



ENTSO-E Response to ACER consultation: Framework Guidelines on System Operation

Brussels, 8 September 2011

1. INTRODUCTION

ENTSO-E welcomes the opportunity to comment on the ACER draft Framework Guidelines (FWGL) on System Operation.

In principle, ENTSO-E considers that the draft FWGL covers all system operation issues and the document is well structured. The present ENTSO-E input to the public consultation addresses issues stated in the FWGL with respect to the Network Codes to be drafted by ENTSO-E. It comprises two parts: the first part highlights the key comments that are recurring through the entire document (Key Issues), the second part provides more detailed comments on specific FWGL provisions and follows the structure of the FWGL (comments to specific FWGL provisions).

2. KEY ISSUES

ENTSO-E considers that some provisions of the FWGL are too specific, too descriptive and including requirements, which are best left to be covered by the Network Codes, e.g. Definitions and terms, Staff Training and Certification. ENTSO-E believes that the FWGL should be kept at a sufficiently high level in order to ensure efficient drafting and implementation of the Network Code(s). The FWGL should set out the *what* is to be covered by the Network Codes, but not the *how* to solve the issues. In the current draft the level of detail is significantly varying in different topics (Topic 1-6) and would benefit from greater consistency and uniformity.

ENTSO-E understands the provisions of the *Methodology & Tools* chapters under the Topics 1-5 in such a way that during the development of the Network Codes, ENTSO-E will determine more precisely in which Network Code the different issues listed in the *Methodology & Tools* chapters will be addressed.

ENTSO-E questions the recurrent and generic references made through the FWGL to "*cost/benefit analysis*" and their lack of precision (see pages 15, 17, 18, 19, 22 and 25 of the FWGL). In that context, ENTSO-E refers to the current discussions taking place in the Planning Group meetings and stresses that ENTSO-E will respond in due course to the ACER 15 July Initial Impact Assessment for the FWGL.

ENTSO-E considers that further clarification is required on "*cost sharing principles*" for remedial actions and division between the high-level principles that govern cost sharing and the detailed principles which shall be defined in the Network Codes. ENTSO-E considers the cost sharing to be a governance issue which needs to be addressed by regulators in a harmonized way. ENTSO-E believes that the overall targets of market integration and non-discrimination can hardly be met if cost acceptance principles differ on a regional level.

A Network Code for New Applications may be too inflexible for future developments. The network codes should be drafted with sufficient flexibility to accommodate new applications and cover any new applications as far as we can reasonably foresee them. The network codes should be flexible enough not to block the introduction of future New Applications in the system; should this not be the case, then these can be addressed in a future review of the NCs.

Some TSOs have already set up Coordination Initiatives. Thus ENTSO-E proposes to add *"The Network Codes shall be open for the TSOs to form Regional Coordination Initiatives to solve system operation tasks in common."*

3. COMMENTS TO SPECIFIC FWGL PROVISIONS

§1 GENERAL PROVISIONS

- 1.1 Scope

FWGL text (Second paragraph):

"The Network Codes adopted according to these Framework Guidelines will be applied by electricity Transmission System Operators (TSOs) and other affected stakeholders, taking into account relevant public service obligations and without prejudice to the regulatory regime for cross-border issues pursuant to Article 42 of Directive 2009/72/EC and to the responsibilities and powers of regulatory authorities established according to Article 41(6) of Directive 2009/72/EC."

Comment:

Reference in the 2nd paragraph of point 1.1 of FG to the Article 42 of Directive 2009/72/EC with regards to cross border issues and to the article 41(6) of the Directive 2009/72/EC with regards to responsibilities of regulatory authorities seem not correct.

FWGL text (Fourth paragraph):

"All TSOs actions with regard to System Operation within a synchronous area or between them bear cross-border character due to law of physics."

Comment:

There are operational actions that do not imply cross-border effects, but have rather local character. ENTSO-E proposes to change the sentence into a conditional mode *"could bear"* and completing it with *"depending on the proximity and scope of action and topology of the network"*.

FWGL text (Table 1)

Column *"New Applications"*

Comment:

See the comment in Key Issues. ENTSO-E suggests adding a sentence which will clarify that New Applications do not need to be addressed in a separate network code.

