# **OPERATING CODE NO. 7**

(OC7)

## **OPERATIONAL LIAISON**

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## OC7.1 INTRODUCTION

- OC7.1.1 **Operating Code No. 7** ("OC7") sets out the requirements for the exchange of information in relation to **Operations** and/or **Events** on the **Total System** which have had (or may have had) or will have (or may have) an **Operational Effect**:
  - (a) on the National Electricity Transmission System in the case of an Operation and/or Event occurring on the System of a User or Users; and
  - (b) on the **System** of a **User** or **Users** in the case of an **Operation** and/or **Event** occurring on the **National Electricity Transmission System**.

It also describes the types of **National Electricity Transmission System Warning** which may be issued by **NGET**.

- OC7.1.2 The requirement to notify in OC7 relates generally to notifying of what is expected to happen or what has happened and not the reasons why. However, as OC7 provides, when an Event or Operation has occurred on the National Electricity Transmission System which itself has been caused by (or exacerbated by) an Operation or Event on a User's System, NGET in reporting the Event or Operation on the National Electricity Transmission System to another User can pass on what it has been told by the first User in relation to the Operation or Event on the first User's System.
- OC7.1.3 Where an Event or Operation on the National Electricity Transmission System falls to be reported by NGET to an Externally Interconnected System Operator under an Interconnection Agreement, OC7 provides that in the situation where that Event or Operation has been caused by (or exacerbated by) an Operation or Event on a User's System, NGET can pass on what it has been told by the User in relation to the Operation or Event on that User's System.
- OC7.1.4 OC7 also deals with **Integral Equipment Tests**.
- OC7.1.5 To reconfigure the **National Electricity Transmission System**, **NGET** may reasonably require the assistance of a **User** to reconfigure parts of the **User System**. To reconfigure its **User System** a **User** may reasonably require the reasonable assistance of **NGET** to direct the reconfiguration of parts of the **National Electricity Transmission System**.
- OC7.1.6 OC7.6 sets down the arrangements for the exchange of information required when configuring Connection Sites (or in the case of OTSUA operational prior to the OTSUA Transfer Time, Transmission Interface Sites) and parts of the National Electricity Transmission System adjacent to those Connection Sites (or Transmission Interface Sites) in Scotland and Offshore. It also covers the setting up of a Local Switching Procedure. NGET shall procure that Relevant Transmission Licensees shall comply with section OC7.6 and any relevant Local Switching Procedure where and to the extent that such matters apply to them.

#### OC7.2 <u>OBJECTIVE</u>

The objectives of **OC7** are:

- OC7.2.1 To provide for the exchange of information so that the implications of an **Operation** and/or **Event** can be considered, possible risks arising from it can be assessed and appropriate action taken by the relevant party in order to maintain the integrity of the **Total System**. **OC7** does not seek to deal with any actions arising from the exchange of information, but merely with that exchange.
- OC7.2.2 To provide for types of **National Electricity Transmission System Warnings** which may be issued by **NGET**.
- OC7.2.3 To provide the framework for the information flow and discussion between **NGET** and certain **Users** in relation to **Integral Equipment Tests**.
- OC7.2.4 To provide the procedure to be followed in respect of **Operational Switching** in Scotland and **Offshore**.

## OC7.3 SCOPE

OC7.3.1

- OC7 applies to NGET and to Users, which in OC7 means:
  - (a) Generators (other than those which only have Embedded Small Power Stations or Embedded Medium Power Stations) and including Generators undertaking OTSDUW;
  - (b) Network Operators;
  - (c) Non-Embedded Customers;
  - (d) Suppliers (for the purposes of National Electricity Transmission System Warnings);
  - (e) Externally Interconnected System Operators (for the purposes of National Electricity Transmission System Warnings); and
  - (f) **DC Converter Station** owners.

The procedure for operational liaison by NGET with Externally Interconnected System Operators is set out in the Interconnection Agreement with each Externally Interconnected System Operator.

In Scotland and Offshore OC7.6 also applies to Relevant Transmission Licensees.

## OC7.4 PROCEDURE

- OC7.4.1 The term "**Operation**" means a scheduled or planned action relating to the operation of a **System** (including an **Embedded Power Station**).
- OC7.4.2 The term "Event" means an unscheduled or unplanned (although it may be anticipated) occurrence on, or relating to, a System (including an Embedded Power Station) including, without limiting that general description, faults, incidents and breakdowns and adverse weather conditions being experienced.
- OC7.4.3 The term "**Operational Effect**" means any effect on the operation of the relevant other **System** which causes the **National Electricity Transmission System** or the **Systems** of the other **User** or **Users**, as the case may be, to operate (or be at a materially increased risk of operating) differently to the way in which they would or may have normally operated in the absence of that effect.
- OC7.4.4 References in this OC7 to a System of a User or User's System shall not include Embedded Small Power Stations or Embedded Medium Power Stations, unless otherwise stated.
- OC7.4.5 Requirement To Notify Operations
- OC7.4.5.1 Operation On The National Electricity Transmission System

In the case of an **Operation** on the **National Electricity Transmission System**, which will have (or may have) an **Operational Effect** on the **System(s)** of a **User** or **Users**, **NGET** will notify the **User** or **Users** whose **System(s)** will, or may, in the reasonable opinion of **NGET**, be affected, in accordance with **OC7**.

OC7.4.5.2 Operation On A User's System

In the case of an **Operation** on the **System** of a **User** which will have (or may have) an **Operational Effect** on the **National Electricity Transmission System** (including an equivalent to an **Operation** on the equivalent of a **System** of a **User** or other person connected to that **User's System** which, via that **User System**, will or may have an **Operational Effect** on the **National Electricity Transmission System**), the **User** will notify **NGET** in accordance with **OC7**. Following notification by the **User**, **NGET** will notify any other **User** or **Users** on whose **System(s)** the **Operation** will have, or may have, in the reasonable opinion of **NGET**, an **Operational Effect**, in accordance with **OC7** and will notify any **Externally Interconnected System Operator** on whose **System** the **Operation** will have, or may have, in the reasonable opinion of **NGET**, an **Operational Effect**, if it is required to do so by the relevant **Interconnection Agreement**.

