

16<sup>th</sup> December 2019

## **Market Suspension related to Emergency and Restoration (amended proposal)**

Dear Ofgem,

In accordance with *COMMISSION REGULATION (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (referred to as NCER)*, and *COMMISSION REGULATION (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (referred to as SOGL)* the Transmission System Operators (TSO) of a member state are required to submit the following proposals to the relevant regulatory authority.

Market Suspension Rules, comprising of:

- a) the rules for suspension and restoration of market activities, in accordance with E&R Article 36(1);
- b) specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities, in accordance with E&R Article 39(1); and
- c) a proposal specifying the level of demand loss at which the transmission system shall be in the blackout state, in accordance with SOGL Article 18(3-4).

In Ofgem's<sup>1</sup> "Minded to decision assignment of TSO Obligations under three EU Network Codes" dated 10<sup>th</sup> January 2018<sup>2</sup>, the obligations to develop the above rules and proposal was assigned to National Grid in its role as Electricity System Operator (NGESO).

The detailed market suspension rules proposed are the BSC and Grid Code rules set out in Table 1 attached to this letter. Table 1 in Annex A is provided to help show that the existing Market Suspension rules for GB meet and are compliant with the requirements of NCER Article 35 to 39 and in some cases, BSC and Grid Code modifications are proposed.

In accordance with E&R Article 36(3), whilst considering the rules for the suspension and restoration of market activities NGESO have considered the harmonisation and compatibility of the rules with the following :

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<sup>1</sup> The terms "the Authority" and "Ofgem" are used interchangeably in this document. Ofgem is the Office of the Gas and Electricity Markets Authority (the Authority).

<sup>2</sup> <https://www.ofgem.gov.uk/publications-and-updates/minded-decision-assignment-tso-obligations-under-three-eu-network-codes>

- (a) the rules on provision of cross zonal capacity in the Channel and IU region. Both the IU and Channel Region have been developed and approved within GB but with a 2-3-year delayed implementation phase.
- (b) rules detailed in Article 33 of EBGL relating to the submissions by balancing service providers of capacity and balancing energy,
- (c) the balanced position at the end of day-ahead time frame rules detailed in Article 18(7) of EBGL. This relates to requirements for balancing service providers to provide information on unused generation capacity and other balancing resources from balancing service providers, after the day-ahead market gate closure time and after the intraday cross-zonal gate closure time. It is not expected that NG ESO will require this from Balancing Service Providers and therefore the rules are not accounted for within GB.
- (d) The rules for provision of modifications of the position of balance responsible parties. Under the EBGL, 'position' is defined (EBGL Article 2(16)) as 'the declared energy volume of a balance responsible party used for the calculation of its imbalance'. Position is distinct from 'allocated volume' in the EBGL, where 'allocated volume' means energy volumes 'physically injected or withdrawn from the system and attributed to a balance responsible party, for the calculation of the imbalance of that balance responsible party'. Therefore, it is clear that the GB concept that is equivalent to 'modifications of the position of balance responsible parties' is an Energy Contract Volume Notification (ECVN) declared by a BSC Party pursuant to the BSC Section P.

Under the BSC, Section G3.2.1(c), there are already provisions to suspend the notification of contract volumes in accordance with BSC Section P1.6. As our proposal is that these rules form part of the rules concerning the suspension and restoration of market activities required by NCER Article 36(1), then the rules that we propose are compatible with the rules for the modification of position as required by NCER Article 36(3)(d).

- (e) the rules for provision of schedules referred to in SOGL Article 111(1) and (2) namely the generation schedules, consumption schedules, internal commercial trade schedules and external commercial trade schedules. In the GB context, these schedules are partly made up of ECVNs (equivalent to commercial trade schedules), which have already been considered for compatibility above. But these schedules also include, in the GB context, external commercial trade schedules produced by TERRE as market coupling is reference in SOGL Article 111(2); and Physical Notifications (equivalent to generation and consumption schedules). The compatibility of our proposal for market suspension and restoration and the provision of TERRE commercial trade schedules will be achieved by our proposals for BSC and Grid Code changes to address RR Market Suspension set out in this letter.

## **Request for Amendment**

On 21 November 2019, Ofgem requested amendments to the blackout state proposal, market suspension and restoration rules, and the settlement rules for market suspension. This letter details our responses to the request for amendment and the steps required to ensure compliance of NCER.

## **The Blackout State Proposal**

Ofgem asked the ESO to ensure that the amended proposal in accordance with SOGL Article 18(4) refers only to the level of demand loss and makes no implication that would amend the definition as prescribed in Article 3(2) (22) of SOGL.

From a practical perspective, a blackout state as defined in SOGL article 18(4) leading to NGENSO activating measures of its restoration plan can occur under two conditions these being either a total shutdown of the GB National Electricity Transmission System or a partial shutdown.

Considering a total blackout, there are various conditions under which this could occur, but a likely scenario would be in the event that all stages of the Low Frequency Demand Disconnection Scheme as defined in section CC.A.5.1 of the Grid Code would have operated between 48.8Hz and 47.8Hz. Under this scenario, over 50% of demand would have been lost through disconnection and whilst it is still technically possible that a reduced network could be operated below 47.8Hz, and before the final threshold of 47.5Hz at which generators will disconnect was reached, stable operation at these frequency levels is unpredictable.

Considering a partial blackout, a likely scenario for this is the disconnection of a part of the network due to the loss of a number of transmission facilities and a consequential loss of demand in the disconnected area. This could also be characterised as a system split, in which two or more separate areas of the transmission system are established and in which demand may be retained in one or more of the resulting areas.

