

All Recipients of the Serviced Grid Code

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THE SERVICED GRID CODE – ISSUE 6 REVISION 18

GC0161 - “Changes to OC6 to allow for site protection” has been approved by the authority for implementation on **2 October 2023**.

To ensure your copy of the Grid Code remains up to date, you will need to replace the section affected with the revised version available on the [National Grid Electricity System Operator website](#).

The revisions document provides an overview of the changes made to the Grid Code since the previous issue.

Many thanks,

Code Administrator

National Grid Electricity System Operator

THE GRID CODE – ISSUE 6 REVISION 18**INCLUSION OF REVISED SECTION**

- Operating Code 6

SUMMARY OF CHANGES

The changes arise from the implementation of modifications proposed in the GC0161 Modification Report:

GC0161 - “Changes to OC6 to allow for site protection”**Summary of GC0161 and Impact:**

The modification aims through minor alterations to OC6 to allow sites to be protected in the event of an operational situation where there is a need to reduce National Demand.

THE GRID CODE

ISSUE 6

REVISION 18

2 October 2023

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OPERATING CODE NO. 6

(OC6)

DEMAND CONTROL

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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 **The Company**, 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 **The Company**);
- (b) **Customer Demand** reduction by **Disconnection** initiated by **Network Operators** (other than following the instruction of **The Company**);
- (c) **Demand** reduction instructed by **The Company**;
- (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 **The Company** 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 reviewed and published from time to time by the appropriate 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**, except in relation to those **Demand Disconnection** stages referred to in OC6.5.3(a) and where such protection is technically feasible, although, even in these situations, protection cannot be guaranteed.

To invoke the Electricity Supply Emergency Code the Secretary of State will issue direction(s) to all **Network Operators** affected, exercising emergency powers under the Electricity Act 1989 or by virtue of an Order in Council under the Energy Act 1976. Following the issuance of such direction, **The Company** 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 in accordance with the instructions **The Company** receives from the Secretary of State or those authorised on their behalf for this purpose.

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 **The Company** 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.

OC6.2 OBJECTIVE

OC6.2.1 The overall objective of **OC6** is to require the provision of facilities to enable **The Company** to achieve reduction in **Demand** that will either avoid or relieve operating problems on the **National Electricity Transmission System**, in whole or in part, and thereby to enable **The Company** to instruct **Demand Control** in a manner that does not unduly discriminate against, or unduly prefer, any one or any group of **Suppliers** or **Network Operators** or **Non-Embedded Customers**. It is also to ensure that **The Company** is notified of any **Demand Control** utilised by **Users** other than following an instruction from **The Company**.

OC6.2.2 For certain **Grid Supply Points** in Scotland it is recognised that it may not be possible to meet the requirements in OC6.4.5(b), OC6.5.3(b) (in respect of **Demand Disconnection** only), OC6.5.6 (ii), OC6.6.2 (c) and OC6.7.2 (b). In these circumstances **The Company** and the relevant **Network Operator(s)** will agree equivalent requirements covering a number of **Grid Supply Points**. If **The Company** and the relevant **Network Operator** fail to agree equivalent requirements covering a number of **Grid Supply Points**, then the relevant **Network Operator** will apply the provisions of OC6.4.5(b), OC6.5.3(b) (in respect of **Demand Disconnection** only), OC6.5.6(ii), OC6.6.2(c) and OC6.7.2(b) as evenly as reasonably practicable over the relevant **Network Operator's** entire **System**.

OC6.3 SCOPE

OC6.3.1 **OC6** applies to **The Company** and to **Users** which in **OC6** means:

- (a) **Generators**; and
- (b) **Network Operators**.

It also applies to **The Company** in relation to **Non-Embedded Customers**.

OC6.3.2 Explanation

OC6.3.2.1 (a) Although OC6 does not apply to **Suppliers**, the implementation of **Demand Control** may affect their **Customers**.

(b) In all situations envisaged in **OC6**, **Demand Control** is exercisable:

- (i) by reference to a **Network Operator's System**; or
- (ii) by **The Company** in relation to **Non-Embedded Customers**.

(c) **Demand Control** in all situations relates to the physical organisation of the **Total System**, and not to any contractual arrangements that may exist.

OC6.3.2.2 (a) Accordingly, **Demand Control** will be exercisable with reference to, for example, five per cent (or such other figure as may be utilised under OC6.5) tranches of **Demand** by a **Network Operator**.