OC7.4.5.3 Examples Of Situations Where Notification By NGET Or A User May Be Required

Whilst in no way limiting the general requirement to notify in advance set out in OC7.4.5.1 and OC7.4.5.2, the following are examples of situations where notification in accordance with OC7.4.5 will be required if they will, or may, have an **Operational Effect**:

- (a) the implementation of a planned outage of **Plant** and/or **Apparatus** which has been arranged pursuant to **OC2**;
- (b) the operation (other than, in the case of a **User**, at the instruction of **NGET**) of any circuit breaker or isolator/disconnector or any sequence or combination of the two; or
- (c) voltage control.

#### OC7.4.5.4 Operations Caused By Another Operation Or By An Event

An **Operation** may be caused by another **Operation** or an **Event** on another's **System** (including an **Embedded Power Station**) (or by the equivalent of an **Event** or **Operation** on the **System** of an **Externally Interconnected System Operator** or **Interconnector User**) and in that situation the information to be notified is different to that where the **Operation** arose independently of any other **Operation** or **Event**, as more particularly provided in OC7.4.5.6.

## OC7.4.5.5 Form

A notification and any response to any questions asked under OC7.4.5, of an **Operation** which has arisen independently of any other **Operation** or of an **Event**, shall be of sufficient detail to describe the **Operation** (although it need not state the cause) and to enable the recipient of the notification reasonably to consider and assess the implications and risks arising (provided that, in the case of an **Operation** on a **User's System** which **NGET** is notifying to other **Users** under OC7.4.5.2, **NGET** will only pass on what it has been told by the **User** which has notified it) and will include the name of the individual reporting the **Operation** on behalf of **NGET** or the **User**, as the case may be. The recipient may ask questions to clarify the notification and the giver of the notification will, insofar as it is able, answer any questions raised, provided that, in the case of an **Operation** on a **User's System** which **NGET** is notifying to other **Users** under OC7.4.5.2, in answering any question, **NGET** will not pass on anything further than that which it has been told by the **User** which has notified it. **NGET** may pass on the information contained in the notification as provided in OC7.4.5.6.

- OC7.4.5.6 (a) A notification by NGET of an Operation under OC7.4.5.1 which has been caused by another Operation (the "first Operation") or by an Event on a User's System, will describe the Operation and will contain the information which NGET has been given in relation to the first Operation or that Event by the User. The notification and any response to any questions asked (other than in relation to the information which NGET is merely passing on from a User) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the Operation on the National Electricity Transmission System and will include the name of the individual reporting the Operation on behalf of NGET. The recipient may ask questions to clarify the notification and NGET will, insofar as it is able, answer any questions raised, provided that in relation to the information which NGET is merely passing on from a User, in answering any question NGET will not pass on anything further than that which it has been told by the User which has notified it.
  - (b) Where a User is reporting an Operation or an Event which itself has been caused by an incident or scheduled or planned action affecting (but not on) its System, the notification to NGET will contain the information which the User has been given by the person connected to its System in relation to that incident or scheduled or planned action (which the User must require, contractually or otherwise, the person connected to its System to give to it) and NGET may pass on the information contained in the notification as provided in this OC7.4.5.6.

- OC7.4.5.7 Where an **Operation** on the **National Electricity Transmission System** falls to be reported by **NGET** under an **Interconnection Agreement** and the **Operation** has been caused by another **Operation** (the "first **Operation**") or by an **Event** on a **User's System**, **NGET** will include in that report the information which **NGET** has been given in relation to the first **Operation** or that **Event** by the **User** (including any information relating to an incident or scheduled or planned action, as provided in OC7.4.5.6).
- OC7.4.5.8 (a) A notification to a User by NGET of an Operation under OC7.4.5.1 which has been caused by the equivalent of an Operation or of an Event on the equivalent of a System of an Externally Interconnected System Operator or Interconnector User, will describe the Operation on the National Electricity Transmission System and will contain the information which NGET has been given, in relation to the equivalent of an Operation or of an Event on the equivalent of a System Operator or Interconnected System Operator or Interconnected System Operator or Interconnected System of an Event on the equivalent of a System of an Externally Interconnected System Operator or Interconnector User, by that Externally Interconnected System Operator or Interconnector User.
  - (b) The notification and any response to any question asked (other than in relation to the information which NGET is merely passing on from that Externally Interconnected System Operator or Interconnector User) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the Operation on the National Electricity Transmission System and will include the name of the individual reporting the Operation on behalf of NGET. The recipient may ask questions to clarify the notification and NGET will, insofar as it is able, answer any questions raised, provided that, in relation to the information which NGET is merely passing on from an Externally Interconnected System Operator or Interconnector User, in answering any question NGET will not pass on anything further than that which it has been told by the Externally Interconnected System Operator or Interconnector User which has notified it.
- OC7.4.5.9

(a) A Network Operator may pass on the information contained in a notification to it from NGET under OC7.4.5.1, to a Generator with a Generating Unit or a Power Park Module connected to its System, or to a DC Converter Station owner with a DC Converter connected to its System, or to the operator of another User System connected to its System (which, for the avoidance of doubt, could be another Network Operator), in connection with reporting the equivalent of an Operation under the Distribution Code (or the contract pursuant to which that Generating Unit or Power Park Module or other User System, or to a DC Converter Station is connected to the System of that Network Operator) (if the Operation on the National Electricity Transmission System caused it).

