GC0061 – Amendments Required to Implement the Electricity Supply Emergency Code (ESEC)

What stage is this document at?

01	Workgroup Report
02	Industry Consultation
03	Report to the Authority

This proposal seeks to modify the Grid Code to clarify the role that will be taken by Network Operators should the Government invoke ESEC to deal with a prolonged electricity supply emergency.

This document is open for Industry Consultation. Any interested party is able to make a response in line with the guidance set out in Section 5 of this document.

Published on: **28 July 2014**
Length of Consultation: **20 Working Days**
Responses by: **26 August 2014**

National Grid recommends:
GC0061 should be implemented as it better facilitates Applicable Grid Code objectives (i) and (iii)

High Impact:
None identified

Medium Impact:
None identified

Low Impact:
System Operator, Distribution Network Operators

Contents

About this document

This Industry Consultation outlines the information required for interested parties to form an understanding of a defect within the Grid Code and seeks the views of interested parties in relation to the issues raised by this document.

Parties are requested to respond by 26 August 2014 to grid.code@nationalgrid.com

Document Control

Version	Date	Author	Change Reference
0.1	16 July 2014	National Grid	Draft Industry Consultation for GCRP
1.0	28 July 2014	National Grid	Final Industry Consultation

Any Questions?

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Proposer:

DECC

1 Executive Summary

1.1 This document describes the GC0061 Modification Proposal and seeks views from industry members relating to the proposal.

1.2 GC0061proposes to introduce additional wording to OC6 in the Grid Code to add further clarity to the roles that Network Operators will take should the Government decide to invoke ESEC to deal with a prolonged electricity supply emergency.

1.3 An issue proforma for GC0061 was proposed by National Grid and submitted to the Grid Code Review Panel for their consideration on 19 September 2012. The Panel determined that the proposal should be sent out to Industry Consultation for a period of 20 Business Days following the final publication of ESEC.[1]

1.4 A draft of this proposal was discussed at the 16 July 2014 meeting of the Grid Code Review Panel and a number of comments and revisions incorporated into this version which is released for consultation.

2 Why Change?

2.1 During the week commencing 26th March 2012, DECC ran a government-industry exercise (Exercise Faraday) to validate newly developed ESEC arrangements. DECC, National Grid and all the Distribution Network Operators participated in the exercise. As a result of this exercise, it was noted that a change to the Grid Code was required which would allow National Grid to act as a central coordinator/disseminator of 'activation schedules' for rota disconnections. Further work was planned in 2014 by DECC, via Exercise Hopkinson, to consider those customers protected by the V, F and O lists within ESEC. However Exercise Hopkinson has been cancelled and DECC therefore considers it timely to publish ESEC to reflect the revised and validated process only. The V, F and O provisions will be further considered at a later date.

2.2 The Electricity Supply Emergency Code (ESEC) describes the steps which Government might take to deal with an electricity supply emergency of the kind envisaged under section 96(7) of the Electricity Act 1989 or section 3(1)(b) of the Energy Act 1976, such as long-term damage to the system or prolonged shortfalls in generation. It also sets out the actions that are required to be taken by companies in the electricity industry to deal with such an emergency.

2.3 The Code was originally developed to manage a long term shortage of fuel for electricity generation. It enables a fair and equal distribution of available electricity to the consumers via orderly Rota Disconnections and ensures that protected customers maintain supplies whenever possible. ESEC aims to ensure, in the event of an emergency, an equal distribution of supply to consumers in as far as it is technically possible to do so.

2.4 It is the role of the DECC Emergency Response Team (ERT) to decide whether Rota Disconnections need to be introduced. In this occurrence, the Secretary of State will seek to obtain emergency powers via an 'Order in Council' under the Energy Act 1976, for the purpose of issuing a direction to instruct all Network Operators affected to implement a schedule of Rota

[1] ESEC has now been finalised and is awaiting final ministerial approval without which this modification will not be implemented. A copy is available in the same location as this consultation.