(b) For a **Supplier**, whose **Customers** may be spread throughout a number of **User Systems** (and the **National Electricity Transmission System**), to split its **Customers** into five per cent (or such other figure as may be utilised under OC6.5) tranches of **Demand** would not result in **Demand Control** being implemented effectively on the **Total System**.

(c) Where **Demand Control** is needed in a particular area, **The Company** would not know which **Supplier** to contact and (even if it were to) the resulting **Demand Control** implemented, because of the diversity of contracts, may well not produce the required result.

- OC6.3.2.3
- (a) **Suppliers** should note, however, that, although implementation of **Demand Control** in respect of their **Customers** is not exercisable by them, their **Customers** may be affected by **Demand Control**.
 - (b) This will be implemented by **Network Operators** where the **Customers** are within **User Systems** directly connected to the **National Electricity Transmission System** and by **The Company** where they are **Non-Embedded Customers**.
 - (c) The contractual arrangements relating to **Customers** being supplied by **Suppliers** will, accordingly, need to reflect this.
 - (d) The existence of a commercial arrangement for the provision of **Customer Demand Management** or **Commercial Ancillary Services** does not relieve a **Network Operator** from the **Demand Control** provisions of OC6.5, OC6.6 and OC6.7, which may be exercised from time to time.

OC6.4 PROCEDURE FOR THE NOTIFICATION OF DEMAND CONTROL INITIATED BY NETWORK OPERATORS (OTHER THAN FOLLOWING THE INSTRUCTION OF THE COMPANY)

OC6.4.1 Pursuant to the provisions of **OC1**, in respect of the time periods prior to 1100 hours each day, each **Network Operator** will notify **The Company** of all **Customer** voltage reductions and/or restorations and **Demand Disconnection** or reconnection, on a **Grid Supply Point** and half-hourly basis, which will or may, either alone or when aggregated with any other **Demand Control** planned by that **Network Operator**, result in a **Demand** change equal to or greater than the **Demand Control Notification Level** averaged over any half hour on any **Grid Supply Point**, which is planned to be instructed by the **Network Operator** other than following an instruction from **The Company** relating to **Demand** reduction.

OC6.4.2 Under **OC6**, each **Network Operator** will notify **The Company** in writing by 1100 hours each day (or such other time specified by **The Company** from time to time) for the next day (except that it will be for the next 3 days on Fridays and 2 days on Saturdays and may be longer (as specified by **The Company** at least one week in advance) to cover holiday periods) of **Customer** voltage reduction or **Demand Disconnection** which will or may result in a **Demand** change equal to or greater than the **Demand Control Notification Level** averaged over any half hour on any **Grid Supply Point**, (or which when aggregated with any other **Demand Control** planned by that **Network Operator** is equal to or greater than the **Demand Control Notification Level**), planned to take place during the next **Operational Day**.

OC6.4.3 When the **Customer** voltage reduction or **Demand Disconnection** which may result in a **Demand** change equal to or greater than the **Demand Control Notification Level** averaged over any half hour on any **Grid Supply Point** (or which when aggregated with any other **Demand Control** planned or implemented by that **Network Operator** is equal to or greater than the **Demand Control Notification Level**) is planned after 1100 hours, each **Network Operator** must notify **The Company** as soon as possible after the decision to implement has been made. If the **Customer** voltage reduction or **Demand Disconnection** is implemented immediately after the decision to implement is made, each **Network Operator** must notify **The Company** within five minutes of implementation.

OC6.4.4 Where, after **The Company** has been notified, whether pursuant to **OC1**, OC6.4.2 or OC6.4.3, the planned **Customer** voltage reduction or **Demand Disconnection** is changed, the **Network Operator** will notify **The Company** as soon as possible of the new plans, or if the **Customer** voltage reduction or **Demand Disconnection** implemented is different to that notified, the **Network Operator** will notify **The Company** of what took place within five minutes of implementation.

OC6.4.5 Any notification under OC6.4.2, OC6.4.3 or OC6.4.4 will contain the following information on a **Grid Supply Point** and half hourly basis:

- (a) the proposed (in the case of prior notification) and actual (in the case of subsequent notification) date, time and duration of implementation of the **Customer** voltage reduction or **Demand Disconnection**; and

(b) the proposed reduction in **Demand** by use of the **Customer** voltage reduction or **Demand Disconnection**.

OC6.4.6

Pursuant to the provisions of OC1.5.6, each **Network Operator** will supply to **The Company** details of the amount of **Demand** reduction actually achieved by use of the **Customer** voltage reduction or **Demand Disconnection**.