- (b) A Generator may pass on the information contained in a notification to it from NGET under OC7.4.5.1, to another Generator with a Generating Unit or a Power Park Module connected to its System, or to the operator of a User System connected to its System (which, for the avoidance of doubt, could be a Network Operator), if it is required (by a contract pursuant to which that Generating Unit or that Power Park Module or that User System is connected to its System) to do so in connection with the equivalent of an Operation on its System (if the Operation on the National Electricity Transmission System caused it).
- OC7.4.5.10 (a) Other than as provided in OC7.4.5.9, a Network Operator or a Generator may not pass on any information contained in a notification to it from NGET under OC7.4.5.1 (and an operator of a User System or Generator receiving information which was contained in a notification to a Generator or a Network Operator, as the case may be, from NGET under OC7.4.5.1, as envisaged in OC7.4.5.9 may not pass on this information) to any other person, but may inform persons connected to its System (or in the case of a Generator which is also a Supplier, inform persons to which it supplies electricity which may be affected) that there has been an incident on the Total System, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected) an estimated time of return to service.

- (b) In the case of a Generator which has an Affiliate which is a Supplier, the Generator may inform it that there has been an incident on the Total System, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected in a particular area) an estimated time of return to service in that area, and that Supplier may pass this on to persons to which it supplies electricity which may be affected).
- (c) Each Network Operator and Generator shall use its reasonable endeavours to procure that any Generator or operator of a User System receiving information which was contained in a notification to a Generator or Network Operator, as the case may be, from NGET under OC7.4.5.1, which is not bound by the Grid Code, does not pass on any information other than as provided above.
- OC7.4.5.11 The notification will, if either party requests, be recorded by the sender and dictated to the recipient, who shall record and repeat each phrase as it is received and on completion of the dictation shall repeat back the notification in full to the sender who shall confirm that it has been accurately recorded.

## OC7.4.5.12 Timing

A notification under OC7.4.5 will be given as far in advance as possible and in any event shall be given in sufficient time as will reasonably allow the recipient to consider and assess the implications and risks arising.

- OC7.4.6 Requirements To Notify Events
- OC7.4.6.1 Events On The National Electricity Transmission System

In the case of an **Event** on the **National Electricity Transmission System** which has had (or may have had) an **Operational Effect** on the **System(s)** of a **User** or **Users**, **NGET** will notify the **User** or **Users** whose **System(s)** have been, or may have been, in the reasonable opinion of **NGET**, affected, in accordance with **OC7**.

OC7.4.6.2 Events On A User's System

In the case of an **Event** on the **System** of a **User** which has had (or may have had) an **Operational Effect** on the **National Electricity Transmission System**, the **User** will notify **NGET** in accordance with **OC7**.

## OC7.4.6.3 Events Caused By Another Event Or By An Operation

An Event may be caused (or exacerbated by) another Event or by an Operation on another's System (including on an Embedded Power Station) (or by the equivalent of an Event or Operation on the equivalent of a System of an Externally Interconnected System Operator or Interconnector User) and in that situation the information to be notified is different to that where the Event arose independently of any other Event or Operation, as more particularly provided in OC7.4.6.7.

OC7.4.6.4 **NGET** or a **User**, as the case may be, may enquire of the other whether an **Event** has occurred on the other's **System**. If it has, and the party on whose **System** the **Event** has occurred is of the opinion that it may have had an **Operational Effect** on the **System** of the party making the enquiry, it shall notify the enquirer in accordance with **OC7**.

## OC7.4.6.5 Examples Of Situations Where Notification By NGET Or A User May Be Required

Whilst in no way limiting the general requirement to notify set out in OC7.4.6.1, OC7.4.6.2 and OC7.4.6.3, the following are examples of situations where notification in accordance with OC7.4.6 will be required if they have an **Operational Effect**:

- (a) where **Plant** and/or **Apparatus** is being operated in excess of its capability or may present a hazard to personnel;
- (b) the activation of any alarm or indication of any abnormal operating condition;
- (c) adverse weather conditions being experienced;
- (d) breakdown of, or faults on, or temporary changes in the capabilities of, **Plant** and/or **Apparatus**;

- (e) breakdown of, or faults on, control, communication and metering equipment; or
- (f) increased risk of inadvertent protection operation.

Form

- OC7.4.6.6 A notification and any response to any questions asked under OC7.4.6.1 and OC7.4.6.2 of an **Event** which has arisen independently of any other **Event** or of an **Operation**, will describe the **Event**, although it need not state the cause of the **Event**, and, subject to that, will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising and will include the name of the individual reporting the **Event** on behalf of **NGET** or the **User**, as the case may be. The recipient may ask questions to clarify the notification and the giver of the notification will, insofar as it is able (although it need not state the cause of the **Event**) answer any questions raised. **NGET** may pass on the information contained in the notification as provided in OC7.4.6.7.
- OC7.4.6.7 (a) A notification (and any response to any questions asked under OC7.4.6.1) by NGET of (or relating to) an Event under OC7.4.6.1 which has been caused by (or exacerbated by) another Event (the "first Event") or by an Operation on a User's System will describe the Event and will contain the information which NGET has been given in relation to the first Event or that Operation by the User (but otherwise need not state the cause of the Event). The notification and any response to any questions asked (other than in relation to the information which NGET is merely passing on from a User) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the Event on the National Electricity Transmission System and will include the name of the individual reporting the Event on behalf of NGET. The recipient may ask questions to clarify the notification and NGET will, insofar as it is able, answer any questions raised, provided that in relation to the information which NGET is merely passing on from a User, in answering any question NGET will not pass on anything further than that which it has been told by the User which has notified it.
  - (b) Where a User is reporting an Event or an Operation which itself has been caused by (or exacerbated by) an incident or scheduled or planned action affecting (but not on) its System the notification to NGET will contain the information which the User has been given by the person connected to its System in relation to that incident or scheduled or planned action (which the User must require, contractually or otherwise, the person connected to its System to give to it) and NGET may pass on the information contained in the notification as provided in this OC7.4.6.7.
- OC7.4.6.8 Where an **Event** on the **National Electricity Transmission System** falls to be reported by **NGET** under an **Interconnection Agreement** and the **Event** has been caused by (or exacerbated by) another **Event** (the "first **Event**") or by an **Operation** on a **User's System**, **NGET** will include in that report the information which **NGET** has been given in relation to the first **Event** or that **Operation** by the **User** (including any information relating to an incident or scheduled or planned action on that **User's System**, as provided in OC7.4.6.7).
- A notification to a User (and any response to any questions asked under OC7.4.6.1) by NGET of (or relating to) an Event under OC7.4.6.1 which has been caused by (or exacerbated by) the equivalent of an Event or of an Operation on the equivalent of a System of an Externally Interconnected System Operator or Interconnector User, will describe the Event on the National Electricity Transmission System and will contain the information which NGET has been given, in relation to the equivalent of an Event or of an Operator or Interconnected System Operator or Interconnected System Operator or Interconnected System of an Externally Interconnected System of an Event or of an Operation on the equivalent of a System of an Externally Interconnected System Operator or Interconnector User, by that Externally Interconnected System Operator or Interconnector User (but otherwise need not state the cause of the Event).