On this basis, and recognising these multiple scenarios, NGENSO's proposal for the definition of a "Blackout State" is that either the final stage of Low Frequency Demand Disconnection has operated or that over 50% of National Demand has been disconnected from the Main Interconnected Transmission System as prescribed in SOGL. In the case of emergency state, section 2.1.1 of the System Defence Plan aligns the definition of an emergency state with conditions laid out in SOGL Article 18(3) as follows:

- The reserve capacity in the GB Synchronous Area is reduced by more than 20% for longer than 30 minutes and there is no mechanism to recover the deficit in reserve capacity; or
- A situation when Unacceptable Frequency Conditions as defined under the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS) have occurred; or
- An event which leads to a violation of the security limits even with remedial actions.

In taking this approach to the proposal for the E&R Market Suspension Rules, and the SOGL blackout state level of demand loss, we are following the principle set out in Ofgem's open letter of 18 December 2014 (Implementing the Electricity EU Network Codes<sup>3</sup>), to only make changes to the existing GB frameworks where necessary to ensure compliance with requirements of the network codes.

## **Market Suspension and Restoration Rules**

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<sup>3</sup> <https://www.ofgem.gov.uk/publications-and-updates/implementing-eu-electricity-network-codes-and-consulting-ofgem%E2%80%99s-proposed-application-process-nemo-designation>

According to Ofgem, the mapped provisions only provided rules for suspension in two of the four situations described in Article 35(1) of NCER, specifically points (a) and (c). Ofgem therefore requested ESO to convert the situations referred to in NCER Articles 35(1)(b) and (d) into objectively defined parameters pursuant to Article 36(4).

In response to this request to define the parameters in Article 35(1) (b) where the TSO has exhausted all options provided by the market and continuation of market activities would deteriorate system emergency state conditions. NGESO currently issues system warnings that alert users to possible or actual plant shortages, system problems and demand reductions under conditions as detailed out in section OC7.4.8.4 of the Grid Code. Currently, during the period of issuing system warnings, the market will not be suspended until such time and date that the Market Suspension Threshold has been met, or deemed to have been met, in accordance with the provisions of Section G3 of the BSC and as summarised in section 2.1.7 of the System Restoration Plan.

There are currently no parameters that allow for the market to be suspended in an emergency state hence BSC and Grid Code changes are necessary if Ofgem want NGESO to define the parameters in relation to Article 35(1) (b). The modifications need to go through the due process and so will not be complete by January 2020 when we resubmit the amended proposals to Ofgem.

With regards to Article 35(1) (d) where market activities can be suspended in the absence of necessary tools and communication means for TSOs to facilitate market activities, section BC2.9.7 of the Grid Code already contains a clear process and procedures to be followed in the event of unplanned outages of electronic communication and computing facilities. While the tools are unavailable, the Grid Code provisions will apply, and no data will be transferred from NGESO to the Balancing Mechanism Reporting Agent. Additionally, section BC4.9 of the Grid Code allows for the TERRE market to be suspended as a result of loss of tools and communication to the central algorithm.

As requested, we have now replaced the reference to Paragraph X with paragraph 2.1.7 of the System Restoration Plan in the Table below. Section 2.1.7 is referenced because it summarises parameters of the market suspension threshold as detailed in section G3 of the BSC.

Furthermore, Ofgem requested clarity on the time delay to be respected for each parameter defined in Article 36(4) of NCER. In accordance with G3 of the BSC, the market is suspended immediately in a total shutdown. The market can be suspended 72 hours after commencement of a partial shutdown or sooner than the 72-hour backstop if any other part of the market suspension threshold is met.

## **Necessary changes required to align BSC with the Grid Code on rules for Market Suspension**

### **BSC changes**

In their letter, Ofgem requested the ESO to work with the BSCCo to assess whether different provisions in the Grid Code and the BSC lead to any practical implication to the settlement of TERRE bids when the market has been suspended. NGESO and the BSCCo have determined that changes are necessary to align the two codes as follows:

Section G of the BSC sets out or refers to provisions of the Code which are to apply in certain contingencies, and related provisions. Section G3 details the BSC arrangements should a Total Shutdown or a Partial Shutdown exist and that the NGESO intends to implement a Black Start. Currently this includes a list of the rules that vary under a Market Suspension Period (G3.2). The following amendments to the BSC are needed:

- Suspension of the RR Market is to be added to G3.2
- The actual provisions for a RR Market Suspension is to be detailed in section Q

In section Q of the BSC an "Outage" means any withdrawal by the NGESO (for maintenance or otherwise), breakdown or failure of any electronic data communications systems by which the NETSO receives and accesses communications made by Lead Parties. Currently, provisions exist that require NGESO to tell the BSCCo "Outage" start and end time as per section Q1.2.5). The following amendments to the BSC are needed:

- Definition of "Outage" to be expanded to include inability to receive RR Bid Data
- A new section to be added detailing RR Bids during a period of "Outage" (to align with BC4.5.1)

Section Q includes a section on the Suspension of the Balancing Mechanism (Q5.4). An equivalent is needed for the RR Market as follows:

- Add section to detail provisions for RR Market Suspension e.g.
  - No communication to be issued by NGESO regarding RR Bid data, RR Auction Result Data or RR Flagged Acceptance data
  - Any Communication received from NGESO not classed as RR Bid data, RR Auction Result Data or RR Flagged Acceptance data
  - Therefore, no RR related calculations shall trigger
- There is a need to reference a notification from NGESO for RR Market Suspension
  - Needs to be distinct from existing "Outage" notification (RR provisions to be covered in Section Q as per above) and / or Partial/Total shutdown notification (RR provisions to be added to Section G for this scenario as per above)
  - Because there will be scenarios where RR Market is to be suspended in isolation (as per BC4.9)
  - This notification will need to be added to the Grid Code

## **Grid Code changes**

Necessary changes are as follows:

- Provisions that if TERRE market is suspended in accordance with BC4.9 of the Grid Code, NGESO will as soon as reasonably practical, inform Users and the BSCCo that TERRE market has been suspended.
- The BSSCO and users will need to be notified if TERRE market tools are on outage. In this case no data will be transferred from NGESO to the BSSCO regarding RR Bid data, RR Auction Result Data or RR Flagged Acceptance data until the communication facilities are re-established.

## **Justification for Article 36(3) NCER**

NGESO responses on providing more details on the compatibility of the submitted market suspension rules listed in Article 36(3) are included in the Table submitted with this letter. NGESO has developed methodologies in collaboration with the [Channel](#) and [IU](#) (Ireland United Kingdom) capacity calculation regions. The methodologies contain fallback procedures that are developed to observe the Grid Code provisions allowing for Emergency Assistance and communication between TSOs and the capacity calculator. BSC code changes as detailed above will be made to ensure alignment for balancing capacity and balancing energy bids from arrangements with other TSOs.

## **Mapping for the settlement rules cross-referenced in BSC G3.**

Ofgem has also asked to include in the mapping for the settlement rules for market suspension the sections which are cross-referenced from BSC Section G3.2. The following BSC Sections are cross-referenced from G3.2 and have been included in Table 1 (mapping from E&R Article 36(1) and Article 39)) attached to this letter as follows (considered in the order in which they appear in BSC Section G3.2):

- BSC Q5.4 - as it forms part of the rules during market suspension.
- BSC Q8 – BSC Section G3.2 states that BSC Q8 does not apply during market suspension. As such the rules in BSC Q8 do not form part of the rules during market suspension and so BSC Q8 has not been mapped in Table 1.
- BSC P1.6 - as it forms part of the rules during market suspension.
- BSC P5 - BSC Section G3.2 states that BSC Section P5 does not apply during market suspension. As such the rules in BSC P5 do not form part of the rules during market suspension and so BSC P5 has not been mapped in Table 1.
- BSC T1.7 – as it forms part of the rules during market suspension.
- BSC Section M – Section M does not form part of the settlement rules for market suspension, so Section M has not been mapped in Table 1.
- BSC Q2, Q3, Q4 do not form part of the settlement rules for market suspension so these sections have not been mapped in Table 1.

## **Communication Procedure**

Ofgem requested the ESO to consider the addition of entities which NCER Regulation obliges to be contacted in the event of market suspension pursuant to Article 38(1). Our response is detailed in the mapping included in Table 1, where all parties are covered under Grid Code and BSC rules.

The E&R code allows for the suspension of different market activities, most of which are covered by the BSC with a number of additional references in the Grid Code which also relate to suspension of the Balancing Mechanism. In the event of a market suspension activity covered by the BSC, ELEXON, pursuant to BSC Section G3 and as soon as reasonably practicable, will provide a notification to all BSC Parties (which include balance responsible parties) that market activities have been suspended. NGESO will endeavour to provide the listed parties with estimation and updates on the progress for the restoration of the system in accordance with OC9.4.6 and OC9.4.7.9, and ELEXON will also pass these NGESO updates to BSC Parties in

accordance with BSC G3. The BSC Panel will determine, in consultation with NGENSO and pursuant to BSC Section G3, when market activities shall resume and ELEXON will notify BSC Parties.

All notifications and updates provided by NGENSO within this proposal shall be published on our website for those entities assigned or delegated to execute market functions. Where it is not possible to provide such notification via the usual protocols under CC.6.5 or ECC.6.5 of the Grid Code or website, NGENSO shall inform via email or via any other available means to those parties directly participating in the suspended market activities. In order to maintain a relevant and up to date reference of participants to be informed, the National Grid Control room will monitor and update, according to any material changes, the parties that will be affected.

No later than 30 days after the market activities have been restored, NGENSO in collaboration with ELEXON, shall prepare a report that contains a detailed explanation of the rationale, implementation and impact of the market suspension and references to the compliance of the rules in relation to market suspension.

This proposal aims to develop a common set of minimum requirements and principles for the procedures and actions to be carried out specifically when in the emergency, blackout and restoration states. In drawing together, clarifying and ensuring alignment of the rules relating to Market Suspension this is expected to have a positive impact on the objectives of Emergency and Restoration by providing greater clarity and transparency to market participants. The minor changes to the BSC and Grid Code that are proposed as a result will further the specific BSC, and Grid Code objectives, drawn from the Transmission Licence Conditions, for compliance with “the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency”.

Following approval from Ofgem, NGENSO will publish on its website, the rules concerning the suspension and restoration of market activities in accordance with E&R Article 36 (2).

If you have any queries regarding this proposal, please contact Susan Mwape at [Susan.Mwape@nationalgrid.com](mailto:Susan.Mwape@nationalgrid.com).