- OC6.5 PROCEDURE FOR THE IMPLEMENTATION OF DEMAND CONTROL ON THE INSTRUCTIONS OF THE COMPANY
- OC6.5.1 A **National Electricity Transmission System Warning - High Risk of Demand Reduction** will, where possible, be issued by **The Company**, as more particularly set out in OC6.5.4, OC7.4.8 and BC1.5.4 when **The Company** anticipates that it will or may instruct a **Network Operator** to implement **Demand** reduction. It will, as provided in OC6.5.10 and OC7.4.8.2, also be issued to **Non-Embedded Customers**.
- OC6.5.2 Where **The Company** expects to instruct **Demand** reduction within the following 30 minutes, **The Company** will where possible, issue a **National Electricity Transmission System Warning - Demand Control Imminent** in accordance with OC7.4.8.2(c) and OC7.4.8.6.
- OC6.5.3 (a) Whether a **National Electricity Transmission System Warning - High Risk of Demand Reduction** or **National Electricity Transmission System Warning - Demand Control Imminent** has been issued or not:
- (i) provided the instruction relates to not more than 20 per cent of its total **Demand** (measured at the time the **Demand** reduction is required); and
- (ii) if the instruction relates to less than 20 per cent of its total **Demand**, is in
- two voltage reduction stages of between 2 and 4 percent, each of which can reasonably be expected to deliver around 1.5 percent **Demand** reduction; and
 - up to three **Demand Disconnection** stages, each of which can reasonably be expected to deliver between four and six percent **Demand** reduction,
- each **Network Operator** will abide by the instructions of **The Company**, which should specify whether a voltage reduction or **Demand Disconnection** stage is required; or
- (iii) if the instruction relates to less than 20 per cent of its total **Demand**, is in four **Demand Disconnection** stages each of which can reasonably be expected to deliver between four and six per cent **Demand** reduction,
- each **Network Operator** will abide by the instructions of **The Company** with regard to **Demand** reduction under OC6.5 without delay.
- (b) The **Demand** reduction must be achieved within the **Network Operator's System** as far as possible uniformly across all **Grid Supply Points** (unless otherwise specified in the **National Electricity Transmission System Warning - High Risk of Demand Reduction**) either by **Customer** voltage reduction or by **Demand Disconnection**.
- (c) **Demand Control** initiated by voltage reduction shall be initiated as soon as possible but in any event no longer than two minutes from the instruction being received from **The Company**, and completed within 10 minutes of the instruction being received from **The Company**.
- (d) **Demand Control** initiated by **Demand Disconnection** shall be initiated as soon as possible but in any event no longer than two minutes from the instruction being received from **The Company**, and completed within five minutes of the instruction being received from **The Company**.
- (e) Where **Demand Control** is initiated by **Demand Disconnection**, in relation to those **Demand Disconnection** stages referred to in OC6.5.3(a) protection may be given where technically feasible, to pre-designated protected sites in instances where **Demand Control** is implemented on the instruction of **The Company** in accordance with the provisions in OC6.5. The list of pre-designated protected sites is compiled and kept up to date by **Network Operators** in accordance with the terms set out in the Electricity Supply Emergency Code.
- (f) Each **Network Operator** must notify **The Company** in writing by calendar week 24 each year, for the succeeding **Financial Year** onwards, whether **Demand Control** is to be implemented either:

- i) by a combination of voltage reduction and **Demand Disconnection**; or
- ii) **Demand Disconnection** alone;

together with the magnitude of the voltage reduction stages (where applicable) and for **Demand Disconnection** stages, the demand reduction anticipated. Thereafter, any changes must be notified in writing to **The Company** at least 10 **Business Days** prior to the change coming into effect.

- OC6.5.4
- (a) Where **The Company** wishes to instruct a **Demand** reduction of more than 20 per cent of a **Network Operator's Demand** (measured at the time the **Demand** reduction is required), it shall, if it is able, issue a **National Electricity Transmission System Warning - High Risk of Demand Reduction** to the **Network Operator** by 1600 hours on the previous day. The warning will state the percentage level of **Demand** reduction that **The Company** may want to instruct (measured at the time the **Demand** reduction is required).
 - (b) The **National Electricity Transmission System Warning - High Risk of Demand Reduction** will specify the percentage of **Demand** reduction that **The Company** may require in integral multiples of the percentage levels notified by **Users** under OC6.5.3(c) up to (and including) 20 per cent and of five per cent above 20 per cent and will not relate to more than 40 per cent of **Demand** (measured at the time the **Demand** reduction is required) of the **Demand** on the **User System** of a **Network Operator**.
 - (c) If **The Company** has issued the **National Electricity Transmission System Warning - High Risk of Demand Reduction** by 1600 hours on the previous day, on receipt of it, the relevant **Network Operator** shall make available the percentage reduction in **Demand** specified for use within the period of the **National Electricity Transmission System Warning**.
 - (d) If **The Company** has not issued the **National Electricity Transmission System Warning - High Risk of Demand Reduction** by 1600 hours the previous day, but after that time, the **Network Operator** shall make available as much of the required **Demand** reduction as it is able, for use within the period of the **National Electricity Transmission System Warning**.

