

Modification proposal:	<b>Grid Code GC0143: Last resort disconnection of Embedded Generation</b>		
Decision:	The Authority <sup>1</sup> directs <sup>2</sup> that the proposed modification to the Grid Code be made		
Target audience:	National Grid Electricity System Operator (NGESO), the Grid Code Review Panel, Grid Code users, Distributed Generators and other interested parties		
Date of publication:	07 May 2020	Implementation date:	07 May 2020

## Background

Due to the measures announced by the government to attempt to flatten the curve of infection arising from the ongoing outbreak of COVID-19, the electricity system is experiencing new challenges. The unprecedented societal changes brought about by measures put in place to deal with the pandemic has led to a significant reduction in consumer demand for electricity. When combined with certain weather conditions, this could result in electricity demand on the transmission system falling to levels rarely seen, introducing new challenges for the Electricity System Operator<sup>3</sup> (ESO) in balancing supply and demand. The ESO has a range of commercial tools available to deal with these challenges, and is developing further tools specific to managing the transmission system through periods of extremely low demand. However, in the unlikely event that these commercial tools fall short of what is required, the ESO can call on emergency action to balance the system.

## The modification proposal

GC0143<sup>4</sup> ("the modification") was raised by NGESO (the Proposer) on 30 April 2020.

The modification seeks to clarify the nature of existing emergency instructions the ESO can issue to Distribution Network Operators (DNOs) to disconnect plant. The existing Grid Code provisions require an instruction from the ESO to a DNO to disconnect an item of plant from the system. The aim of the modification is to clarify that the ESO could request plant disconnection in the form of a total capacity or percentage of capacity rather than by specific plant. The modification aims to address this legal ambiguity, which has been highlighted by the DNOs.

The modification also seeks to clarify the circumstances under which these emergency instructions could be issued. Specifically, emergency disconnection would be actioned only once commercial means or means through the Balancing Mechanism were exhausted and there was still a need to take action for security of supply purposes.

The modification is strictly time limited and would remain in effect until 25 October 2020. It has specifically been proposed to ensure appropriate, clear and effective safeguards are in place to manage the security of the National Electricity Transmission System

<sup>1</sup> References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.

<sup>2</sup> This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

<sup>3</sup> NGESO is the ESO for Great Britain

<sup>4</sup><https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0143-last-resort-disconnection-embedded>

(NETS) during periods of exceptionally low demand. NGENSO should then bring forward a further modification to develop an enduring solution in consultation with industry stakeholders on a non-urgent timeline to allow all relevant points of view to be taken into account.

The Proposer considers this modification would better facilitate relevant objective (iii) of the Grid Code as a last resort to avert disruption to security of supply.

The Proposer requested GC0143 should be treated as urgent. On 1 May 2020, we issued our decision that this modification be treated as urgent.<sup>5</sup>

### **Grid Code Review Panel recommendation**

At the GCRP meeting on 6 May 2020 a majority of the GCRP considered that the modification better facilitated the Grid Code objective (iii). The GCRP recommended that the modification should be implemented.

### **Our decision**

We have considered the issues raised by the modification proposal and in the Final Modification Report received by us on 6 May 2020. We have considered and taken into account the responses to the industry consultation on the modification proposal which are included in the Final Report<sup>6</sup>. We have concluded that:

- implementation of the modification proposal will better facilitate the achievement of the objectives of the Grid Code;<sup>7</sup> and
- approving the modification is consistent with our principal objective and statutory duties.<sup>8</sup>

### **Reasons for our decision**

We consider this modification proposal will better facilitate Grid Code objectives (iii) and (v), and has a neutral impact on (ii) and (iv).

We have considered the impact of COVID-19 lockdown and societal changes resulting in significant fall in demand for electricity<sup>9</sup>, as has been presented by the ESO as Proposer of this modification. We share the ESO's concern, Panel's majority view and most respondents' view on the risk to security of supply on the NETS that a period of very low demand could result in frequency on the transmission system breaching the upper limit despite commercial measures being taken, albeit very unlikely. We consider that specifically under these circumstances and resulting very low demand scenarios it is of utmost importance that the Grid Code, underpinned by its objective (iii), fully supports the actions needed to ensure and maintain the security of supply to all consumers.