Yours sincerely,

**Rob Wilson**

Technical Codes Change Manager – National Grid Electricity System Operator

Article	Text	Code	Section	Commentary
ER 35.1. a	<p>A TSO may temporarily suspend one or more market activities laid down where:</p> <p>a) the transmission system of the TSO is in blackout state</p>	<p>Grid Code</p> <p>BSC</p>	<p>OC 9.4.2</p> <p>G3</p>	<p><b>BSC G3 covers the automatic Market Suspension in a Total Shutdown (blackout state). The Market Suspension Threshold for a partial shutdown is also in G3.</b></p> <p><b>Both have aligned definitions.</b></p> <p><b>In addition, the conditions for Market Suspension are also detailed in section 2.1.7 of the System Restoration Plan.</b></p>
35.1. b	<p>The TSO has exhausted all options provided by the market and the continuation of market activities under the emergency state would deteriorate one or more of the conditions referred to in Article 18(3)</p>	<p>Grid Code</p> <p>BSC</p>	<p>OC7.4.8</p> <p>OC 9.4.1</p> <p>B2.9</p> <p>G3</p>	<p><b>NGESO issues system warnings as detailed in OC7.4.8.4.</b></p> <p><b>Where all generation has ceased and there is no electricity supply from External Interconnections, NGESO may inform users that a total shutdown exists then the market suspension period shall exist.</b></p> <p><b>NGESO can issue Emergency instructions for users to depart from normal operation for various reasons including the need to maintain adequate Negative Reserve Active Power, implement demand</b></p>



				<p><i>control, invoke black start etc. as per BC2.9.</i></p> <p><i>There is no provision to suspend the market in an emergency state, therefore, Grid Code and BSC changes will be needed for the following parameter:</i></p> <ul style="list-style-type: none"> <li>- <i>While the System is in an emergency state if after issuing system warnings and emergency instructions the Transmission System does not change from emergency state to normal state, the TSO may temporarily suspend market activities in the absence of any options provided by the market. Market suspension rules for a blackout state remain as defined in section G3 of the BSC and OC9 of the Grid Code.</i></li> </ul>
35.1.c	<i>The continuation of market activities would decrease significantly the effectiveness of the restoration process to the normal or alert state, or;</i>	<i>Grid Code</i>	<i>OC 9.4.6</i>	<i>Without an instruction by NGESO to enter into a black start the system would not be able to function as a normal state.</i>
35.1.d	<i>Tools and communication means necessary for the TSOs to facilitate market activities are not available.</i>	<i>Grid Code</i>  <i>BSC</i>	<i>BC2.6.5</i> <i>BC2.9.7</i> <i>OC 9.1</i> <i>BC4.9</i>	<i>The Grid Code (BC2.9.7) contains the processes and procedures to be followed in the event of unplanned outages of electronic communication and computing facilities.</i>

			B2.9 G3	<i>TERRE market can be suspended due to loss of tools and communication.</i>
35.2. a	<i>The following market activities may be suspended pursuant to paragraph 1:  a) The provision of cross zonal capacity for capacity allocation on the corresponding bidding zone borders for each market time unit where it is expected that the transmission system shall not be restored to the normal or alert state</i>	Grid Code	OC 9.3.2	<i>Provisions for contingency planning between NGESO and externally connected TSO's are set out in accordance with CACM agreements. All services including the Balancing Mechanism including the Balancing Mechanism are suspended during a Black Start.</i>
35.2. b	<i>The submission by a balancing service provider of balancing capacity and balancing energy bids</i>	Grid Code BSC	OC 9.4.6, G3	<i>communication to balancing providers is made to suspend this activity.</i>
35.2. c	<i>The provision by a balance responsible party of a balanced position at the end of the day ahead time frames if required by the terms and conditions related to balancing:</i>	Grid Code	OC 9.4.6	<i>NG ESO will not require this from Balancing Service Providers as detailed in the rules for Art 18(7) EBGL relating to the balanced position at the end of day-ahead timeframe. Notification of suspension will not be required.</i>
35.2. d	<i>The provision of modifications of the position of balance responsible parties</i>	Grid Code BSC	OC 9.4.6 G3	<i>Communication is made to the balancing provider to suspend this activity.</i>

35.2. e	<i>The provision of schedules referred to in Article 111(1) and (2) of Regulation (EU) 2017/1485 and</i>	Grid Code BSC	OC 9.4.6 G3	<p><i>This refers to generation, consumption, internal communication, and external schedules namely the PN and ECVN submissions.</i></p> <p><i>The Grid Code (OC.9.4.6) allows NGESO to inform all “Users which in NGESOs opinion need to be informed”. This can be included under this definition.</i></p> <p><i>Suspension of ECVNs and MVRNs is also as defined in the BSC</i></p>
35.2. f	<i>Other relevant market activities in the suspension of which is deemed necessary to preserve and or restore the system</i>	Grid Code BSC	OC 9.4.6 G3	<p><i>OC.9.4.6 of the Grid Code allows NGESO to inform all “Users which in NGESOs opinion need to be informed”.</i></p> <p><i>If the market is suspended, then all BSC activities in the referenced section will be automatically suspended.</i></p>
35.3	<i>In case of suspension of market activities pursuant to paragraph 1, upon request of the TSO, each SGU shall operate where technically possible at an active power set-point established by the TSO</i>	Grid Code	OC 9.4.7.3 OC 9.4.7.5	<i>Users are to abide by NGESOs instructions during a black start. This permits SGUs to be a part of NGESOs instructions.</i>
35.4	<i>When suspending market activities pursuant to paragraph 1 the TSO may fully or partially suspend the operation of its processes impacted by such suspension.</i>	Grid Code BSC	OC 9.4 G3	<i>If the market is suspended, then all BSC activities in the referenced section will be automatically suspended. This requirement is captured in OC.9.4.6 of the Grid Code, Section G3 of the BSC and section 2.1.7 of the System Restoration Plan.</i>