- OC6.5.5
- (a) If **The Company** has given a **National Electricity Transmission System Warning - High Risk of Demand Reduction** to a **Network Operator**, and has issued it by 1600 hours on the previous day, it can instruct the **Network Operator** to reduce its **Demand** by the percentage specified in the **National Electricity Transmission System Warning**.
 - (b) **The Company** accepts that if it has not issued the **National Electricity Transmission System Warning - High Risk of Demand Reduction** by 1600 hours on the previous day or if it has issued it by 1600 hours on the previous day, but it requires a further percentage of **Demand** reduction (which may be in excess of 40 per cent of the total **Demand** on the **User System** of the **Network Operator** (measured at the time the **Demand** reduction is required) from that set out in the **National Electricity Transmission System Warning**, it can only receive an amount that can be made available at that time by the **Network Operator**.
 - (c) Other than with regard to the proviso, the provisions of OC6.5.3 shall apply to those instructions.

- OC6.5.6
- Once a **Demand** reduction has been applied by a **Network Operator** at the instruction of **The Company**, the **Network Operator** may interchange the **Customers** to whom the **Demand** reduction has been applied provided that,
- (i) the percentage of **Demand** reduction at all times within the **Network Operator's System** does not change; and

- (ii) at all times it is achieved within the **Network Operator's System** as far as possible uniformly across all **Grid Supply Points** (unless otherwise specified in the **National Electricity Transmission System Warning - High Risk of Demand Reduction** if one has been issued),

until **The Company** instructs that **Network Operator** in accordance with **OC6**.

OC6.5.7 Each **Network Operator** will abide by the instructions of **The Company** with regard to the restoration of **Demand** under OC6.5 without delay. It shall not restore **Demand** until it has received such instruction. The restoration of **Demand** must be achieved as soon as possible and the process of restoration must begin within 2 minutes of the instruction being given by **The Company**.

OC6.5.8 In circumstances of protracted shortage of generation or where a statutory instruction has been given (eg. a fuel security period) and when a reduction in **Demand** is envisaged by **The Company** to be prolonged, **The Company** will notify the **Network Operator** of the expected duration.

OC6.5.9 The **Network Operator** will notify **The Company** in writing that it has complied with **The Company's** instruction under OC6.5, within five minutes of so doing, together with an estimation of the **Demand** reduction or restoration achieved, as the case may be.

OC6.5.10 **The Company** may itself implement **Demand** reduction and subsequent restoration on **Non-Embedded Customers** as part of a **Demand Control** requirement and it will organise the **National Electricity Transmission System** so that it will be able to reduce **Demand** by **Disconnection** of, or **Customer** voltage reduction to, all or any **Non-Embedded Customers**. Equivalent provisions to those in OC6.5.4 shall apply to issuing a **National Electricity Transmission System Warning - High Risk of Demand Reduction** to **Non-Embedded Customers**, as envisaged in OC7.4.8.

OC6.5.11 Pursuant to the provisions of OC1.5.6, the **Network Operator** will supply to **The Company** details of the amount of **Demand** reduction or restoration actually achieved.

OC6.6 AUTOMATIC LOW FREQUENCY DEMAND DISCONNECTION

OC6.6.1 Each **Network Operator** will make arrangements that will enable automatic low **Frequency Disconnection** of at least:

- (i) 60 per cent of its total **Demand** (based on **Annual ACS Conditions**) at the time of forecast **National Electricity Transmission System** peak **Demand** where such **Network Operator's System** is connected to the **National Electricity Transmission System** in **NGET's Transmission Area**
- (ii) 40 per cent of its total **Demand** (based on **Annual ACS Conditions**) at the time of forecast **National Electricity Transmission System** peak where such **Network Operator's System** is connected to the **National Electricity Transmission System** in either **SPT's** or **SHETL's Transmission Area**

in order to seek to limit the consequences of a major loss of generation or an **Event** on the **Total System** which leaves part of the **Total System** with a generation deficit. Where a **Network Operator's System** is connected to the **National Electricity Transmission System** in more than one **Transmission Area**, the figure above for the **Transmission Area** in which the majority of the **Network Operator's Demand** is connected shall apply.