- (b) The notification and any response to any questions asked (other than in relation to the information which NGET is merely passing on from that Externally Interconnected System Operator or Interconnector User) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the Event on the National Electricity Transmission System and will include the name of the individual reporting the Event on behalf of NGET. The recipient may ask questions to clarify the notification and NGET will, insofar as it is able (although it need not state the cause of the Event) answer any questions raised, provided that, in relation to the information which NGET is merely passing on from an Externally Interconnected System Operator or Interconnector User, in answering any question NGET will not pass on anything further than that which it has been told by the Externally Interconnected System Operator or Interconnector User which has notified it.
- OC7.4.6.10 (a) A Network Operator may pass on the information contained in a notification to it from NGET under OC7.4.6.1, to a Generator with a Generating Unit or a Power Park Module connected to its System or to a DC Converter Station owner with a DC Converter connected to its System or to the operator of another User System connected to its System (which, for the avoidance of doubt, could be a Network Operator), in connection with reporting the equivalent of an Event under the Distribution Code (or the contract pursuant to which that Generating Unit or Power Park Module or DC Converter or other User System is connected to the System of that Network Operator) (if the Event on the National Electricity Transmission System caused or exacerbated it).
  - (b) A Generator may pass on the information contained in a notification to it from NGET under OC7.4.6.1, to another Generator with a Generating Unit or a Power Park Module connected to its System or to the operator of a User System connected to its System (which, for the avoidance of doubt, could be a Network Operator), if it is required (by a contract pursuant to which that Generating Unit or that Power Park Module or that User System is connected to its System) to do so in connection with the equivalent of an Event on its System (if the Event on the National Electricity Transmission System caused or exacerbated it).
- OC7.4.6.11 (a) Other than as provided in OC7.4.6.10, a Network Operator or a Generator, may not pass on any information contained in a notification to it from NGET under OC7.4.6.1 (and an operator of a User System or Generator receiving information which was contained in a notification to a Generator or a Network Operator, as the case may be, from NGET under OC7.4.6.1, as envisaged in OC7.4.6.10 may not pass on this information) to any other person, but may inform persons connected to its System (or in the case of a Generator which is also a Supplier, inform persons to which it supplies electricity which may be affected) that there has been an incident on the Total System, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected) an estimated time of return to service.
  - (b) In the case of a Generator which has an Affiliate which is a Supplier, the Generator may inform it that there has been an incident on the Total System, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected in a particular area) an estimated time of return to service in that area, and that Supplier may pass this on to persons to which it supplies electricity which may be affected).
  - (c) Each Network Operator and Generator shall use its reasonable endeavours to procure that any Generator or operator of a User System receiving information which was contained in a notification to a Generator or Network Operator, as the case may be, from NGET under OC7.4.6.1, which is not bound by the Grid Code, does not pass on any information other than as provided above.

- OC7.4.6.12 When an Event relating to a Generating Unit, a Power Park Module or a DC Converter (or OTSUA operational prior to the OTSUA Transfer Time), has been reported to NGET by a Generator or DC Converter Station owner under OC7.4.6 and it is necessary in order for the Generator or DC Converter Station owner to assess the implications of the Event on its System more accurately, the Generator or DC Converter Station owner may ask NGET for details of the fault levels from the National Electricity Transmission System to that Generating Unit, Power Park Module or DC Converter (or OTSUA operational prior to the OTSUA Transfer Time) at the time of the Event, and NGET will, as soon as reasonably practicable, give the Generator or DC Converter Station owner that information provided that NGET has that information.
- OC7.4.6.13 Except in an emergency situation the notification of an **Event** will, if either party requests, be recorded by the sender and dictated to the recipient, who shall record and repeat each phrase as it is received and on completion of the dictation shall repeat the notification in full to the sender who shall confirm that it has been accurately recorded.