FWGL text (Below table 1):

"The TYNDP (Ten Year Network Development Plan) as general framework according to Regulation (EC) 714/2009 (7) and Chapter V, Article 22.1 of the Directive 2009/72/EC"

Comment:

It is not clear, how the Network Codes of System Operation should consider the TYNDP, which will be updated every two years. Operational security standards are considered in the network planning activities. ENTSO-E is of the opinion that NCs for system operation are not intended to consider the TYNDP but the opposite; network planning shall consider security standards. NCs for system operation shall consider the existing network. ENTSO-E proposes to delete the reference to the TYNDP.

- 1.2 Application

FWGL text (second paragraph):

"The Framework Guidelines address the electric power transmission networks of the European Union (EU)"

Comment:

ENTSO-E considers that FWGL should address also the significant users and distributions networks. *Users* connected to distribution networks may also be considered as significant to the extent that they can have an influence on the operation of the transmission network. DSOs defined as grid users should be treated as *"significant"* by nature, at least if their networks are directly connected to the transmission grid. ENTSO-E suggests rewording into *"These Framework Guidelines apply to System Operators of electric power transmission networks, System Operators of Distribution Networks that connect significant users and all significant grid users to the extent they influence the operation of the electric power transmission networks"*.

- 1.3 Structure

FWGL text (third paragraph):

"Therefore focus is to be laid on the three key challenges":

Comment:

- ENTSO-E understands that the key challenge in the first bullet *"To define harmonized security criteria"* should be understood as "harmonized security principles". ENTSO-E believes the security criteria cannot be harmonized on the pan-European level due to physical differences in the synchronous areas; the principles should be the objective of the pan-European NCs.
- The key challenge in the second bullet *"To clarify and harmonize TSOs' roles, responsibilities and methods"* should include also the other affected stakeholders – DSOs, generators, consumers as anticipated in the IIA (p.21/30).

FWGL text (Figure 2):

The column *"Key Challenges"*

Comment:

The Figure 2 should include not only the box *"TSOs' Roles, Methods"*, but also the additional box *"Roles of the other significant users"*.

- 1.4 Interfaces to other Framework Guidelines

FWGL text (last bullet):

"Real-time information sharing refers to information which is also a subject of the Fundamental Electricity Data Transparency comitology guidelines."

Comment:

In order to reflect data shared in real-time and also in operational planning stages, ENTSO-E proposes to change the word "real-time" by "relevant" and to change "is" to "may", in such a way that the sentence reads: *"Relevant information sharing refers to information which may also be a subject of the Fundamental Electricity Data Transparency comitology guidelines"*. This change is driven by the fact that the real-time data is acquired by System Operators in real time, and the Fundamental Electricity Data Transparency is related to ex-ante (planning) and ex-post time horizons. Additionally, the operational real time data is not transmitted by public communication networks, but by dedicated links among TSOs.

FWGL text:

The last paragraph *"Furthermore, the European Network of Transmission System Operators for Electricity (hereafter referred to as ENTSO-E) shall ensure coherence and compatibility of the Network Codes with the provisions of the Framework Guidelines on Electricity Balancing Market (not yet issued)."*

Comment:

ENTSO-E suggests changing the sentence, since it is not possible to ensure coherence with something not yet known. ENTSO-E proposes: *"(...) provisions in System Operation NCs should be coherent and flexible enough to allow Balancing Market principles to be developed and implemented"*.

§2 DEFINITIONS & TERMS

General comments

ENTSO-E notes that the terms and definitions are included to help understanding the FWGL without prejudice to the future NC definitions. Still, the definitions are very specific and including requirements which have to be covered by the Network Codes (e.g. definition of TRM, definitions on different system states).

ENTSO-E proposes to shorten the definitions, to delete the definitions of TTC, NTC and ATC related to the capacity calculation, which is not in the scope of NC for System Operation and to ask the network codes to elaborate the precise definitions. Only terms applicable at pan-European level (respecting the different approaches in different synchronous areas) should be included.