35.5. a	<p><i>When suspending market activities pursuant to paragraph 1, the TSO shall coordinate at least with the following parties:</i></p> <p>a) <i>the TSOs of the capacity calculation regions of which the TSO is a member of</i></p>	Grid Code	<p>OC 9.4.6</p> <p>BC2.6.4</p> <p>BC.2.9.6</p>	<p><i>OC.9.4.6 details when the Market is to be suspended and when Users need to be informed.</i></p> <p><i>These requirements are also covered in Section G3 of the BSC and 2.1.7 of the System Restoration Plan.</i></p> <p><i>TSOs of the capacity calculation regions of which the TSO is a member of; namely the TSOs of the Channel and IU capacity calculation regions. Coordination is achieved through pre-existing interconnector operating protocols.</i></p>
35.5. b	<p><i>The TSOs with which the TSO has arrangements for the coordination of balancing</i></p>	Grid Code	<p>OC 9.4.6</p> <p>BC2.6.4</p> <p>BC.2.9.6</p>	<p><i>Users in which NGESOs opinion need to be informed.</i></p> <p><i>NGESO will view these as needing to be informed also detailed in letter.</i></p>
35.5. c	<p><i>The NEMO and other entities assigned or delegated to execute market functions in accordance with Regulation (EU) 2015/1222 within its control area;</i></p>	Grid Code	<p>OC 9.4.6</p> <p>OC 2.9.6</p>	<p><i>NEMOs namely Epex and Nord are notified through the BSC</i></p>
35.5. d	<p><i>The TSOs of a load frequency control block of which the TSO is a member of; and</i></p>	<p>Grid Code</p> <p>STC</p>	<p>OC 9.4.6</p> <p>STCP 06-1</p>	<p><i>NGESO is the sole system operator for GB and solely responsible for frequency control unless otherwise delegated through STCP 06-1 to one of the Scottish Transmission Licensees in relation to the Scottish part of the Transmission System alone.</i></p>

35.5. e	<i>The coordinated capacity calculator of the capacity calculation regions of which the TSO is a member of</i>	<i>Grid Code</i>	<i>OC 9.4.6 BC2.6.4</i>	<i>Capacity calculators namely Coreso and TSCNet are included in the fallback arrangements for Capacity Calculation Methodologies.</i>
35.6	<i>In case of suspension of market activities each TSO shall launch the communication, procedure set out in Art 38.</i>			<i>Refer to Art 38.</i>
36.1	<i>By 18 December 2018 each TSO shall develop a proposal for rules concerning the suspension and restoration of market activities.</i>			<i>If the market is suspended, then all BSC activities in the referenced section will be automatically suspended. This requirement is captured in OC.9.4.6 of the Grid Code, Sections G3, P1.6, Q5.4, T1.7 of the BSC and section 2.1.7 of the System Restoration Plan.</i>
36.2	<i>TSO shall publish these rules on its website following their approval by the relevant regulatory authority in accordance with Article 37</i>			<i>Upon approval from Ofgem, NGESO will publish on its website the rules concerning the suspension and restoration of market activities.  The Grid Code is published on NGESO while the BSC can be found on Elexon's website. The System Restoration Plan is also available on the ESO Website with the market suspension conditions specified in section 2.1.7</i>
36.3. a	<i>The rules for suspension and restoration of market activities shall be compatible to the extent possible with:  a) the rules on provision of cross zonal capacity within the</i>			<i>Regional Capacity Calculation methodologies have fallback provisions that allow TSOs to agree on alternative ways of communications. In the case of GB, interconnectors would be issued</i>

	<i>concerned capacity calculation regions;</i>			<i>emergency instructions compatible with the Grid Code.</i>
36.3. <i>b</i>	<i>The rules for submission by balancing service providers of balancing capacity and balancing energy bids resulting from arrangements with other TSOs for the coordination of balancing;</i>			<i>This will form part of the BSC code changes to ensure TERRE market suspension is compatible with the BSC</i>
36.3. <i>c</i>	<i>The rules for provision by balance responsible party of a balanced position at the end of day-ahead timeframe if required by the terms and conditions related to balancing;</i>			<i>NG ESO will not require this from Balancing Service Providers as detailed in the rules for Art 18(7) EBGL relating to the balanced position at the end of day-ahead timeframe.</i>
36.3. <i>d</i>	<i>Rules for provision of modifications of the position of balance responsible parties; and</i>	<i>BSC</i>	<i>G3.2.1 (C) and P1.6</i>	<i>There are no changes needed</i>
36.3. <i>e</i>	<i>The rules for provision of schedules referred to in Article 111(1) and (2) of Regulation (EU) 2017/1485.</i>	<i>BSC</i>	<i>G3.2.1 (C) and P1.6</i>	<i>The rules relating to the following schedules; Generation, Consumption, Internal Commercial Trade, and External Commercial trade will be in accordance with Grid Code.</i>
36.4.	<i>When developing the rules for suspension and restoration of market activities, each TSO shall convert the situations referred to in Article 35(1) into objectively defined parameters taking into account the following factors:</i>  <i>(a) the percentage of load disconnection in the LFC area of the TSO corresponding to:</i>	<i>BSC</i>	<i>G3</i>	<i>BSC section G3 provides guidance on the market suspension threshold which is met when the demand outturn is equal to or lower than 95% or if there is no more baseline forecast data available.</i>