## <u>Timing</u>

- OC7.4.6.14 A notification under OC7.4.6 shall be given as soon as possible after the occurrence of the **Event**, or time that the **Event** is known of or anticipated by the giver of the notification under **OC7**, and in any event within 15 minutes of such time.
- OC7.4.7 <u>Significant Incidents</u>
- OC7.4.7.1 Where a **User** notifies **NGET** of an **Event** under **OC7** which **NGET** considers has had or may have had a significant effect on the **National Electricity Transmission System**, **NGET** will require the **User** to report that **Event** in writing in accordance with the provisions of **OC10** and will notify that **User** accordingly.
- OC7.4.7.2 Where **NGET** notifies a **User** of an **Event** under **OC7** which the **User** considers has had or may have had a significant effect on that **User's System**, that **User** will require **NGET** to report that **Event** in writing in accordance with the provisions of **OC10** and will notify **NGET** accordingly.
- OC7.4.7.3 **Events** which **NGET** requires a **User** to report in writing pursuant to OC7.4.7.1, and **Events** which a **User** requires **NGET** to report in writing pursuant to OC7.4.7.2, are known as "**Significant Incidents**".
- OC7.4.7.4 Without limiting the general description set out in OC7.4.7.1 and OC7.4.7.2, a **Significant Incident** will include **Events** having an **Operational Effect** which result in, or may result in, the following:
  - (a) operation of **Plant** and/or **Apparatus** either manually or automatically;
  - (b) voltage outside statutory limits;
  - (c) **Frequency** outside statutory limits; or
  - (d) **System** instability.
- OC 7.4.8 National Electricity Transmission System Warnings
- OC7.4.8.1 Role Of National Electricity Transmission System Warnings

**National Electricity Transmission System Warnings** as described below provide information relating to **System** conditions or **Events** and are intended to:

- (i) alert **Users** to possible or actual **Plant** shortage, **System** problems and/or **Demand** reductions;
- (ii) inform of the applicable period;
- (iii) indicate intended consequences for Users; and
- (iv) enable specified **Users** to be in a state of readiness to react properly to instructions received from **NGET**.

A table of **National Electricity Transmission System Warnings**, set out in the Appendix to **OC7**, summarises the warnings and their usage. In the case of a conflict between the table and the provisions of the written text of **OC7**, the written text will prevail.

## OC7.4.8.2 Recipients Of National Electricity Transmission System Warnings

- (a) Where National Electricity Transmission System Warnings, (except those relating to Demand Control Imminent), are applicable to System conditions or Events which have widespread effect, NGET will notify all Users under OC7.
- (b) Where in NGET's judgement System conditions or Events may only have a limited effect, the National Electricity Transmission System Warning will only be issued to those Users who are or may in NGET's judgement be affected.
- (c) Where a National Electricity Transmission System Warning Demand Control Imminent is issued it will only be sent to those Users who are likely to receive Demand Control instructions from NGET.

## OC7.4.8.3 Preparatory Action

- (a) Where possible, and if required, recipients of the warnings should take such preparatory action as they deem necessary taking into account the information contained in the **National Electricity Transmission System Warning**. All warnings will be of a form determined by **NGET** and will remain in force from the stated time of commencement until the cancellation, amendment or re-issue, as the case may be, is notified by **NGET**.
- (b) Where a National Electricity Transmission System Warning has been issued to a Network Operator and is current, Demand Control should not (subject as provided below) be employed unless instructed by NGET. If Demand Control is, however, necessary to preserve the integrity of the Network Operator's System, then the impact upon the integrity of the Total System should be considered by the Network Operator and where practicable discussed with NGET prior to its implementation.

Where a **National Electricity Transmission System Warning** has been issued to a **Supplier**, further **Customer Demand Management** (in addition to that previously notified under **OC1 - Demand** Forecasts) must only be implemented following notification to **NGET**.

- (c) National Electricity Transmission System Warnings will be issued by such data transmission facilities as have been agreed between NGET and Users. In the case of Generators with Gensets this will normally be at their Trading Points (if they have notified NGET that they have a Trading Point).
- (d) Users may at times be informed by telephone of National Electricity Transmission System Warnings and in these circumstances confirmation will be sent to those Users so notified by such data transmission facilities as have been agreed between NGET and Users, as soon as possible.

## OC7.4.8.4 <u>Types Of National Electricity Transmission System Warnings</u>

National Electricity Transmission System Warnings consist of the following types:-

- (i) National Electricity Transmission System Warning Electricity Margin Notice
- (ii) National Electricity Transmission System Warning High Risk of Demand Reduction
- (iii) National Electricity Transmission System Warning Demand Control Imminent
- (iv) National Electricity Transmission System Warning Risk of System Disturbance
- OC7.4.8.5 National Electricity Transmission System Warning Electricity Margin Notice

A National Electricity Transmission System Warning - Electricity Margin Notice may be issued to Users in accordance with OC7.4.8.2, at times when there is a reduced System Margin, as determined under BC1.5.4. It will contain the following information:

- (i) the period for which the warning is applicable; and
- (ii) the availability shortfall in MW; and

- (iii) intended consequences for **Users**, including notification that **Maximum Generation Service** may be instructed.
- OC 7.4.8.6 National Electricity Transmission System Warning High Risk of Demand Reduction
  - (a) A National Electricity Transmission System Warning High Risk of Demand Reduction may be issued to Users in accordance with OC7.4.8.2 at times when there is a reduced System Margin, as determined under BC1.5.4 and in NGET's judgement there is increased risk of Demand reduction being implemented under OC6.5.1. It will contain the following information in addition to the required information in a National Electricity Transmission System Warning - Electricity Margin Notice:
    - (i) the possible percentage level of **Demand** reduction required; and
    - (ii) Specify those **Network Operators** and **Non Embedded Customers** who may subsequently receive instructions under OC6.5.1.
  - (b) A National Electricity Transmission System Warning High Risk of Demand Reduction may also be issued by NGET to those Network Operators and Non Embedded Customers who may subsequently receive instructions under OC6.5.1 relating to a Demand reduction in circumstances not related to System Margin (for example Demand reduction required to manage System overloading).

The National Electricity Transmission System Warning - High Risk of Demand Reduction will specify the period during which Demand reduction may be required and the part of the Total System to which it applies and any other matters specified in OC6.5.

