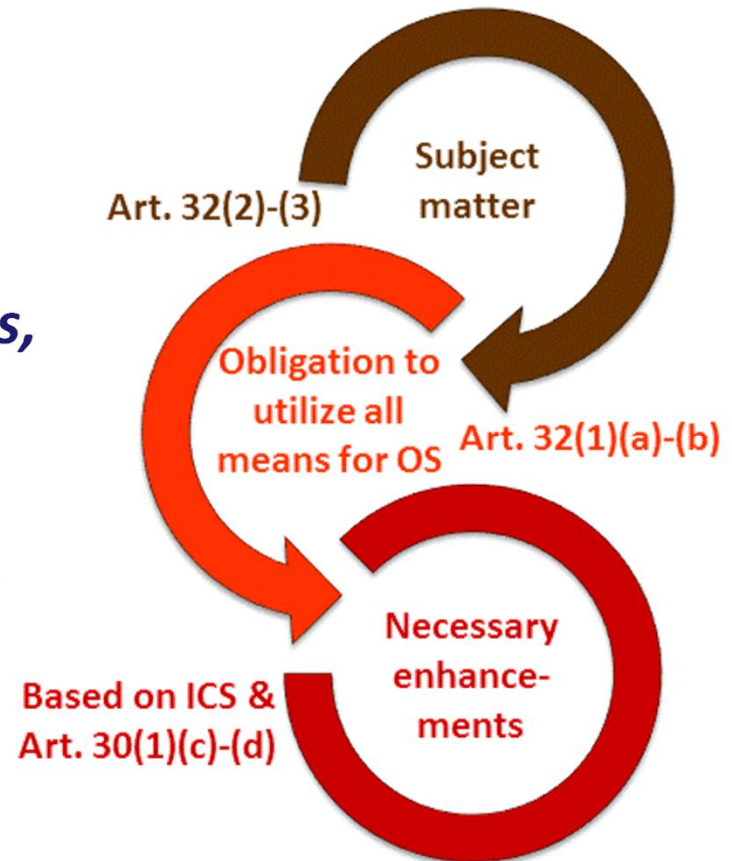
III. Performance Indicators

The key concepts & process:

Therefore, added in Art. 31(2)

- “ **geographical scope**,
- “ **electrical TSO interdependencies**,
- “ **historical information**

to be reflected upon, for incidents in annual report.



IV. Information exchange

- “ Modification of Art. 16(6)-(8) in the sense of **DSOs' proposal**
- “ „**best available**“ for DSO aggregated data in Art. 20(1)
- “ Amendments in Art. 27(1)-(2) on **SGUs' obligation to deliver data also to DSOs**
- “ New Art. 31(9) for **Type A User not tested** but only their Aggregators must be compliant with the requirements

V. Scope

- “ Art. 1(4) added with „*no applicability to the TSO or part of a TSO which are not synchronously interconnected*“
- “ Also, no application to the Åland Islands

VI. Drafting quality

- “ Art. 8(14): precise on TSO *„... instructing the SGUs ...“*
- “ Art. 10(4), new, on **Demand Facilities capabilities/disconnect**
- “ Accepting DSOs proposals in Art. 10(13), 16(6) and 16(8) in the sense of **proportionality**
- “ Corrected **Art. 12(3) „Responsibility Area“** → **„Observability Area“**
- “ Art. 13(10) added *„convergence of load-flow calculations“* as the meaning of *„sufficiently“*