	<p>(i) <i>the inability of a significant share of balancing responsible parties to maintain their balance; or</i></p> <p>(ii) <i>(ii) the necessity for the TSO not to follow the usual balancing processes to perform an efficient re-energisation;</i></p>			<p><b>Section 2.1.7 of the System Restoration Plan States:</b></p> <p><b>“Market Suspension (EU NCER Article 35 part 1) occurs in GB</b></p> <p><b>Automatically in the event of a Total Shutdown (in this case the Market Suspension Threshold is not relevant).</b></p> <p><b>During a Partial Shutdown and in this case the market is only suspended if the Market Suspension Threshold is met. There are three circumstances in which the threshold can be met or deemed to be met.</b></p> <p><b>the NGENSO determines that the spot time Initial National Demand Out-Turn is equal to or lower than 95% of the baseline forecast (this means that 5% or more of demand has been lost); or</b></p> <p><b>No more baseline forecast data is available to the NGENSO; or</b></p> <p><b>72 hours have elapsed since the Partial Shutdown commenced”</b></p> <p><b>A System Shutdown would be considered to take place when at least 50% of National Demand (or 50% of local Demand in the case of a Partial Blackout) would be considered to have taken place.</b></p>
36.4. b	<i>the percentage of generation disconnection in the LFC area of the TSO corresponding to the inability of a significant share of balancing</i>	BSC	G3	<b>BSC section G3 provides guidance on the market suspension threshold which is met when the demand outturn is equal to or lower than 95%</b>

	<i>responsible parties to maintain their balance;</i>			<i>or if there is no more baseline forecast data available.</i>  <i>As noted above this is also noted in 2.1.7 of the System Restoration Plan.</i>
36.4. c	<i>the share and geographic distribution of unavailable transmission system elements corresponding to:</i>  <i>(i) the desynchronisation of a significant part of the LFC area rendering the usual balancing processes counterproductive; or</i>	<b>BSC</b>	<b>G3</b>	<b><i>BSC section G3 provides guidance on the market suspension threshold which is met when the demand outturn is equal to or lower than 95% or if there is no more baseline forecast data available.</i></b>  <b><i>As noted above this is also noted in 2.1.7 of the System Restoration Plan.</i></b>
	<i>ii) the reduction to zero of cross zonal capacity on a bidding zone border(s);</i>	<b>Grid Code</b>	<b>BC2.9.6</b>	<b><i>Interconnectors can provide emergency assistance as instructed by NGESO to reduce or increase Active Energy</i></b>
36.4. d	<i>the inability of the following affected entities to execute their market activities for reason(s) outside their control:</i>  <i>(i) balance responsible parties;</i> <i>(ii) balancing service providers;</i> <i>(iii) NEMOs and other entities assigned or delegated to execute market functions pursuant to Regulation (EU) 2015/1222;</i>  <i>(iv) transmission connected DSOs;</i>	<b>BSC</b>  <b>Grid Code</b>	<b>G3 and P1.6</b>  <b>BC1.4.5</b>  <b>BC2.9.7</b>	<b><i>These parameters are pre-defined within the BSC .</i></b>  <b><i>Balance responsible parties equate to Trading parties within BSC code</i></b>  <b><i>BC2.9.7 covers the situation when there are unplanned outages of Electronic Communication and Computing Facilities</i></b>



36.4.e	<p><i>the absence of properly functioning tools and communication means necessary to perform:</i></p> <p><i>(i) the single day-ahead or intraday coupling or any explicit capacity allocation mechanism; or</i></p> <p><i>(ii) the frequency restoration process; or</i></p> <p><i>(iii) the reserve replacement process; or</i></p> <p><i>(iv) the provision by balance responsible party of a balanced position in day ahead and the provision of change of its position; or</i></p> <p><i>(v) the provision of schedules referred to in Article 111(1) and (2) of Regulation (EU) 2017/1485.</i></p>	<p><b>BSC</b></p> <p><b>Grid Code</b></p>	<p><b>G3 and P1.6</b></p> <p><b>BC2.9.6</b></p> <p><b>BC4.9</b></p> <p><b>BC2.9.6</b></p> <p><b>BC.2.9.7</b></p>	<p><i>These parameters are pre-defined within the BSC.</i></p> <p><i>BC2.9.7 covers the situation when there are unplanned outages of Electronic Communication and Computing Facilities</i></p>
36.5	<p><i>The rules for suspension and restoration of market activities shall define a time delay to be respected for each parameter defined pursuant to paragraph 4, prior to starting the procedure for suspension of market activities.</i></p>	<p><b>BSC</b></p>	<p><b>G3</b></p>	<p><i>The market is suspended immediately in a total shutdown, from the time that the shutdown commenced.</i></p> <p><i>If the defined parameters lead to a partial shutdown, the market can be suspended after 72 hours or sooner than the 72 hour backstop if any other part of the market suspension threshold is met as summarised in section 2.1.7 of the System Restoration Plan</i></p>
36.6	<p><i>The concerned TSO shall assess in real-time the parameters defined pursuant to</i></p>	<p><b>BSC</b></p>	<p><b>G3</b></p>	