- OC6.6.2
- (a) The **Demand** of each **Network Operator** which is subject to automatic low **Frequency Disconnection** will be split into discrete MW blocks.
 - (b) The number, size (% **Demand**) and the associated low **Frequency** settings of these blocks, will be as specified in Table CC.A.5.5.1a and Table ECC.A.5.5.1a. **The Company** will keep the settings under review.
 - (c) The distribution of the blocks will be such as to give a reasonably uniform **Disconnection** within the **Network Operator's System**, as the case may be, across all **Grid Supply Points**.
 - (d) Each **Network Operator** will notify **The Company** in writing by calendar week 24 each year of the details of the automatic low **Frequency Demand Disconnection** on its **User System**. The information provided should identify, for each **Grid Supply Point** at the date and time of the annual peak of the **National Electricity Transmission System Demand** at **Annual ACS Conditions** (as notified pursuant to OC1.4.2), the frequency settings at which **Demand Disconnection** will be initiated and the amount of **Demand** disconnected at each such setting.

OC6.6.3 Where conditions are such that, following automatic low **Frequency Demand Disconnection**, and the subsequent **Frequency** recovery, it is not possible to restore a large proportion of the total **Demand** so disconnected within a reasonable period of time, **The Company** may instruct a **Network Operator** to implement additional **Demand Disconnection** manually, and restore an equivalent amount of the **Demand** that had been disconnected automatically. The purpose of such action is to ensure that a subsequent fall in **Frequency** will again be contained by the operation of automatic low **Frequency Demand Disconnection**.

OC6.6.4 Once an automatic low **Frequency Demand Disconnection** has taken place, the **Network Operator** on whose **User System** it has occurred, will not reconnect until **The Company** instructs that **Network Operator** to do so in accordance with **OC6**.

OC6.6.5 Once the **Frequency** has recovered, each **Network Operator** will abide by the instructions of **The Company** with regard to reconnection under OC6.6 without delay. Reconnection must be achieved as soon as possible and the process of reconnection must begin within 2 minutes of the instruction being given by **The Company**.

OC6.6.6 (a) **Non-Embedded Customers** and **Pumped Storage Generators**, must provide automatic low **Frequency** disconnection, which shall be split into discrete blocks.

(b) The number and size of blocks and the associated low **Frequency** settings shall be as specified by **The Company** by week 24 each calendar year following discussion with the **Non-Embedded Customer** and **Pumped Storage Generator** in accordance with the relevant **Bilateral Agreement**.

(c) **Generators, Defence Service Providers, Restoration Service Providers** or **Non-Embedded Customers** in respect of **Electricity Storage Modules** who have agreed with **The Company** to satisfy the requirements of OC6.6.6 as provided for in ECC.6.3.7.2.3.1 must provide automatic low **Frequency** disconnection, which shall be split into discrete blocks. The number and size of blocks and the associated low **Frequency** settings will be specified by **The Company** by week 24 each calendar year following discussion with the relevant parties in accordance with the relevant **Bilateral Agreement** or other relevant **Ancillary Services** agreement.

OC6.6.7 (a) In addition, **Generators** may wish to disconnect **Power Generating Modules** and/or **Generating Units** from the **System**, either manually or automatically, should they be subject to **Frequency** levels which could result in **Power Generating Module** and/or **Generating Unit** damage.

(b) This **Disconnection** facility on such a **Power Generating Module** and/or **Generating Unit** directly connected to the **National Electricity Transmission System**, will be agreed with **The Company** in accordance with the **Bilateral Agreement**.

(c) Any **Embedded Power Stations** will need to agree this **Disconnection** facility with the relevant **User** to whose **System** that **Power Station** is connected, which will then need to notify **The Company** of this.

OC6.6.8 The **Network Operator** or **Non-Embedded Customer**, as the case may be, will notify **The Company** with an estimation of the **Demand** reduction which has occurred under automatic low **Frequency Demand Disconnection** and similarly notify the restoration, as the case may be, in each case within five minutes of the **Disconnection** or restoration.

OC6.6.9 Pursuant to the provisions of OC1.5.6 the **Network Operator** and **Non-Embedded Customer** will supply to **The Company** details of the amount of **Demand** reduction or restoration actually achieved.