## OC7.4.8.6.1 Protracted Periods Of Generation Shortage

- (a) Whenever NGET anticipates that a protracted period of generation shortage may exist a National Electricity Transmission System Warning - Electricity Margin Notice or High Risk of Demand Reduction may be issued, to give as much notice as possible to those Network Operators and Non Embedded Customers who may subsequently receive instructions under OC6.5.
- (b) A National Electricity Transmission System Warning High Risk of Demand Reduction will in these instances include an estimate of the percentage of Demand reduction that may be required and the anticipated duration of the Demand reduction. It may also include information relating to estimates of any further percentage of Demand reduction that may be required.
- (c) The issue of the National Electricity Transmission System Warning Electricity Margin Notice or High Risk of Demand Reduction is intended to enable recipients to plan ahead on the various aspects of Demand reduction.
- OC7.4.8.7 National Electricity Transmission System Warning Demand Control Imminent
  - (a) A National Electricity Transmission System Warning Demand Control Imminent, relating to a Demand reduction under OC6.5, will be issued by NGET to Users in accordance with OC7.4.8.2. It will specify those Network Operators who may subsequently receive instructions under OC6.5.
  - (b) A National Electricity Transmission System Warning Demand Control Imminent, need not be preceded by any other National Electricity Transmission System Warning and will be issued when a Demand reduction is expected within the following 30 minutes, but will not cease to have effect after 30 minutes from its issue. However, NGET will either reissue the National Electricity Transmission System Warning - Demand Control Imminent or cancel the National Electricity Transmission System Warning - Demand Control Imminent no later than 2 hours from first issue, or from re-issue, as the case may be.

- OC7.4.8.8 National Electricity Transmission System Warning Risk of System Disturbance
  - (a) A National Electricity Transmission System Warning Risk of System Disturbance will be issued by NGET to Users who may be affected when NGET knows there is a risk of widespread and serious disturbance to the whole or part of, the National Electricity Transmission System;
  - (b) The National Electricity Transmission System Warning Risk of System Disturbance will contain such information as NGET deems appropriate;
  - (c) for the duration of the National Electricity Transmission System Warning Risk of System Disturbance, each User in receipt of the National Electricity Transmission System Warning - Risk of System Disturbance shall take the necessary steps to warn its operational staff and to maintain its Plant and/or Apparatus in the condition in which it is best able to withstand the anticipated disturbance;
  - (d) During the period that the National Electricity Transmission System Warning Risk of System Disturbance is in effect, NGET may issue Emergency Instructions in accordance with BC2 and it may be necessary to depart from normal Balancing Mechanism operation in accordance with BC2 in issuing Bid-Offer Acceptances.

## OC7.4.8.9 Cancellation of National Electricity Transmission System Warning

- (a) NGET will give notification of a Cancellation of National Electricity Transmission System Warning to all Users issued with the National Electricity Transmission System Warning when in NGET's judgement System conditions have returned to normal.
- (b) A Cancellation of National Electricity Transmission System Warning will identify the type of National Electricity Transmission System Warning being cancelled and the period for which it was issued. The Cancellation of National Electricity Transmission System Warning will also identify any National Electricity Transmission System Warnings that are still in force.

## OC7.4.8.10 General Management Of National Electricity Transmission System Warnings

- (a) **National Electricity Transmission System Warnings** remain in force for the period specified unless superseded or cancelled by **NGET**.
- (b) A National Electricity Transmission System Warning issued for a particular period may be superseded by further related warnings. This will include National Electricity Transmission System Warning - Electricity Margin Notice being superseded by National Electricity Transmission System Warning - High Risk of Demand Reduction and vice-versa.
- (c) In circumstances where it is necessary for the period of a **National Electricity Transmission System Warning** to be changed:
  - the period applicable may be extended by the issue of a National Electricity Transmission System Warning with a period which follows on from the original period, or
  - (ii) revised or updated National Electricity Transmission System Warnings will be issued where there is an overlap with the period specified in an existing National Electricity Transmission System Warning, but only if the revised period also includes the full period of the existing National Electricity Transmission System Warning.

In any other case the existing **National Electricity Transmission System Warning** will be cancelled and a new one issued.

(d) A National Electricity Transmission System Warning is no longer applicable once the period has passed and to confirm this NGET will issue a Cancellation of National Electricity Transmission System Warning.

OC7.5.1 This section of the **Grid Code** deals with **Integral Equipment Tests**. It is designed to provide a framework for the exchange of relevant information and for discussion between **NGET** and certain **Users** in relation to **Integral Equipment Tests**.

## OC7.5.2 An Integral Equipment Test :

- (a) is carried out in accordance with the provisions of this OC7.5 at:
  - (i) a User Site,
  - (ii) a Transmission Site,
  - (iii) an Embedded Large Power Station, or,
  - (iv) an Embedded DC Converter Station;
- (b) will normally be undertaken during commissioning or re-commissioning of **Plant** and/or **Apparatus**;
- (c) may, in the reasonable judgement of the person wishing to perform the test, cause, or have the potential to cause, an **Operational Effect** on a part or parts of the **Total System** but which with prior notice is unlikely to have a materially adverse effect on any part of the **Total System**; and
- (d) may form part of an agreed programme of work.

In the case of **OTSUA** operational prior to the **OTSUA Transfer Time**, a **User's Site** or **Transmission Site** shall, for the purposes of this **OC7**, include a site at which there is an **Interface Point** until the **OTSUA Transfer Time** and the provisions of this OC7.5 and references to **OTSUA** shall be construed and applied accordingly until the **OTSUA Transfer Time**.

OC7.5.3 A set of guidance notes is available from **NGET** on request, which provide further details on suggested procedures, information flows and responsibilities.