Some examples of potential problematic definitions are listed hereunder:

- *"Ancillary services"* – it is not necessary to mention the procurement of ancillary services in this definition.

- *"Bidding zone"* – the definition of bidding zone structures like "(...)(in which case the respective balancing markets / systems must be aligned with the congestion management / redispatch systems)(...)" goes too far at this stage as long as it is not finally clarified whether this absolute consistency is required. It is very well conceivable that, if bidding zones were once redefined, the structure of control areas could remain unchanged.
- *"Control Block"* – this definition is not used on pan-European level and is not applicable in other than Continental Europe regions. The common minimum system control unit on pan-European level is the control area. Our proposal is to delete definition of a control block.
- *"Flow based capacity calculation"* – the advantage of the flow based calculation are not part of the definition.
- *"Operating states"* – should also include *"blackout"* state from which the *"restoration"* state starts.
- *"Operational Planning and Scheduling"* – a clarity might be added by including "(...) and planning within control areas (...)".
- *"Security Analysis"* – is performed not only in the TSO control centers. ENTSO-E proposes to omit the phrases "(...) using various standard software applications (...)" and "(...) in the TSOs' control centers (...)" from the *"Security Analysis"* definition: *"Security Analysis – a process to analyze and determine the overall system operational security ex ante or during real time operations. Security analyses include (...)"*
- *"Security Criteria"* – the last sentence may be perceived as criticizing the fact that no fully standardized approaches exist. ENTSO-E suggests deleting this sentence from the definition.
- *"Significant Grid Users"* – ENTSO-E understands that the definition and references to significant users rely on the flexibility left to TSOs to further develop and address criteria for defining significant users in the NCs.
- *"Total Transfer capacity (TTC)"* – the definition does not reflect the flow based methodology. It should be deleted.
- *"Transmission Reliability Margin"* – definition should be related to a reliability margin designed to cover the risk that real-time physical flows can be different from forecasted ones. The definition should reflect also flow based methodology.

§3 MINIMUM STANDARDS AND REQUIREMENTS FOR SYSTEM OPERATION

FWGL text (In first paragraph):

'Operational Planning & Scheduling are activities and tasks conducted prior to the real-time operation and include outage scheduling, day ahead congestion forecast (DACF) and intraday / extended real time (N-1) contingency analysis (which could be complemented with other security analyses like e.g. voltage stability analysis), but also the commercial and TSO scheduling processes.'

Comment:

Real time contingency analysis covers not only N-1 contingencies, but also risk assessment. ENTSO-E proposes to remove "(N-1)" and state "(...) and intraday / extended real time contingency analysis (...)"

GENERAL SYSTEM OPERATION CHARACTERISTICS

Criteria

FWGL text:

"Where the minimum standards and requirements, introduced by the Network Codes deviate significantly (e.g. in terms of cost- and risk allocation) from the current international standards, procedures and requirements, there should be a cost/benefit analysis that justifies on the one hand this deviation and on the other hand demonstrates additional benefits from requiring the new standard."

Comment:

See the comment in Key Issues.

Information Exchange

FWGL text:

"The Network Codes shall define a harmonized standard for form and content of information (real-time and other) to other TSOs and/or DSOs within the ENTSO-E as well as outside of ENTSO-E, where applicable."

Comment:

The "form" of transfer of information is related to the IT standards and communication protocols, which are related to industry standards; those should not be prescribed in the law, due to rapid changes of communication technology. ENTSO-E proposes to use "timing and content of information".

FWGL text:

"In that, the TSOs should fully respect data protection laws and regulation, most notably not disclosing the received data to any market participant but only to the affected and responsible TSOs."

Comment:

DSOs should be included.

TOP 1: Operational Security

Scope and Objectives

FWGL text:

"Ensuring – on a high level – coherent and coordinated behaviour of bulk transmission networks and power systems in each control area under normal operation (...)"

Comment:

Network codes should address the issues at the pan-European level and affecting the cross-border issues, so this aspect should be included. ENTSO-E proposes to change the sentence to: *"Ensuring – on a high level – coherent and coordinated behaviour of bulk transmission networks and power systems in each control area and between control areas under normal operation (...)"*

Criteria

FWGL text:

"The operational security requirements shall be defined in terms of technical - but also market - needs and security of supply, considering cost/benefit and related organizational provisions."