OC6.6.10 (a) In the case of a **User**, it is not necessary for it to provide automatic low **Frequency** disconnection under OC6.6 only to the extent that it is providing, at the time it would be so needed, low **Frequency** disconnection at a higher level of **Frequency** as an **Ancillary Service**, namely if the amount provided as an **Ancillary Service** is less than that required under OC6.6 then the **User** must provide the balance required under OC6.6 at the time it is so needed.

(b) The provisions of OC7.4.8 relating to the use of **Demand Control** should be borne in mind by **Users**.

OC6.7 EMERGENCY MANUAL DISCONNECTION

OC6.7.1 Each **Network Operator** will make arrangements that will enable it, following an instruction from **The Company**, to disconnect **Customers** on its **User System** under emergency conditions irrespective of **Frequency** within 30 minutes. It must be possible to apply the **Demand Disconnections** to individual or specific groups of **Grid Supply Points**, as determined by **The Company**.

OC6.7.2 (a) Each **Network Operator** shall provide **The Company** in writing by week 24 in each calendar year, in respect of the next following year beginning week 24, on a **Grid Supply Point** basis, with the following information (which is set out in a tabular format in the Appendix):

(i) its total peak **Demand** (based on **Annual ACS Conditions**); and

(ii) the percentage value of the total peak **Demand** that can be disconnected (and

must include that which can also be reduced by voltage reduction, where applicable) within timescales of 5/10/15/20/25/30 minutes.

- (b) The information should include, in relation to the first 5 minutes, as a minimum, the 20% of **Demand** that must be reduced on instruction under OC6.5.

OC6.7.3 Each **Network Operator** will abide by the instructions of **The Company** with regard to **Disconnection** under OC6.7 without delay, and the **Disconnection** must be achieved as soon as possible after the instruction being given by **The Company**, and in any case, within the timescale registered in OC6.7. The instruction may relate to an individual **Grid Supply Point** and/or groups of **Grid Supply Points**.

OC6.7.4 **The Company** will notify a **Network Operator** who has been instructed under OC6.7, of what has happened on the **National Electricity Transmission System** to necessitate the instruction, in accordance with the provisions of **OC7** and, if relevant, **OC10**.

OC6.7.5 Once a **Disconnection** has been applied by a **Network Operator** at the instruction of **The Company**, that **Network Operator** will not reconnect until **The Company** instructs it to do so in accordance with **OC6**.

OC6.7.6 Each **Network Operator** will abide by the instructions of **The Company** with regard to reconnection under OC6.7 without delay, and shall not reconnect until it has received such instruction and reconnection must be achieved as soon as possible and the process of reconnection must begin within 2 minutes of the instruction being given by **The Company**.

OC6.7.7 **The Company** may itself disconnect manually and reconnect **Non-Embedded Customers** as part of a **Demand Control** requirement under emergency conditions.

OC6.7.8 If **The Company** determines that emergency manual **Disconnection** referred to in OC6.7 is inadequate, **The Company** may disconnect **Network Operators** and/or **Non-Embedded Customers** at **Grid Supply Points**, to preserve the security of the **National Electricity Transmission System**.

OC6.7.9 Pursuant to the provisions of OC1.5.6 the **Network Operator** will supply to **The Company** details of the amount of **Demand** reduction or restoration actually achieved.

OC6.8 OPERATION OF THE BALANCING MECHANISM DURING DEMAND CONTROL

Demand Control will constitute an **Emergency Instruction** in accordance with BC2.9 and it may be necessary to depart from normal **Balancing Mechanism** operation in accordance with BC2 in issuing **Bid-Offer Acceptances**. **The Company** will inform affected **BM Participants** in accordance with the provisions of **OC7**.

APPENDIX 1 - EMERGENCY MANUAL DEMAND REDUCTION/DISCONNECTION SUMMARY SHEET

(As set out in OC6.7)

NETWORK OPERATOR: _____ [YEAR] PEAK: _____

| GRID SUPPLY POINT (Name) | PEAK MW | % OF GROUP DEMAND DISCONNECTION (AND/OR REDUCTION IN THE CASE OF THE FIRST 5 MINUTES) (CUMULATIVE) | | | | | | REMARKS |
|---------------------------------------|------------|---|----|----|----|----|----|---------|
| | | TIME (MINS) | | | | | | |
| | | 5 | 10 | 15 | 20 | 25 | 30 | |
| | | | | | | | | |

Notes:

1. Data to be provided annually by week 24 to cover the following year.

< END OF OPERATING CODE NO. 6 >

REVISIONS

(R)

(This section does not form part of the Grid Code)