## Notification Of An IET

- OC7.5.4 In order to undertake an **Integral Equipment Test** (and subject to OC7.5.8 below), the **User** or **NGET**, as the case may be, (the proposer) must notify the other (the recipient) of a proposed **IET**. Reasonable advance notification must be given, taking into account the nature of the test and the circumstances which make the test necessary. This will allow recipients time to adequately assess the impact of the **IET** on their **System**.
- OC7.5.5 The notification of the IET must normally include the following information:-
  - (a) the proposed date and time of the **IET**;
  - (b) the name of the individual and the organisation proposing the **IET**;
  - (c) a proposed programme of testing; and
  - (d) such further detail as the proposer reasonably believes the recipient needs in order to assess the effect the **IET** may have on relevant **Plant** and/or **Apparatus**.
- OC7.5.6 In the case of an **IET** in connection with commissioning or re-commissioning, the test should be incorporated as part of any overall commissioning programme agreed between **NGET** and the **User**.

#### Response To Notification Of An IET

- OC7.5.7 The recipient of notification of an **IET** must respond within a reasonable timescale prior to the start time of the **IET** and will not unreasonably withhold or delay acceptance of the **IET** proposal.
- OC7.5.8 (a) Where NGET receives notification of a proposed IET from a User, NGET will consult those other Users whom it reasonably believes may be affected by the proposed IET to seek their views. Information relating to the proposed IET may be passed on by NGET with the prior agreement of the proposer. However it is not necessary for NGET to obtain the agreement of any such User as IETs should not involve the application of irregular, unusual or extreme conditions. NGET may however consider any comments received when deciding whether or not to agree to an IET.

- (b) In the case of an Embedded Large Power Station or Embedded DC Converter Station, the Generator or DC Converter Station owner as the case may be must liaise with both NGET and the relevant Network Operator. NGET will not agree to an IET relating to such Plant until the Generator or DC Converter Station owner has shown that it has the agreement of the relevant Network Operator.
- (c) A **Network Operator** will liaise with **NGET** as necessary in those instances where it is aware of an **Embedded Small Power Station** or an **Embedded Medium Power Station** which intends to perform tests which in the reasonable judgement of the **Network Operator** may cause an **Operational Effect** on the **National Electricity Transmission System**.
- OC7.5.9 The response from the recipient, following notification of an **IET** must be one of the following:
  - (a) to accept the IET proposal;
  - (b) to accept the **IET** proposal conditionally subject to minor modifications such as date and time;
  - (c) not to agree the **IET**, but to suggest alterations to the detail and timing of the **IET** that are necessary to make the **IET** acceptable.

#### Final Confirmation Of An IET

- OC7.5.10 The date and time of an **IET** will be confirmed between **NGET** and the **User**, together with any limitations and restrictions on operation of **Plant** and/or **Apparatus**.
- OC7.5.11 The **IET** may subsequently be amended following discussion and agreement between **NGET** and the **User**.

#### Carrying Out An IET

- OC7.5.12 **IETs** may only take place when agreement has been reached and must be carried out in accordance with the agreed programme of testing.
- OC7.5.13 The implementation of an **IET** will be notified in accordance with OC7.4.5.
- OC7.5.14 Where elements of the programme of testing change during the **IET**, there must be discussion between the appropriate parties to identify whether the **IET** should continue.
- OC7.6 PROCEDURE IN RESPECT OF OPERATIONAL SWITCHING IN SCOTLAND AND OFFSHORE
- OC7.6.1 This section OC7.6 of the **Grid Code** sets out the procedure to be followed for **Operational Switching** in Scotland and **Offshore**. Its provisions are supplementary to the provisions of the rest of this **OC7**.

It is designed to set down the arrangements for NGET, Users and the Relevant Transmission Licensees in respect of the Operational Switching of Plant and Apparatus at a Connection Site and parts of the National Electricity Transmission System adjacent to that Connection Site.

- OC7.6.2 In general:
  - (i) **NGET** is responsible for directing the configuration of the **National Electricity Transmission System**
  - (ii) Each **Relevant Transmission Licensee** is responsible for the instruction and operation of its **Plant** and **Apparatus** on its **Transmission System**
  - (iii) Each **User** is responsible for the configuration, instruction and operation of its **Plant** and **Apparatus**.

Definitive schedules of these responsibilities for each **Connection Site** are contained in the relevant **Site Responsibility Schedules**.

For the avoidance of doubt, where a **User** operates **Transmission Plant** and **Apparatus** on behalf of a **Relevant Transmission Licensee**, **NGET** cannot instruct the **User** to operate that **Plant** and **Apparatus**.

#### Planned Operational Switching

- OC7.6.3 Following the notification of an **Operation** under OC7.4.5, **NGET** and the **User** shall discuss the **Operational Switching** required. **NGET** will then discuss and agree the details of the **Operational Switching** with the **Relevant Transmission Licensee**. The **Relevant Transmission Licensee** shall then make contact with the **User** to initiate the **Operational Switching**. For the avoidance of doubt, from the time that the **Relevant Transmission Licensee** shall then become the primary point of operational contact with the **User** in relation to **OC7** for matters which would or could affect, or would or could be affected by the **Operational Switching**.
- OC7.6.4 The User shall be advised by the Relevant Transmission Licensee on the completion of the Operational Switching, that NGET shall again become the primary point of operational contact for the User in relation to OC7.
- OC7.6.5 During **Operational Switching**, either the **Relevant Transmission Licensee** or the **User** may need to unexpectedly terminate the **Operational Switching**. **NGET** may also need to terminate the **Operational Switching** during the **Operational Switching**. In the event of unexpected termination of the **Operational Switching**, **NGET** shall become the primary point of operational contact for the **User** in relation to **OC7**. Following the termination of the **Operational Switching**, it will not be permitted to restart that **Operational Switching** without the parties again following the process described in OC7.6.3.

## **Emergencies**

- OC7.6.6 For **Operations** and/or **Events** that present an immediate hazard to the safety of personnel, **Plant** or **Apparatus**, the **Relevant Transmission Licensee** may:
  - (i) as permitted by the STC, carry out **Operational Switching** of **Plant** and **Apparatus** on its **Transmission System** without reference to **NGET** and the **User**, and
  - (ii) request a **User** to carry out **Operational Switching** without the **User** first receiving notification from **NGET**.