Comment:

ENTSO-E suggests not including references to the market needs in the criteria used for operational security code. Security requirements come first and are analyzed and established taking into account the system behavior, no matter what the market rules are. The proposal is to change the sentence to: *"The operational security requirements shall be defined in terms of technical needs considering market solutions being used to ensure the security of supply"*.

Methodology & Tools

FWGL text:

"Roles and responsibilities of TSOs and significant grid users in all operating states, including actions to be taken" and

"Coordination requirements with other TSOs and other significant grid users"

Comment:

ENTSO-E proposes to include also the responsibilities of DSOs and not limit it to TSOs and significant users.

FWGL text:

"In order to perform efficient and effective operational planning and transmission capacity calculation, it is essential that the Network Codes provide for a unique format and contents of the common grid model and harmonized schedule for individual TSO data exchange."

Comment:

"a unique format (...) of the common grid model" is related to IT standardization which is not appropriate for the legislation due to rapid changes in IT technologies. ENTSO-E suggests to replace *"unique format"* by *"unique timing"*.

FWGL text:

"The Network Codes shall also contain all the necessary provisions applicable to significant grid users that are connected to distribution networks, as they affect the operational security of the transmission network."

Comment:

ENTSO-E considers that NC should also contain all necessary provisions applicable to DSOs.

Roles & responsibilities**Comment:**

Requirements and obligations to allow and perform testing and monitoring of the performance of the grid users, TSOs and DSOs should be added.

FWGL text:

"TSOs' coordinated remedial action plans including cost sharing principles shall be submitted to regulatory authorities for approval."

Comment:

See also the comment in Key Issues. Coordinated remedial actions are often prepared in a time horizon, which is close to real-time. This makes it impossible to submit it for approval to regulators. The cost sharing principles shall be addressed by regulators. ENTSO-E suggests deleting this sentence.

Information Exchange**FWGL text:**

"The Network Codes shall define the timing and content of data exchange among TSOs for:"

Comment:

ENTSO-E considers that the exchange of information among TSOs and DSOs or TSOs/DSOs and significant users and among adjacent DSOs should also be added.

TOP 2: Operational Planning & Scheduling**Methodology & Tools****FWGL text:**

"The provisions shall ensure that System Operation meets security criteria under any simulated operating conditions, and that the operation of the interconnected control areas is not jeopardised".

Comment:

ENTSO-E considers that it is not possible to meet the security criteria in all operation conditions (*any*). ENTSO-E proposes to change the sentence to: *"The provisions shall ensure that System Operation meets security criteria under any simulated operating conditions, consistent with contingency assessment principles, and that the operation of the interconnected control areas is not jeopardised".*

FWGL text:

"Ensuring access to an adequate level of ancillary services (e.g. active and reactive power reserves, balancing power) in real-time to meet security criteria and the requirements set at synchronous area level, for each operational planning stage.

Comment:

ENTSO-E considers that *"ensuring"* is beyond the TSOs capabilities. ENTSO-E proposes to change the sentence to: *"TSOs shall design and manage mechanisms for the provision of an adequate level of ancillary services".*

Information Exchange**General comments**

This chapter should be strengthened and should include DSOs, generators and consumers (significant grid users) in data exchange.

DSOs and generators (significant grid users) shall provide information about their all technical abilities, defined during the connection procedure, to provide the ancillary services and outage plans in the predefined timeframes.

TOP 3: Load-Frequency Control

Scope & Objectives

Comment:

ENTSO-E proposes to add balancing as a bullet point, as it is one of the main objectives of the LFC.

Criteria

Comment:

Balancing should be added as a bullet point.

FWGL text:

"Requirements from the market shall be considered"

Comment:

ENTSO-E proposes to change the sentence to clarify how to refer the requirements from the market: *"The requirements shall be defined in terms of technical needs considering market solutions"*

Methodology & Tools

FWGL text:

"A detailed, common specification of these requirements should apply for the EU mainland, but is not necessarily applicable to 'small isolated systems', as described in Article 2.26 of Directive 2009/72/EC."