	<i>paragraph 4, on the basis of the information at its disposal.</i>			
36.7	<i>By 18 December 2020, ENTSO for Electricity shall submit to the Agency a report assessing the level of harmonisation of the rules for suspension and restoration of market activities established by the TSOs and identifying, as appropriate, areas that require harmonisation.</i>			<i>Not a TSO requirement. This obligation is on ENTSO-E</i>
36.8	<i>By 18 June 2019, each TSO shall submit to ENTSO for Electricity the data required to prepare and submit the report in accordance with paragraph 7.</i>			<i>This data will form part of the Grid Code, BSC, System Defence Plan and System Restoration Plan.</i>
37.1	<i>The concerned TSO, in coordination with the NEMO(s) active in its control area and with the neighbouring TSOs, shall launch the procedure for the restoration of market activities suspended pursuant to Article 35(1) when:</i>  <i>(a) the situation triggering the suspension has ended and no other situation referred to in Article 35(1) applies; and</i>  <i>(b) the entities referred to in Article 38(2) have been duly informed in advance in accordance with Article 38.</i>	<i>Grid Code</i>	<i>OC 9.4.7.9</i>	<i>This section in the Grid Code relates to the restoration of the system back to a normal state.</i>  <i>The Grid Code states that all users should be informed as soon reasonably possible and that no situation that initially triggered suspension is compromising the integrity of the system at present.</i>
37.2	<i>The concerned TSO, in coordination with neighbouring TSOs, shall launch the restoration of TSO processes impacted by the suspension of market activities when the conditions of paragraph 1 are</i>	<i>Grid Code</i>	<i>OC9.4.7.9</i>	<i>In making the determination that the total system could return to normal operation states that the above factors amongst others are considered.</i>

	<i>fulfilled or before, if necessary to restore market activities.</i>			
37.3	<i>The concerned NEMO(s), in coordination with TSOs and entities referred to in Article 35(5), shall launch the restoration of the relevant single day ahead and/or single intraday coupling processes as soon as the TSO(s) notifies that the TSOs' processes have been restored.</i>			<i>These requirements are covered within bi-lateral agreements with power exchanges.  Provision of ECVNs will have been suspended in accordance with BSC G3</i>
37.4	<i>4. When the provision of cross zonal capacity has been suspended and subsequently restored, each concerned TSO shall update the cross zonal capacities for capacity allocation by using, from the following, the most feasible and efficient option for each market time unit:  (a) by using the latest available cross zonal capacities calculated by the coordinated capacity calculator;  (b) by launching the regional capacity calculation processes applicable in accordance with Articles 29 and 30 of Regulation (EU) 2015/1222; or,  (c) by determining, in coordination with</i>			<i>These requirements are covered within bi-lateral agreements with power exchanges.</i>
37.5	<i>When part of the total coupled area where market activities have been suspended is back to the normal state or alert state, the NEMO(s) of this area shall be entitled to execute a market coupling in a part of the total coupled area, in consultation with the TSOs and entities referred to in Article 35(5), provided that the TSO has</i>			<i>These requirements are covered within bi-lateral agreements with power exchanges.  Provision of ECVNs will have been suspended in accordance with BSC G3</i>

	<i>restored the capacity calculation process.</i>			
37.6	<i>No later than 30 days after the market activities have been restored, the TSO(s) that suspended and restored market activities shall prepare a report at least in English containing a detailed explanation of the rationale, implementation and impact of the market suspension and a reference to the compliance with the rules for suspension and restoration of market activities and shall submit it to the relevant regulatory authority in accordance with Article 37 of Directive 2009/72/EC, and make it available to the entities referred to in Article 38(2).</i>			<i>The report shall be published on our website in collaboration with Elexon.</i>
37.7	<i>The regulatory authorities of the Member States or the Agency may issue a recommendation to the concerned TSO(s) to promote good practices and prevent similar incidents in the future.</i>			<i>This is not a TSO requirement.</i>
38.1	<i>The rules for suspension and restoration of market activities developed pursuant to Article 36 shall also contain a communication procedure detailing the tasks and actions expected from each party in its different roles during the suspension and restoration of market activities.</i>	<i>Grid Code</i> <i>BSC</i>	<i>OC9</i> <i>G3</i>	<i>The BSC section G3 requires that:</i>  <i>1) NGESO will notify Elexon of the following:</i> <i>- That a total shutdown or partial shutdown exists</i> <i>- The time and date from which the total shutdown or partial shutdown commenced</i> <i>- The time and date, if applicable, on which the market suspension threshold was met</i>
38.2	<i>The communication procedure shall provide that information is sent, simultaneously, to the following entities:</i>  <i>(a) the parties referred to in Article 35(5);</i>			