VI. Drafting quality *(cont'd)*

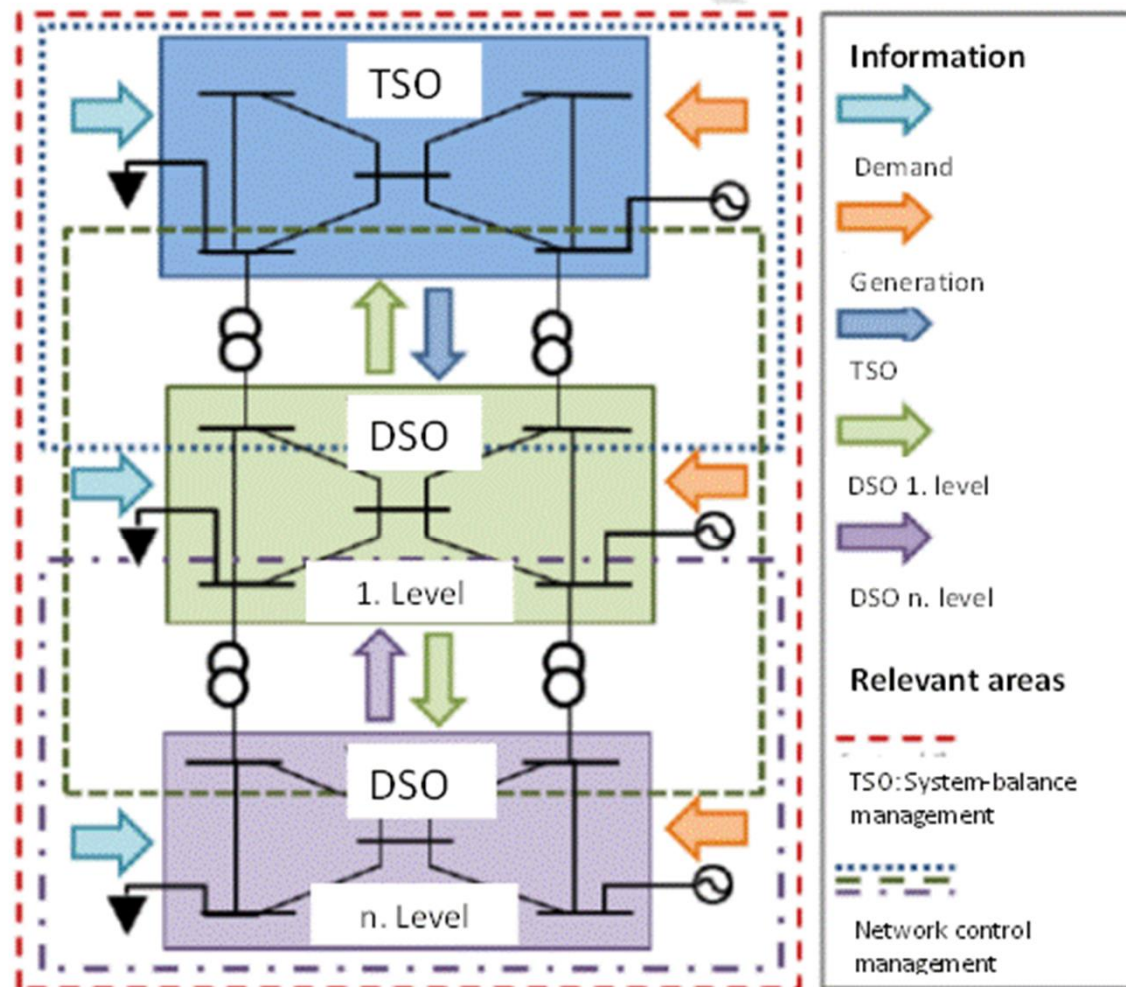
- *„Transmission Connected Demand Facilities“*
- *„Best endeavour“ → „use all available economically efficient and feasible means under its control“*
- *„European Awareness System“ → „IT tool for real-time data exchange“, to reduce need for new definitions*
- **Wording and rephrasing of several articles**

Adjustments in Supporting Document

- Chapter 3.5: **compliance by each TSO**, if an agreement at the Synchronous Area cannot be achieved → greatest possible extent for Code implementation throughout Europe
- Chapter 6.5: **flexibility and proportionality in data exchange** for DSOs and SGUs & **flexibility cf. real-time data for A**
- Chapter 6.7.4: **Examples on operational data exchange**
→ ...

Adjustments in Supporting Document *(cont'd)*

...→ key principles
of data &
information
exchange
between grid
operators



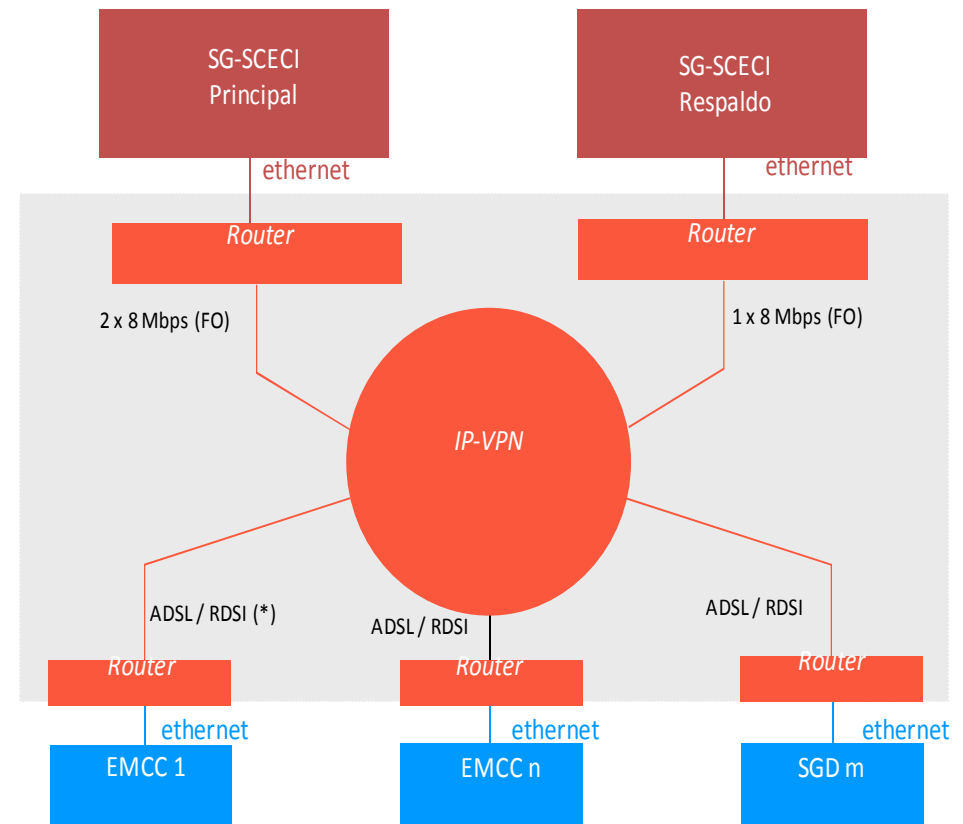
Adjustments in Supporting Document *(cont'd)*

