

Minutes ENTSO-E Workshop with the DSOs Technical Expert Group on Operational Security Network Code (OS NC)

20 April 2012
10:00 h – 12:00 h
Avenue de Cortenbergh 100 - 1000 Brussels

Participation

DSOs Technical Expert Group for OS NC			
Johan	Lundqvist	Svensk Energi	Sweden
Javier	Meco	Endesa	Spain
Axel	Sandner	SWM	Germany
Alan	Staunton	ESB Networks	Ireland
David	Trebolle	Gas Natural Fenosa	Spain
Matthias	Wielage	EWE	Belgium
Giovani	Valtorta	Enel Distribuzione S.p.A	Italy
Florian	Chapalain	EDSO for Smart Grids	Belgium
Jesus	Peco	Iberdrola	Spain
Marc	Lagouardat	Electricité Réseau Distribution France (ERDF)	France
Pavla	Mandatova	Eurelectric	Belgium
ACER (videoconference)			
Uros	Gabrijel	ACER	Slovenia
Anne	De Geeter	ACER	Slovenia
Emmanouil	Styvaktakis	ACER	Slovenia
ENTSO-E			
Konstantin	Staschus	ENTSO-E	Belgium
Tahir	Kapetanovic	APG	Austria
David	Coan	National Grid	UK
Maria	Zerva	Swissgrid	Switzerland
Donal	Connolly	Eirgrid	Ireland
Ana	Cigaran	50HzT	Germany
Nathalie	Lemaitre	RTE	France
Ramunas	Bikulcius	ENTSO-E	Belgium
Pilar	Munoz-Elena	ENTSO-E	Belgium

Programme

9 :30 – 10:00	<i>Registration/Welcome coffee</i>	
10:00 – 10:15	Welcome	Konstantin Staschus <i>ENTSO-E Secretary-General</i>

10:15 – 10:45	First draft Operational Security NC - Scope - Questions for the Workshop	Tahir Kapetanovic <i>ENTSO-E Convenor of OS NC Drafting Team</i>
10:45 – 12:00	- Questions & remarks of the DSOs Technical Expert Group - Topics of special interest	Workshop participants
12:00	<i>End of Workshop</i>	
12:00 – 13:00	<i>Lunch</i>	

Presentations are accessible on the ENTSO-E website.

Welcome

Welcome and introduction was made by Konstantin Staschus. DSOs have an important responsibility for system security, so it is important to include DSO expertise in the development of the codes. Konstantin Staschus presented the road map and of the process for stakeholder's involvement through March 2013 (presentation is available in the ENTSO-E website). He asks if there are any specific topics to be discussed bilaterally besides the workshops with the DSOs TEG. DSO TEG proposed that the workshops should be used as an opportunity to discuss outstanding items and parts of the NC in detail in the future, as it is good practice in other DSO TEG.

First draft Operational Security NC

Tahir Kapetanovic presented the first draft OS NC (presentation is available at the ENTSO-E website). The difference of system operation codes (OS NC, Operational Planning and Scheduling NC, Load Frequency & Reserves NC) in comparison with all other areas and codes is in that the codes and technical rules for operation of synchronous areas exist already for many decades (e.g. in ENTSSOE RGCE since 1951, in ENTSO-E RG North since 1963, etc.). All TSOs worked together on development of these rules and codes within the TSOs associations preceding ENTSO-E, so the main objective of system operation codes is now to adjust and develop further the European system operation rules into codes to face system operation challenges today and in the coming years, most notably increasing volatility from market operations, integration of massive wind and solar generation, integration and completion of the Internal Electricity Market (IEM), to name just the most important points.

In the common presentation, DSOs TEG (presentation is available at the ENTSO-E website) highlighted the following comments:

- 1) DSOs are not 'regular' system users' but system operators. In other words, responsibilities and duties they have towards users of their grids are similar to the ones of TSO (DSO needs to ensure local system security and power quality in their networks). This issue is, in fact, very important for all the DSOs that are the owners of the subtransmission networks in their countries (relevant DSO's). The network code should clarify the responsibility of DSO as system operators.
- 2) DSOs agree that information exchange is of key importance. They need more information including real time from TSOs for security assessment and visibility area. DSO will concentrate the information from all DER embedded in their networks. Therefore, DSO's should play a role of an information facilitator on generation embedded in their networks towards TSO.
- 3) Voltage control affects both DSOs and TSOs. Voltage is local phenomenon and reactive power should be compensated locally. TSO's will deliver a voltage range at connection that enables DSO's to maintain the voltage

within the security standards. Therefore, TSO should be in charge of voltage control in their networks and DSO in theirs.

ENTSO-E appreciated common contribution of the DSO associations to the discussion.

Questions & remarks of the DSOs Technical Expert Group

Q1: What scenario do we see in the future – 100% renewable generation, no rotating reserves and electronic devices on heating and cooling units?

A1: Synchronous generators are essential to maintain power system stability and secure system operation is not possible without synchronous generators. In order to ensure the minimum conditions for stability and operational security, additional provisions for “must-run synchronous generators” will be considered in the OS NC.

Q2: The costs associated with reactive power compensation are lower in distribution system.

A2: The OS NC deals with voltage and reactive power compensation in the transmission system – this will be emphasized accordingly and more explicitly where necessary.