Disconnections across their licence area(s) throughout the period of emergency. Under this direction and with provisions of the Grid Code, the NETSO will instruct all affected Network Operators to restrict the supply of electricity to consumers, other than those in protected categories, by Rota Disconnections to achieve a specified level of disconnection.

2.5 The Variable Rota Disconnection Plan (VRDP) is the core plan that provides the information for a set of more detailed 18 Rota Plans. The VRDP defines the 8 periods of the day across Monday to Sunday and the order of disconnections for 18 load groups labelled A to U. The VRDP divides non-protected customers into 18 groups of near equal demand and the VRDP is intended to ensure that the available supplies of electricity are shared equitably as possible amongst all non-protected consumers. During an emergency, as available supplies diminish, higher levels of disconnection will mean that an increasing number of load blocks are disconnected in any one period.

2.6 The period of time that the overall process of Rota Disconnections continues together with the level(s) of disconnection will be decided by the Secretary of State in the light of advice from the DECC ERT.

2.7 OC6.1.5 of the Grid Code explains that the Electricity Supply Emergency Code (ESEC) provides a degree of 'protection' to consumers when Rota Disconnections are implemented. However, the current wording of this paragraph does not explain the role NGET will take if ESEC is invoked and it is proposed to amend the wording in OC6.1.5 to add transparency and clarity to the process surrounding the invoking of the ESEC.

3 Solution

3.1 GC0061 seeks to implement the proposed changes identified in Annex 1.

3.2 It is proposed to amend OC6.1.5 to provide additional clarity and transparency around the role that Network Operators will undertake following the issue of an 'Order in Council' from the Secretary of State.

3.3 The proposed changes to OC6.1.5 explain that when the DECC ERT determines that Rota Disconnections must be introduced, the Secretary of State will seek to obtain emergency powers under the Energy Act 1976 for the purpose of issuing a direction to all Network Operators affected. NGET will then act as a central coordinator/disseminator to implement a schedule of Rota Disconnections across their licence area(s) throughout the period of the emergency. The severity and duration of Rota Disconnection will be determined by the Secretary of State in the light of advice from the DECC ERT.

4 Impact & Assessment

Impact on the Grid Code

4.1 GC0061 requires amendments to the following parts of the Grid Code:

- Operating Code No 6 – Demand Control

4.2 The text required to give effect to the proposal is contained in Annex 1 of this document.

Impact on National Electricity Transmission System (NETS)

4.3 The proposed changes will not have an adverse impact on the Transmission System.

Impact on Grid Code Users

4.4 The proposed changes will not in themselves have an adverse impact on the Grid Code Users but seek to clarify roles and responsibilities of Network Operators in the event of ESEC being invoked.

Impact on Greenhouse Gas emissions

4.5 The proposed changes will not have a material impact on Greenhouse Gas Emissions.

Assessment against Grid Code Objectives

4.6 National Grid considers that GC061 will better facilitate the Grid Code objective:

(i) to permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;

The proposed changes permit the operation of an efficient transmission system by removing any confusion within the Grid Code requirements in facilitating the operation of activation schedules for rota disconnections so as to cause the minimum loss to the transmission system.

(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);

The proposal has a neutral impact on 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; and

The proposed changes permit the operation of an efficient transmission system by removing any confusion within the Grid Code requirements in facilitating the operation of activation schedules for Rota Disconnections so as to cause the minimum loss to the transmission system. This additional clarity will help promote system security by ensuring parties are aware of the process surrounding the invoking of ESEC.

(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.

The proposal has a neutral impact on this objective

Impact on core industry documents

4.7 The proposed modification does not impact on any core industry documents

Impact on other industry documents

4.8 The proposed modification does not impact on any other industry documents

Implementation

4.9 National Grid proposes GC0061 should be implemented 10 business days after an Authority decision. Views are invited on this proposed implementation date.