We agree with the Proposer and the majority of the Panel that this modification, which clarifies the position on ESO's emergency instructions to DNOs on disconnection of

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<sup>5</sup> [https://www.ofgem.gov.uk/system/files/docs/2020/05/gc0143\\_urgency\\_letter.pdf](https://www.ofgem.gov.uk/system/files/docs/2020/05/gc0143_urgency_letter.pdf)

<sup>6</sup> Grid Code proposals, final reports and representations can be viewed on NGENSO's website at: <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/>

<sup>7</sup> As set out in Standard Condition C14(1)(b) of the Electricity Transmission Licence, available at: <https://epr.ofgem.gov.uk/>

<sup>8</sup> The Authority's statutory duties are wider than matters which the Grid Code Panel Review must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

<sup>9</sup> The ESO has quoted up to 20% reduction in demand

embedded generation as a last resort and only once all commercially available options have been exhausted by the ESO, is necessary at this point in time.

In addition, we note the Proposer's projection on the anticipated period of low demand over the Bank Holiday weekend commencing 8 May 2020, and agree with the Proposer and the Panel on urgency to implement this emergency operational clarity before 8 May, to safeguard system security and security of supply position.

In deciding to approve this urgent modification it is our and the industry's clear expectation, and has been made explicit in the legal text, that ESO will exercise this option only as a last resort in an emergency situation, after having exhausted all other commercially available options. Likewise, for the DNOs, when they implement ESO's emergency instructions it is our and industry's expectation that they will take a considered approach, taking into account the operational requirements of their users, particularly where this raises safety or environmental issues.

We have taken note of the large number of responses provided by the distribution network users to the Code Administrator's consultation. We appreciate the concerns raised and we also note that most respondents have said that they understand the reasoning behind the modification that has been raised to mitigate any threat to the security of supply position during the current situation.

While there is support amongst respondents to address the issue, the general view is that it should have been addressed in a more thorough and considered way. We have further noted the concerns about the modification. Consultees have raised significant issues on implementation, regarding the way in which DNOs will fulfil the emergency instructions, transparency and consequences for generators which are dependent on industrial processes and auxiliary supplies from the system.

We note that the ESO agrees that this should have been done in more detailed consultation. But the ESO is of the opinion that the urgency in establishing clarity around the current ambiguity in the text was the overriding consideration. These concerns are further mitigated by the fact that this provision will fall away by the 25 October 2020, which will limit the applicability of the new measures and allow the ESO sufficient time to develop a more enduring solution with industry. We agree with ESO's assessment on this pressing need and are satisfied that as the modification proposal limits the use of this power of instruction, as a last resort and is time limited, that on a balance addressing security of supply as per this modification outweighs the concerns raised by those who have responded to the consultation. We further note that ESO has committed to imminently start working with the industry to develop an enduring solution.

We strongly encourage the ESO to review the current commercial tools available for managing low levels of demand and work with industry to develop a market-based enduring solution (eg opening up balancing service markets to a broader range of participants).

We have read the concerns on environmental impact and safety issues raised by several responders including generators using process oriented generation technologies. We would expect the ESO and associated DNOs to determine which generation could be disconnected to safeguard the wider impact on security of supply, whilst minimising safety and environmental risks associated with the disconnection of individual plant. To address these concerns we expect DNOs to engage with their generator stakeholders as a

matter of urgency and put in place suitable arrangements for safe and secure implementation of any emergency instructions from the ESO.

In summary, respondents have raised legitimate concerns about this modification and we expect the ESO and DNO's to consult more widely on the enduring solution and address these concerns fully. Nevertheless for reason of proximity of a very real threat of low demand over the coming Bank Holiday weekend we must balance these potentially adverse impacts against the security of supply risks faced by consumers. We expect the DNOs and ESO to further incorporate these concerns in developing an enduring solution.

