

Addendum replacing Article 13 and Chapter 4 of the ENTSO-E Working Draft Network Code on Emergency and Restoration released on the 13 October 2014

DRAFT FOR ADDITIONAL PUBLIC CONSULTATION

15 December 2014

Notice

This document reflects the status of the work of Transmission System Operator experts as of 15 December 2014 in line with the ACER Framework Guidelines on Electricity System Operation published on 02 December 2011 and after the EC mandate letter was received by ENTSO-E on 1 April 2014.

The document does not in any case represent a firm, binding or definitive ENTSO-E position on the content, the structure or the prerogatives of the Network Code on Emergency and Restoration.

A first version of the draft Network Code has been released for the first public workshop organised by ENTSO-E.

A second version of the draft Network Code has been released for the public consultation in accordance with the provisions of Article 10 of Regulation (EC) No 714/2009 on 13th October 2014, the consultation being open until 5th December 2014.

This addendum is presenting Article 13 and Chapter 4, that have been further developed after releasing the second version of the draft Network Code for public consultation. This addendum replaces the respective article and chapter. It is released for additional public consultation in

accordance with the provisions of Article 10 of Regulation (EC) No 714/2009 on 15th December 2014, the consultation being open until 14th January 2014.

Please note the numbering of this document is only for the purpose of the public consultation. Article 1 corresponds to Article 13 of the draft Network Code released for public consultation on 13 October 2014. Chapter 4, including its Articles 2 to 7 correspond to Chapter 4 of the draft Network Code released for public consultation on 13 October 2014.

DRAFT

Article 1

Automatic low Frequency control scheme

1. The automatic low Frequency control scheme shall include an automatic Low Frequency Demand Disconnection scheme and the settings of Limited Frequency Sensitive Mode in the TSO LFC Area.
2. Each TSO shall activate Limited Frequency Sensitive Mode before frequency reaches Demand disconnection first mandatory stage as defined in table 1, provided the rate of change of frequency allows to do so.
3. Each TSO and DSO identified in the System Defence Plan shall activate automatic disconnection of Energy Storage acting as Demand connected to its network before frequency reaches Demand disconnection first mandatory stage as defined in table 1, provided the rate of change of Frequency allows to do so.
4. The automatic Low Frequency Demand Disconnection scheme of the System Defence Plan shall include the disconnection of Demand at different frequencies, from a starting to an ending mandatory level within an implementation range and respecting a minimum number of steps. The implementation range defines the maximum admissible deviation of Demand to be disconnected from target Demand to be disconnected at a given frequency, calculated through linear interpolation between starting and ending mandatory levels. The starting mandatory level, the ending mandatory level, the implementation range and the minimum number of steps shall respect the following characteristics:

Parameter	Values SA Continental Europe	Values SA Nordic	Values SA Great Britain	Values SA Ireland	Measuring Unit
Demand disconnection starting mandatory level : Frequency	49	48.7 – 48.8	48.8	48.85	Hz
Demand disconnection starting mandatory level: Demand to be disconnected	5	5	5	6	% of the Total Load
Demand disconnection ending mandatory level: Frequency	48	48	48	48.5	Hz
Demand disconnection ending mandatory level:	45	30	50	60	% of the Total Load

Cumulative Demand to be disconnected					
Implementation range (the Implementation range does not allow to disconnect less Demand than the Demand to be disconnected at starting mandatory level)	±7	±10	±7	±7	% of the Total Load for a given frequency
Minimum number of steps to reach the ending mandatory level	6	2	4	6	Number of steps
Maximum Demand disconnection for each step	10	15	10	12	% of the Total Load for a given step