- R.1 **The Company's Transmission Licence** sets out the way in which changes to the Grid Code are to be made and reference is also made to **The Company's** obligations under the General Conditions.
- R.2 All pages re-issued have the revision number on the lower left hand corner of the page and date of the revision on the lower right hand corner of the page.
- R.3 The Grid Code was introduced in March 1990 and the first issue was revised 31 times. In March 2001 the New Electricity Trading Arrangements were introduced and Issue 2 of the Grid Code was introduced which was revised 16 times. At British Electricity Trading and Transmission Arrangements (BETTA) Go-Active Issue 3 of the Grid Code was introduced and subsequently revised 35 times. At Offshore Go-active Issue 4 of the Grid Code was introduced and has been revised 13 times since its original publication. Issue 5 of the Grid Code was published to accommodate the changes made by Grid Code Modification A/10 which has incorporated the **Generator** compliance process into the Grid Code, which was revised 47 times. Issue 6 was published to incorporate all the non-material amendments as a result of modification GC0136.
- R.4 This Revisions section provides a summary of the sections of the Grid Code changed by each revision to Issue 6.
- R.5 All enquiries in relation to revisions to the Grid Code, including revisions to Issues 1, 2, 3, 4 and 5 should be addressed to the Grid Code development team at the following email address:
Grid.Code@nationalgrideso.com

| Revision | Section | Related Modification | Effective Date |
|-----------------|--------------------------------|-----------------------------|-----------------------|
| 0 | Glossary Definitions | GC0136 | 05 March 2021 |
| 0 | Planning Code | GC0136 | 05 March 2021 |
| 0 | Connection Conditions | GC0136 | 05 March 2021 |
| 0 | European Connection Conditions | GC0136 | 05 March 2021 |
| 0 | Demand Response Services | GC0136 | 05 March 2021 |
| 0 | Compliance Processes | GC0136 | 05 March 2021 |
| 0 | Europeans Compliance Processes | GC0136 | 05 March 2021 |
| 0 | Operating Code 1 | GC0136 | 05 March 2021 |
| 0 | Operating Code 2 | GC0136 | 05 March 2021 |
| 0 | Operating Code 5 | GC0136 | 05 March 2021 |
| 0 | Operating Code 6 | GC0136 | 05 March 2021 |
| 0 | Operating Code 7 | GC0136 | 05 March 2021 |
| 0 | Operating Code 8 | GC0136 | 05 March 2021 |
| 0 | Operating Code 8A | GC0136 | 05 March 2021 |
| 0 | Operating Code 8B | GC0136 | 05 March 2021 |
| 0 | Operating Code 9 | GC0136 | 05 March 2021 |
| 0 | Operating Code 11 | GC0136 | 05 March 2021 |
| 0 | Operating Code 12 | GC0136 | 05 March 2021 |
| 0 | Balancing Code 2 | GC0136 | 05 March 2021 |

| Revision | Section | Related Modification | Effective Date |
|-----------------|------------------------|-----------------------------|-----------------------|
| 0 | Balancing Code 3 | GC0136 | 05 March 2021 |
| 0 | Balancing Code 4 | GC0136 | 05 March 2021 |
| 0 | Balancing Code 5 | GC0136 | 05 March 2021 |
| 0 | Data Registration Code | GC0136 | 05 March 2021 |
| 0 | General Conditions | GC0136 | 05 March 2021 |
| 0 | Governance Rules | GC0136 | 05 March 2021 |
| 1 | Glossary Definitions | GC0130 | 18 March 2021 |
| 1 | Operating Code 2 | GC0130 | 18 March 2021 |
| 1 | Data Registration Code | GC0130 | 18 March 2021 |
| 1 | General Conditions | GC0130 | 18 March 2021 |
| 2 | Glossary Definitions | GC0147 | 17 May 2021 |
| 2 | Operating Code 6B | GC0147 | 17 May 2021 |
| 2 | Operating Code 7 | GC0147 | 17 May 2021 |
| 2 | Balancing Code 1 | GC0147 | 17 May 2021 |
| 2 | Balancing Code 2 | GC0147 | 17 May 2021 |
| 3 | Balancing Code 2 | GC0144 | 26 May 2021 |
| 3 | Balancing Code 4 | GC0144 | 26 May 2021 |
| 4 | Preface | GC0149 | 03 August 2021 |
| 4 | Glossary Definitions | GC0149 | 03 August 2021 |
| 4 | Planning Code | GC0149 | 03 August 2021 |