5 Consultation Responses

5.1 If you wish to make a representation on this Industry Consultation, please use the response proforma which can be found at the following link:

http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/consultationpaper/

5.2 Views are invited to the following questions:

- Do you believe that GC0061better facilitates the Applicable Grid Code Objective as set out in paragraph 4.6?
- Do you support the proposed implementation approach in paragraph 4.9?
- Do you support the proposed changes to OC6.1.5?

5.3 Views are invited upon the proposals outlines in this consultation.

5.4 If you wish to submit a confidential response please note the following:

(i) Information provided in response to this consultation will be published on National Grid's website unless the response is clearly marked "Private & Confidential", we will contact you to establish the extent of the confidentiality. A response marked "Private and Confidential" will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the Grid Code Review Panel or the industry and may therefore not influence the debate to the same extent as a non confidential response.

(ii) Please note an automatic confidentiality disclaimer generated by your IT System will not in itself, mean that your response is treated as if it had been marked "Private and Confidential".

Annex 1 - Proposed Legal Text

This section contains the proposed legal text to give effect to the proposals. The proposed new text is in red and is based on Grid Code Issue 5 Revision 9.

OPERATING CODE NO.6

DEMAND CONTROL

OC6.1 INTRODUCTION

OC6.1.1 **Operating Code No.6** ("**OC6**") is concerned with the provisions to be made by **Network Operators**, and in relation to **Non-Embedded Customers** by **NGET,** to permit the reduction of **Demand** in the event of insufficient **Active Power** generation being available to meet **Demand**, or in the event of breakdown or operating problems (such as in respect of **System Frequency**, **System** voltage levels or **System** thermal overloads) on any part of the **National Electricity Transmission System.**

OC6.1.2 **OC6** deals with the following:

(a) **Customer** voltage reduction initiated by **Network Operators** (other than following the instruction of **NGET**);

(b) **Customer Demand** reduction by **Disconnection** initiated by **Network Operators** (other than following the instruction of **NGET**);

(c) **Demand** reduction instructed by **NGET**;

(d) automatic low frequency **Demand Disconnection**; and

(e) emergency manual **Demand Disconnection**.

The term "**Demand Control**" is used to describe any or all of these methods of achieving a **Demand** reduction.

OC6.1.3 The procedure set out in **OC6** includes a system of warnings to give advance notice of **Demand Control** that may be required by **NGET** under this **OC6**.

OC6.1.4 Data relating to **Demand Control** should include details relating to MW

OC6.1.5 The Electricity Supply Emergency Code as ~~approved~~ reviewed and published from time to time by the lead government department for energy emergencies provides that in certain circumstances consumers are given a certain degree of "protection" when rota disconnections are implemented pursuant to a direction under the

Energy Act 1976. No such protection can be given in relation to **Demand Control** under the **Grid Code**.

To invoke the Electricity Supply Emergency Code the Secretary of State will obtain emergency powers via an 'Order in Council' under the Energy Act 1976, for the purpose of issuing a direction to all **Network Operators** affected by the **Demand Control**. Following the issuance of such direction, **NGET** will act to coordinate the implementation of an agreed schedule of rota disconnections across all affected **Network Operators'** licence area(s) and to disseminate any information as necessary throughout the period of the emergency.**NGET**

OC6.1.6 Connections between **Large Power Stations** and the **National Electricity Transmission System** and between such **Power Stations** and a **User System** will not, as far as possible, be disconnected by **NGET** pursuant to the provisions of **OC6** insofar as that would interrupt supplies

(a) for the purposes of operation of the **Power Station** (including **Start-Up** and shutting down);

(b) for the purposes of keeping the **Power Station** in a state such that it could be Started-up when it is off-**Load** for ordinary operational reasons; or

(c) for the purposes of compliance with the requirements of a Nuclear Site Licence.

Demand Control pursuant to this **OC6** therefore applies subject to this exception.