Table 1: Automatic Low Frequency Demand Disconnection scheme characteristics

5. Each TSO may include in the automatic Low Frequency Demand Disconnection scheme of its System Defence Plan a Demand disconnection based on frequency gradient assuming that:
 - a) it is activated only when the Frequency Deviation is higher than the Maximum Instantaneous Frequency Deviation and until the frequency reaches the frequency of the Demand disconnection starting mandatory level; and
 - b) the characteristics described in table 1 are respected.
6. Each TSO may include in the automatic Low Frequency Demand Disconnection scheme of its System Defence Plan additional Demand disconnection stages below the Demand disconnection last mandatory stage defined in table 1.
7. Each TSO shall be entitled to implement other Special Protection Schemes triggered by a frequency smaller or equal to the frequency of the Demand disconnection last mandatory stage and aiming at faster restoration process, ensuring that such schemes do not further deteriorate frequency.
8. The DSO shall, when implementing the automatic Low Frequency Demand Disconnection scheme, pursuant to the notification under Article 9(2):
 - a) ensure no intentional time delay for Low Frequency Demand Disconnection is set additionally to the operating time of the relays and circuit breakers;
 - b) ensure to minimise the total disconnected installed capacity of Power Generating Modules connected directly to its distribution system; and
 - c) ensure that this scheme does not lead to power flow deviation and Voltage deviation outside Operational Security Limits.

When a DSO cannot fulfil the two requirements under paragraphs 8(b) and 8(c), it shall notify the TSO and propose which one of these requirements shall prevail. The TSO shall define the applicable requirements.

9. When a TSO implements automatic Low Frequency Demand Disconnection scheme on its transmission system, it shall respect principles set in paragraph 8.
10. By derogation to Article 53, this Article shall apply [5 years after the DATE of entry into application of this Network Code pursuant to Article 53].

DRAFT

CHAPTER 4

MARKET INTERACTIONS

To be added in the definition section:

Market Activities Suspension Triggers means the conditions which when met, individually or cumulatively, could lead to a suspension of market activities

To be added in the Whereas section:

“This Network Code endeavors to ensure the continuity of energy transactions during Emergency, Blackout or Restoration State and provides the conditions under which such transactions could be suspended”.

Article 2

Market Activities Suspension Triggers

1. Each TSO shall define, in consultation with NEMOs and Market Participants, a set of Market Activities Suspension Triggers.
2. The Market Activities Suspension Triggers shall cover at least the situations where prolongation of market activities would worsen the conditions of the transmission system into Emergency State, as defined pursuant to Article 8(1)(c) [NC OS].
3. When defining the Market Activities Suspension Triggers, each TSO shall consider at least the following parameters:
 - a) a percentage of Demand Disconnection in the LFC area of the TSO;
 - b) a percentage of generation disconnection in the LFC area of the TSO;
 - c) a significant part of the LFC area in desynchronised operation with the rest of the LFC area of the TSO;
 - d) a significant decrease of Cross Zonal capacities; and
 - e) a percentage of Balancing Service Providers and/or Balance Responsible Parties not able to perform their market activities for reason(s) out of their control.
4. The TSO shall submit the Market Activities Suspension Triggers it defined to its NRA for approval. It shall publish them.

Article 3

Procedure for market activities suspension

1. When, during an Emergency State one or several Market Activities Suspension Triggers are met, or during a Blackout State, each TSO, in coordination with neighbouring TSOs, shall be entitled to suspend:

- a) Cross Zonal Capacity made available on the corresponding Bidding Zone Borders for market time periods where it is expected the transmission system shall not be restored to Normal or Alert State; and/or
 - b) submission by Balancing Service Provider of Balancing Capacity and Balancing Energy bids, as described in Article 23 [NC EB]; and/or
 - c) provision by Balance Responsible Party of a balanced Position in day ahead and the provision of change of its Position, as described in Article 25(4) [NC EB]; and/or
 - d) provision of schedules, as described in Article 53(1) and 53(2) [NC OPS].
2. When suspending any of the above mentioned market activities or any combination thereof, each TSO shall inform its NRA, the NEMOs within its responsibility area and at least the TSOs of the Capacity Calculation Region without delay.
 3. Each NEMO shall without delay inform its Market Participants of any suspension of market activities announced by a TSO.
 4. In case of suspension of market activities, each TSO shall be entitled to request Significant Grid Users to keep their last Active Power set point, until further instruction by the TSO, if technically possible.