Q3: Will data exchange for all of the connections in the distribution system be through the DSO?

A3: Yes, the data exchange (of the grid users connected to the DSO, at the connection points between the TSO and DSO) will be through the DSO and OS NC will clarify the respective provisions to make it sufficiently binding and clear.

Q4: Causes of the last big incident 2006 in Continental Europe are violation by a dispatcher of the rules, lack of TSOs coordination and linked with areas. The code should answer the first two issues – not only data exchange, but also organizational issues should be addressed.

A4: Compliance monitoring and ensuring the implementation of all network codes, not only OS NC, is responsibility of ENTSO-E and ACER. ENTSO-E is already working on a process for monitoring (who needs to do what), more interaction between TSO and regulators, on implementation consistency (e.g. how to ensure manufacturers compliance). The organisational issues are considered in respective provisions and this will be amplified where necessary and important for clear and unambiguous application of the OS NC.

Q5: Real-time system operation is defined by the actual network and there shall be clear relation between system development and planning and system operation.

A5: OS NC will consider more specific provisions to indicate this relation.

Q6: It is important to cooperate on data exchange; there is a lack of information on DSO level, coordination of redispatch between DSOs and TSOs.

A6: Closer coordination between TSO and DSO on re-dispatch, in the sense of the adjusted definition of DSO emphasizing that DSO operates the distribution system, will be considered in the OS NC. Moreover, with the 3rd Package and complete unbundling of TSOs (as ISO, OU or ITO), the TSOs are now fully independent and there should be no reservations or concerns on data confidentiality.

Q7: DSO should not be considered as system user, but as system operator. There are very many different DSOs (e.g. voltage levels differ in different Member States) and it is not clear what type of DSOs is described in the code. What are the difference between TSO and DSO?

A7: The definition of DSO will be adjusted accordingly. The DSOs addressed in the code are in the first line those which are directly, physically connected to the TSO – nevertheless, (especially for the sake of distributed generation) where it is necessary (e.g. for data exchange aggregation) the provisions in the OS NC do refer also to DSOs which are connected only to the other DSOs. The key differences between TSO and DSO are among others the load-frequency control, cross

border exchanges of electricity and market integration, as well as the overall power system security of supply for which the TSOs are legally responsible.

Comment: DSOs have a big paradigm shift with massive distributed and micro generation in the distribution network; DSO is facing the same problems as TSOs, so there must be cooperation between TSO and DSO. TSOs must understand what is going on in DSOs to find the optimum solution.

Q8: How are the system operation, grid connection and market codes linked together?

A8: There are multiple levels of coordination of the work within ENTSO-E between different teams developing different network codes. There are regular convenors meetings, workshops between different Drafting Teams. E.g. data exchange list used as the basis for the data exchange provisions in the OS NC is compiled together with the market code. The consistency and coherence with the requirements in the grid connection and market codes, with the OS NC (and other system operation codes in preparation) are continuously checked and updated accordingly.

Q9: Article 12.1 contingency analysis should include a wider coverage (external), including DSOs.

A9: Ok. This will be done in Article 12.1.

Tahir Kapetanovic **summarized the new considerations for the OS NC, resulting from the key issues raised by the DSOs TEG** in their presentation and during the discussion. Those issues will be discussed by the ENTSO-E Drafting Team in further work on the OS NC:

- 1) Describing responsibilities of DSOs as system operators with respective references to this adjusted definition throughout the OS NC.; the new definition will be checked together with DSOs TEG.
- 2) Provisions for TSOs' providing DSO with necessary information will be considered in the OS NC;
- 3) Voltage control and reactive power management focus on transmission will be emphasized accordingly;
- 4) Provisions for must-run synchronous generators will be considered in the OS NC, in order to ensure minimum conditions to maintain transmission system stability and security of operation;
- 5) Not only technical but also organisational issues will be considered in provisions on data exchange;
- 6) Link between system development and system operation should be introduced;
- 7) Compliance monitoring and enforcement (in line with the overarching ENTSO-E and ACER strategies) will be referred to;
- 8) Include more precise provisions on coordination of re-dispatch between TSO and DSO;
- 9) References to other network codes will continue to be checked and adjusted accordingly as the work progresses;
- 10) Protection and Dynamic Stability in the OS NC are addressing transmission system;
- 11) Article 12.1 will emphasize that external contingencies are dealt with too;
- 12) Training of TSO and DSO together on relevant issues is important.

Eurelectric will provide some more detailed comments on the draft OS NC by the end of April. At the 2nd Workshop (intended to be held together with DSOs TEG and ACER) will reflect on the results of the today's discussion and proposals and adjustments identified for the next draft OS NC.

ACER comment:

There are no additional comments and proposal from ACER today. It was useful to hear the opinion from DSOs and ACER looks forward to continued interaction between the ACER team in charge of System Operation Framework Guidelines and ENTSO-E team developing the OS NC.

Tahir Kapetanovic announced the preliminary dates of the next workshops with the DSOs TEG (changes might be necessary, what will be announced sufficiently in advance): 2nd July, 18th Sept. (during Public Consultation), and 20th Dec. 2012.



Konstantin Staschus and Tahir Kapetanovic thanked the participants for active participation, constructive and practical comments and closed the Workshop.