***(i) to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the transmission of electricity***

None

***(ii) to facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity)***

A number of stakeholders considered that this modification may have a negative impact on competition in the generation of electricity, most notably between distribution and transmission connected generators. We acknowledge these concerns, however we consider that this modification is to clarify an existing power of instruction and that any possible negative impact on competition is firstly mitigated by the limits to the extent of when and in what circumstances this instruction may be used and that it will be of limited duration. This, we consider, outweighs the negative impacts on competition and is justified by the benefit of ensuring security of supply (under Grid Code objective (iii)).

Given the above we think the issue is limited and has neutral impact against this objective.

***(iii) subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole***

The principal aim of this modification proposal is for the Grid Code provisions to support security of supply and system operation in emergency situations as discussed in earlier sections. We agree with the Panel view that this modification will have positive impact against this objective.

***(iv) to efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency.***

We agree with the Panel view that this modification proposal is neutral with regards to objective (iv). One stakeholder expressed concerns on a potential conflict between GC0143 and some elements of the "System Defence Plan" established by the ESO in accordance with Regulation (EU) 2017/219610 (NCER Regulation, which was adopted on the basis of the Electricity Regulation). We believe that this decision is consistent with the

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<sup>10</sup> <https://www.nationalgrideso.com/document/160016/download>

NCER Regulation and consequentially with the Electricity Regulation. We furthermore note that as, at this stage, Ofgem has not approved i) the list of Significant Grid Users (SGUs) or ii) the list of measures that the SGUs need to comply with, in accordance with the NCER Regulation. We will take this decision on GC0143 in consideration when making a decision pursuant to the NCER and engage with the ESO on this topic.

***(v) to promote efficiency in the implementation and administration of the Grid Code arrangements***

This modification proposal provides clarity and further detail on ESO's emergency instructions to the DNOs for plant disconnection, which promotes efficiency in the implementation of Grid Code arrangements. We therefore believe that the proposal will have a positive impact against this objective.

**Observations**

We are concerned that this modification was brought forward for urgency with such a tight deadline for its proposed implementation date. Whilst we accept that the reduction in demand this summer due to COVID-19 social distancing measures is extraordinary and unforeseen, we are concerned that the issue at hand in this decision is one of clarity of the legal text. The previous wording had been in existence for many years. We are also concerned that the issue of legal ambiguity was only raised by DNOs at this point immediately before possible need. Licensees are obligated to keep Codes up to date and under review as a condition of their licences. This urgent modification shows that no timely review was undertaken prior to this summer, which is particularly concerning given that summer minimum demand has been falling for some years, increasing the need for robust emergency controls.

This modification is time limited, and as a result the ESO has committed to bringing forward an enduring solution. We strongly encourage the development of market based solution. We expect the ESO, DNOs, DG owners and all other concerned parties to work together to resolve many of the concerns that consultees have expressed in this modification proposal.

Given the significant interest this modification proposal received from industry we require the ESO to undertake a detailed review of the responses. We require the ESO to address the responses from each of the consultees and provide us with a detailed report within 2 weeks from issue of this decision. These responses should be used to inform the work on an enduring solution.

We also encourage the ESO to consider further how, if at all, implementation of the modification interacts with Article 13 paragraph 7 of the Clean Energy Package. This requires that "where non-market based redispatching is used, it shall be subject to financial compensation by the system operator requesting the redispatching to the operator of the redispatched generation, energy storage or demand response facility except in the case of producers that have accepted a connection agreement under which there is no guarantee of firm delivery of energy". We do not consider that this modification allows parties to avoid any liability that may be incurred Article 13 paragraph 7, if it is engaged.

**Decision notice**

In accordance with Standard Condition C14 of the Transmission Licence, the Authority hereby directs that Grid Code modification proposal Grid Code GC0143: 'Last resort disconnection of Embedded Generation' be made.

**Martin Queen**

**Principal Engineer – S&N Division**

Signed on behalf of the Authority and authorised for that purpose