Article 4

Procedure for TSO processes suspension

1. When, during an Emergency State one or several Market Activities Suspension Triggers are met, or during Blackout State, each TSO shall be entitled to suspend full or partial operation of its processes impacted by suspension pursuant to Article 2.

Article 5

Procedure for market activities and TSO processes restoration

1. Each TSO, in coordination with neighbouring TSOs, shall launch the restoration of suspended market activities when:
 - a) the Market Activities Suspension Triggers are not met;
 - b) Market Participants have been duly informed sufficiently in advance;
 - c) tools and communication means necessary for TSOs, NEMOs and the percentage of Balancing Service Providers and/or Balance Responsible Parties as defined in Article 1(3)(e) to operate the activities are properly functioning; and
 - d) significant amount of Cross Zonal Capacities can be made available to Market Participants.
2. Each TSO, in coordination with neighbouring TSOs, shall launch the restoration of TSO processes when the conditions of the paragraph 1 of this Article are fulfilled or before if necessary to restore market activities.

3. For calculation of Cross Zonal Capacities, each TSO shall select after consultation of the Coordinated Capacity Calculator one of the following strategies to provide Cross Zonal Capacities to the NEMO(s):
 - a) use of any already existing calculated Cross Zonal Capacities;
 - b) launch the regional capacity calculation processes applicable in Normal and Alert States according to Article 28 [CACM]; or
 - c) use values TSO defines based on the actual physical network conditions, taking into account Article 24.
4. When only part of the area where market activities have been suspended is back to Normal State, the TSO(s) of this area shall be entitled to launch a partial market coupling, after consultation with the Coordinated Capacity Calculator and the NEMO(s).
5. Each TSO shall use available Cross Zonal schedules, respecting Cross Zonal Capacities defined according to paragraph 3, as input for its Load Frequency Control, upon request of its Frequency Leader when appointed.

Article 6

Communication procedure

1. Each TSO shall develop, in consultation with NEMO(s) and Market Participants, a communication procedure detailing the tasks and actions expected from each party in its different roles during the restoration of market activities. The procedure shall include at least the following steps :
 - a) Notification of the suspension of market activities by the TSO according to Article [3], including the best estimate for the time and date of the restoration;
 - b) Global update on the restoration process by TSOs;
 - c) Notification by the NEMO(s) that their market tools and communication systems are operational;
 - d) Notification of the restoration of the network back to Normal State by the TSO(s);
 - e) Consultation by the TSO of the NEMO(s) on the proposed time and date for the return to normal market activities;
 - f) Notification by the TSO of the best estimate for time and date when market activities will be restored; and
 - g) Confirmation by the TSO and NEMO(s) that market activities have been restored.
2. Each TSO shall update its NRAs and NEMOs on the restoration of market activities, without delay.
3. Each NEMO shall forward the information mentioned in the previous article to its market participants, without delay.

Article 7
Settlement principles

1. In case of an Emergency State the settlement rules and principles defined in Chapter 5 of [NC Electricity Balancing] shall apply.
2. The settlement of Emergency State with suspension of market activities according to Article 2, Blackout State or Restoration State may be governed by rules and principles deviating from Chapter 5 of [NC Electricity Balancing] as defined under national law or as defined by a TSO, in consultation with Market Participants and subject to NRA approval. The rules and principles shall be in line with the ones defined pursuant to [CACM] and [FCA] if any.

The rules and principles shall address all settlements of TSO's with Balance Responsible Parties, Balance Services Providers and other TSOs.

Each NRA shall ensure the financial neutrality of all TSOs under its competence with regard to the financial outcome as a result of the settlement pursuant to this paragraph, over the regulatory period as defined by the relevant NRA.