...➔ **direct communication with SGUs providers of special services (e.g. here: interruptible loads)**

TSO System including monitoring

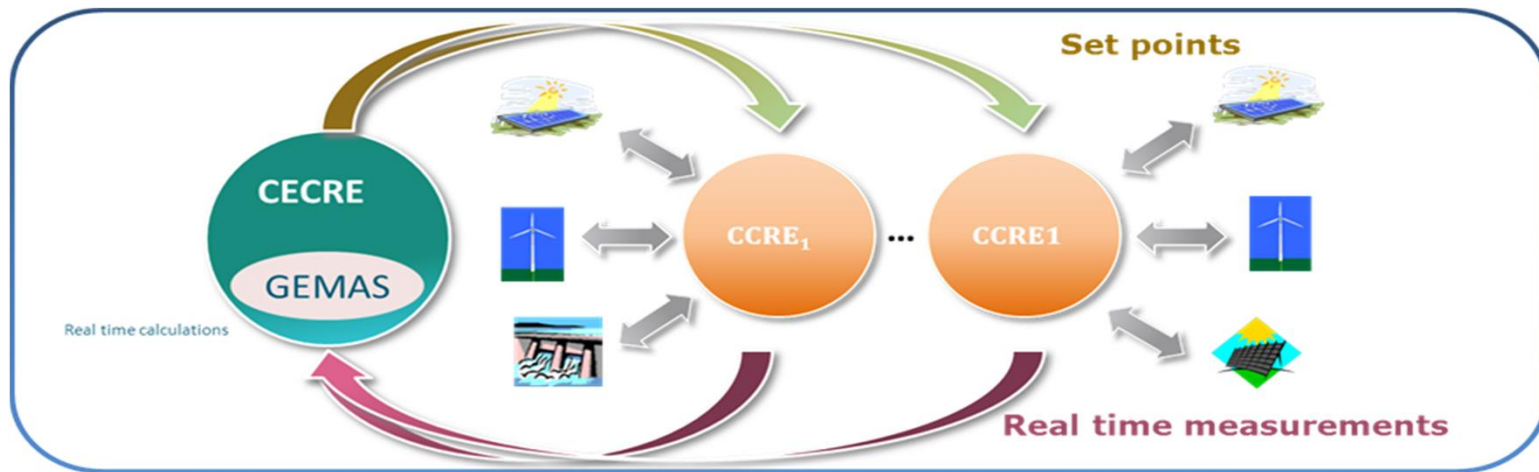
Communication channels directly with SGUs participating in the service

SGU System including activation of instructions



Adjustments in Supporting Document *(cont'd)*

...→ real-time communication to the control-centres of intermittent/renewable generation, depending on Operational Security needs





- “ Chapter 7.4.1: Clarifying explanation on **geographical, electrical and history** scope and characteristics for Performance Indicators
- “ Chapter 8.2.1: underlying clarification that the **SGU concepts address Aggregators** and not their individual small members
- “ Chapter 8.5.3: further detailed explanation on pre-fault and post-fault Remedial Actions
- “ Annex III adapted to fit new Article 4 of the Code

Adjustments in Supporting Document *(cont'd)*

- “ Annex V (FAQ) amended with explanations of **real-time** and **Virtual Tie-Line**
- “ Annex VIII (Definitions) aligned with the Code

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Completion, approval and towards comitology

- **ENTSO-E internal approvals in September 2013**
- **ACER opinion and recommendation anticipated in November 2013**
- **Upon completion of all preparatory steps, comitology could be expected Q1-Q2/2014**
- **Entering into force possibly end 2014 / 2015, depending on the duration and outcome of comitology**



Many thanks for your attention!

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16 September 2013, Brussels

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