| Revision | Section | Related Modification | Effective Date |
|-----------------|--------------------------------|--|-----------------------|
| 4 | European Connection Conditions | GC0149 | 03 August 2021 |
| 4 | European Compliance Processes | GC0149 | 03 August 2021 |
| 4 | Demand Response Services Code | GC0149 | 03 August 2021 |
| 4 | Operating Code 2 | GC0149 | 03 August 2021 |
| 4 | Balancing Code 4 | GC0149 | 03 August 2021 |
| 4 | Data Registration Code | GC0149 | 03 August 2021 |
| 4 | Governance Rules | GC0149 | 03 August 2021 |
| 5 | Operating Code 7 | GC0109 | 23 August 2021 |
| 6 | Connection Conditions | GC0134 | 01 September 2021 |
| 6 | European Connection Conditions | GC0134 | 01 September 2021 |
| 6 | Balancing Code 2 | GC0134 | 01 September 2021 |
| 7 | Operating Code 6B | GC0150 | 04 October 2021 |
| 8 | Operating Code 2 | GC0151 | 08 November 2021 |
| 8 | Operating Code 3 | GC0151 | 08 November 2021 |
| 8 | Operating Code 5 | GC0151 | 08 November 2021 |
| 9 | Governance Rules | GC0152 | 29 December 2021 |
| 10 | General Conditions | Electrical Standards - EDL Instruction Interface Valid Reason Codes | 20 January 2022 |
| 11 | Glossary Definitions | GC0137 | 14 February 2022 |
| 11 | Planning Code | GC0137 | 14 February 2022 |

| Revision | Section | Related Modification | Effective Date |
|-----------------|--------------------------------|-----------------------------|-----------------------|
| 11 | Connection Conditions | GC0137 | 14 February 2022 |
| 11 | European Connection Conditions | GC0137 | 14 February 2022 |
| 11 | European Compliance Processes | GC0137 | 14 February 2022 |
| 11 | Data Registration Code | GC0137 | 14 February 2022 |
| 12 | Glossary Definitions | GC0153 | 09 March 2022 |
| 12 | Connection Conditions | GC0153 | 09 March 2022 |
| 12 | European Connection Conditions | GC0153 | 09 March 2022 |
| 12 | Operating Code 6 | GC0153 | 09 March 2022 |
| 12 | Operating Code 8A | GC0153 | 09 March 2022 |
| 12 | Operating Code 8B | GC0153 | 09 March 2022 |
| 12 | Operating Code 12 | GC0153 | 09 March 2022 |
| 12 | Balancing Code 2 | GC0153 | 09 March 2022 |
| 12 | Governance Rules | GC0153 | 09 March 2022 |
| 13 | Compliance Processes | GC0138 | 24 June 2022 |
| 13 | European Compliance Processes | GC0138 | 24 June 2022 |
| 13 | Operating Code 5 | GC0138 | 24 June 2022 |
| 14 | Glossary & Definitions | GC0157 | 06 October 2022 |
| 14 | European Connection Conditions | GC0157 | 06 October 2022 |
| 14 | Operating Code 2 | GC0157 | 06 October 2022 |
| 14 | Operating Code 5 | GC0157 | 06 October 2022 |

| Revision | Section | Related Modification | Effective Date |
|-----------------|-----------------------------------|-----------------------------|-----------------------|
| 14 | Data Registration Code | GC0157 | 06 October 2022 |
| 14 | No changes to published Grid Code | GC0158 | 06 December 2022 |
| 15 | Glossary & Definitions | GC0160 | 07 December 2022 |
| 15 | Balancing Code 1 | GC0160 | 07 December 2022 |
| 15 | Balancing Code 2 | GC0160 | 07 December 2022 |
| 16 | Planning Code | GC0141 | 05 January 2023 |
| 16 | Connection Conditions | GC0141 | 05 January 2023 |
| 16 | European Connection Conditions | GC0141 | 05 January 2023 |
| 16 | Compliance Processes | GC0141 | 05 January 2023 |
| 16 | European Compliance Processes | GC0141 | 05 January 2023 |
| 17 | Connection Conditions | GC0148 | 4 September 2023 |
| 17 | European Compliance Processes | GC0148 | 4 September 2023 |
| 17 | European Connection Conditions | GC0148 | 4 September 2023 |
| 17 | General Conditions | GC0148 | 4 September 2023 |
| 17 | Glossary & Definitions | GC0148 | 4 September 2023 |
| 17 | Operating Code 5 | GC0148 | 4 September 2023 |
| 17 | Operating Code 6 | GC0148 | 4 September 2023 |
| 17 | Planning Code | GC0148 | 4 September 2023 |
| 18 | Operating Code 6 | GC0161 | 2 October 2023 |

< END OF REVISIONS >