Comment:

There are also synchronous areas that are neither part of the *"EU mainland"* nor *"small isolated systems"*. The framework guideline shall be clear that different specifications will exist for different synchronous areas. ENTSO-E proposes to add *"small synchronous areas with a weak interconnection"*.

FWGL text:

"Criteria for the definition of significant grid users, based on a predefined set of parameters, which measure the degree of impact of these users on the system. The definitions of significant grid users shall be coordinated between adjacent System Operators".

Comment:

ENTSO-E considers that the *"criteria for the definition of significant users"* could be moved to the requirements for Operational Security as it is not an issue only for frequency control.

FWGL text:

"Requirement of reserves that have to be available within the control area or a control block and within the synchronous area and levels of reserves that may be contracted outside of a control area or a control block - including a detailed methodology to calculate the requirements on different categories of control reserves"

Comment:

Including a *"detailed methodology"* does not allow flexibility in view of the future changes in generation technologies as well as might not be adequate given the rapid changes in the generation mix.

ENTSO-E recommends changing *"the detailed methodology"* into *"principles"* as to ensure that future improvements in methodology can be incorporated; and not to use the term *"control block"*: *"Requirement of reserves that have to be available within the control area and within the synchronous area and levels of reserves that may be contracted outside of a control area - including principles to calculate the requirements on different categories of control reserves"*.

FWGL text:

"TSOs' requirements for the implementation of controllable generation, load characterization and demand side management".

Comment:

TSOs have no power to develop generation and change the load characteristics. It is not clear if these requirements are obligations for grid users.
ENTSO-E suggests deleting this sentence.

Roles & responsibilities

General comment:

ENTSO-E suggests including a reference to obligations for the grid users, since without their contribution it is not possible to provide LFC.

TOP 4: Staff Training & Certification

Scope & Objectives

Comment:

Staff training should include training involving control staff of DSOs and significant grid users to the extent related to system operation common processes (e.g. grid restoration), to improve joint understanding of their influence on the total system behavior. ENTSO-E proposes to add this in the "Scope and objectives".

FWGL text:

"The certification shall extend primarily to the TSO organization and lead transmission system operators in charge (e.g. shift engineers)".

Comment:

ENTSO-E considers that the text can be simplified by removing the words "primarily" and "organizations" as the certification is to address the TSO staff only. It is important that the certification is determined by the TSO to allow for differences in roles and responsibilities within different industry configurations. ENTSO-E proposes to change the sentence to: *"The certification shall extend to the TSO control room shift staff".*

Methodology & Tools

FWGL text:

"English as standard common language"

Comment:

ENTSO-E suggests to determine the specific situations where English will be used, e.g. *"English as standard common language for communication related to the documentation and exchange of information in pursuance of the NCs"*. English should not be mandatorily pursued for communication between dispatchers.

Roles and Responsibilities

FWGL text:

"The TSOs are responsible for the assessment, selection, advancement and adequate assignment of their operating staff. ENTSO-E shall actively coordinate (e.g. develop and monitor) the training and certification tasks at European level."

Comment:

ENTSO-E proposes that obligations should be placed on TSOs rather than ENTSO-E. TSO rather than ENTSO-E shall actively develop and coordinate the training and certifications tasks: *"The TSOs are responsible for the assessment, selection, advancement and adequate assignment of their operating staff."*

TOP 5: Emergency & Restoration

Criteria

Comment:

ENTSO-E proposes to add evidence of training and simulations.

FWGL text:

“Emergency prevention and restoration plans shall - besides technical needs - consider cost/benefit issues on macroeconomic and market level”.

Comment:

In an emergency or blackout situation the principle objective of TSOs is the return to normal situation and system restoration. The requirement on a TSO to consider cost/benefit analyses for emergency prevention and restoration plans seems not appropriate. ENTSO-E suggests deleting this sentence.

TOP 6: New Applications

General comments

See Key Issues. ENTSO-E interprets this chapter as the requirement to have flexibility in all NCs to integrate any new applications and future developments, but not as a separate network code.