	<p><i>(b) the balance responsible parties;</i></p> <p><i>(c) the balancing service providers;</i></p> <p><i>(d) the transmission connected DSOs; and</i></p> <p><i>(e) the relevant regulatory authority of the concerned Member States in accordance with Article 37 of Directive 2009/72/EC.</i></p>			<ul style="list-style-type: none"> <li>- <i>The operation of the Transmission System during a Black Start</i></li> <li>- <i>The time that the Total System could return to normal operation</i></li> <li>- <i>The time at which, if there is no market suspension, the Total System returned to normal operation</i></li> </ul>
38.3	<p><i>The communication procedure shall include at least the following steps:</i></p> <p><i>(a) the notification by the TSO that market activities have been suspended in accordance with Article 35; (b) the notification by the TSO of best estimate for the time and date for transmission system restoration;</i></p> <p><i>(c) the notification by the NEMO and other entities designated to execute market functions according to Regulation (EU) 2015/1222 and to Regulation (EU) 2016/1719 of the suspension of their activities, if any; (d) the updates by the TSOs on the process for restoration of the transmission system;</i></p> <p><i>(e) the notification by the entities referred to in points (a) to (d) of paragraph 2, that their market tools and communication systems are operational;</i></p> <p><i>(f) the notification by the TSO(s) that the transmission system has been restored back to normal state or alert state;</i></p>			<p>2) <i>ELEXON will notify all BSC parties of the following:</i></p> <ul style="list-style-type: none"> <li>- <i>That a Total Shutdown or Partial Shutdown exists</i></li> <li>- <i>The Settlement Period from which the Total Shutdown or Partial Shutdown commenced</i></li> <li>- <i>The existence of, and Settlement Period representing the start of, any Market Suspension Period</i></li> <li>- <i>The operation of BSC Systems and, so far as ELEXON is informed by National Grid, the operation of the Transmission System during a Black Start</i></li> <li>- <i>The Settlement Period (as determined by the BSC Panel) from which normal market operations, if suspended, shall be restored</i></li> <li>- <i>The Settlement Period at which, if there is no market suspension, the Total System returned to normal operation</i></li> </ul>

	<p><i>(g) the notification by the NEMO and other entities assigned or delegated to execute market functions according to Regulation (EU) 2015/1222 of the best estimate for time and date when market activities will be restored; and</i></p> <p><i>(h) the confirmation by the NEMO and other entities assigned or delegate</i></p>			<p><i>BSC and Non BSC parties with ancillary service contracts will be notified of the system status through BMRS.</i></p>
38.4	<p><i>All notifications and updates by the TSO(s), the NEMO(s) and other entities assigned or delegated to execute market functions referred to in paragraph 3, shall be published on the websites of those entities. When notification or update on the website is not possible, the entity subject to the obligation to notify, shall inform via email, or via any other available means, at least those parties directly participating in the suspended market activities.</i></p>			
38.5	<p><i>Notification pursuant to point (e) of paragraph 3 shall be done via email or via any other available means to the concerned TSO.</i></p>			
39.1	<p><i>By 18 December 2018, each TSO shall develop a proposal for rules for imbalance settlement and settlement of balancing capacity and balancing energy which shall be applicable for imbalance settlement periods during which the market activities were suspended. The TSO may propose the same rules it applies for normal operations. The TSO shall publish these rules on its website following their approval by the relevant</i></p>	<p><b>BSC</b></p>	<p><b>G3</b></p> <p><b>P1.6</b></p> <p><b>Q5.4</b></p> <p><b>T1.7</b></p>	<p><i>The TSO is allowed to propose the same rules of which are applied in normal circumstances during the imbalance settlement phase.</i></p> <p><i>NGESO will propose the same rules as listed in Section G3 of BSC and including those rules applicable during market suspension periods</i></p>

	<i>regulatory authority in accordance with Article 37 of Directive 2009/72/EC. A TSO may delegate the TSO's tasks referred to in this Article to one or more third parties, provided that the third party can carry out the respective function at least as effectively as the TSO(s). A Member State or, where applicable, a regulatory authority, may assign the tasks referred to in this Article to one or more third parties, provided that the third party can carry out the respective function at least as effectively as the TSO(s).</i>			<i>according to BSC Section G3.2 and excluding those which are not applicable.</i>
39.2	<i>The rules referred to in paragraph 1 shall address the settlements of TSO's and third parties, where relevant, with balance responsible parties, and balancing services providers.</i>	BSC	G 3 P1.6 Q5.4 T1.7	<i>References the settlements of TSOs and third parties where relevant. Third parties referenced in this Article are BSCCo and the BSC clearer who have been assigned settlement responsibilities under the EB GL requirements for balancing services under BSC and imbalance settlement.  Settlement of balancing services with non-BSC parties and all balancing capacity settlement is performed by NGESO in accordance with the service contract terms.</i>
39.3	<i>The rules developed in accordance with paragraph 1 shall:  (a) ensure the financial neutrality of each TSO and relevant third party referred to in paragraph 1;  (b) avoid distortions of incentives or counterproductive incentives to balance</i>	BSC	G3 P1.6 Q5.4 T1.7	<i>-  The existing Grid Code and BSC rules do not change the financial neutrality of NGESO or ELEXON during market suspension periods.  BSC third parties are ELEXON and ELEXON Clear. These two parties are not for profit and are required to</i>

<p><i>responsible parties, balance service providers and TSOs; 28.11.2017 EN Official Journal of the European Union L 312/77</i></p> <p><i>(c) incentivise balance responsible parties to strive to be balanced or help the system to restore its balance; (d) avoid any financial penalties imposed on balance responsible parties and balancing service providers due to the execution of the actions requested by the TSO;</i></p> <p><i>(e) discourage TSOs from suspending market activities, unless strictly necessary, and incentivise TSOs to restore the market activities as soon as possible; and</i></p> <p><i>(f) incentivise balance service providers to offer services to the connecting TSO that helps restore the system to normal state.</i></p>			<p><i>be financially neutral. The BSC rules during market suspension do not change this.</i></p> <p><i>NGESO is not exposed to imbalance settlement as it is excluded from being a BSC Trading Party.</i></p> <p><i>A BSC Party which is given a 'black start instruction' by the ESO during market suspension periods may seek compensation under the rules set out in BSC section G3. This compensation, if approved, is paid for by BSC Trading Parties. NGESO and ELEXON, and ELEXON Clear are not impacted by this.</i></p>
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