In such emergency circumstances, communication between the **Relevant Transmission** Licensee and the User shall normally be by telephone and will include an exchange of names. The User shall use all reasonable endeavours to carry out **Operational Switching** on its **Plant** and **Apparatus** without delay. Following completion of the requested **Operational Switching**, the **Relevant Transmission Licensee** shall notify **NGET** of the **Operational Switching** which has taken place. In such emergency circumstances, the **User** may only refuse to carry out **Operational Switching** on safety grounds (relating to personnel or plant) and this must be notified to the **Relevant Transmission Licensee** immediately by telephone.

OC7.6.7 For Operations and/or Events that present an immediate hazard to the safety of personnel, Plant or Apparatus, and which require Operational Switching of Plant or Apparatus on a Transmission System in order to remove the hazard, the User should contact the Relevant Transmission Licensee directly to request Operational Switching of Plant or Apparatus on its Transmission System.

> In such emergency circumstances, communication between the **Relevant Transmission** Licensee and the User shall normally be by telephone and will include an exchange of names. The **Relevant Transmission Licensee** shall use all reasonable endeavours to carry out **Operational Switching** on its **Plant** and **Apparatus** without delay. Following completion of the requested **Operational Switching**, the **User** shall notify **NGET** of the **Operational Switching** which has taken place. In such emergency circumstances, the **Relevant Transmission Licensee** may only refuse to carry out **Operational Switching** on safety grounds (relating to personnel or plant) and this must be notified to the **User** immediately by telephone.

## OC7.6.8 Establishment Of A Local Switching Procedure

- (a) NGET, a User or a Relevant Transmission Licensee may reasonably require a Local Switching Procedure to be established.
- (b) Where the need for a **Local Switching Procedure** arises the following provisions shall apply:
  - (i) NGET, User(s) and the Relevant Transmission Licensee will discuss and agree the detail of the Local Switching Procedure as soon as the requirement for a Local Switching Procedure is identified. NGET will notify the Relevant Transmission Licensee and the affected User(s) and will initiate these discussions.
  - Each Local Switching Procedure shall be in relation to either one or more Connection Sites (or in the case of OTSUA operational prior to the OTSUA Transfer Time, Transmission Interface Sites) and parts of the National Electricity Transmission System adjacent to the Connection Site(s) (or in the case of OTSUA operational prior to the OTSUA Transfer Time, Transmission Interface Sites)
  - (iii) A draft Local Switching Procedure shall be prepared by the Relevant Transmission Licensee to reflect the agreement reached and shall be sent to NGET.
  - (iv) When a Local Switching Procedure has been prepared, it shall be sent by NGET to the Relevant Transmission Licensee and User(s) for confirmation of its accuracy.
  - (v) The Local Switching Procedure shall then be signed on behalf of NGET and on behalf of each User and Relevant Transmission Licensee by way of written confirmation of its accuracy.
  - (vi) Once agreed under this OC7.6.8, the procedure will become a Local Switching Procedure under the Grid Code, and (subject to any change pursuant to this OC7) will apply between NGET, Relevant Transmission Licensee and the relevant User(s) as if it were part of the Grid Code.
  - (vii) Once signed, **NGET** will send a copy of the **Local Switching Procedure** to the **Relevant Transmission Licensee** and the **User(s)**.
  - (viii) An agreed **Local Switching Procedure** should be referenced by relevant **Site Responsibility Schedules**.
  - (ix) NGET, the User(s) and the Relevant Transmission Licensee must make the Local Switching Procedure readily available to the relevant operational staff.
  - (x) If the Relevant Transmission Licensee or the User(s) become aware that a change is needed to a Local Switching Procedure, they must inform NGET immediately. Where NGET has been informed of a need for a change, or NGET proposes a change, NGET shall notify both the affected User and the Relevant Transmission Licensee and will initiate discussions to agree a change to the Local Switching Procedure. The principles applying to the establishment of a new Local Switching Procedure shall then apply to the discussion and agreement of any changes.

# APPENDIX 1 - NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNINGS TABLE

WARNING TYPE	GRID CODE	FORMAT	TO: FOR ACTION	TO: FOR INFORMATION	TIMESCALE	WARNING OF/OR CONSEQUENCE	RESPONSE FROM RECIPIENTS
NATIONAL ELECTRICITY TRANSMISSION WARNING – ELECTRICITY MARGIN NOTICE	OC7.4.8.5	Fax or other electronic means	Generators, Suppliers, Externally Interconected System Operators, DC Converter Station owners	Network Operators, Non- E mb edded C ustomers	All timescales when at the time there is not a high risk of Demand reduction. Primarily 1200 hours onwards for a future period.	Insufficient generation available to meet forecast Demand plus Operating Margin. Notification that if not improved Demand reduction may be instructed. (Normal initial warning of insufficient System Margin	Offers of increased availability from Generators or DC Converter Station owners and Interconnector Users. Suppliers notify NGET of any additional Customer Demand Management that they will initiate.
NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNING – High risk of Demand Reduction	OC7.4.8.6	Fax or other means means	Generators, Suppliers, Network Operators, Non-Embedded Customers, Extermally Interconnected System Operators, DC Converter Station Owners		All timescales where there is a high risk of Demand Reduction. Primarily 1200 hours onwards for a future period	Insufficient generation available to meet forecast Demand plus Operating Margin and/or a high risk of Demand Reduction being instructed. (May be issued locally as demand reduction risk only for circuit overloads)	Offers of increased availability from Generators or DC Converter Station owners and Interconnector Users. Suppliers notify NGET of any additional Customer Demand Management that they will initiate. Specified Network Operators and Non-Embedded Customers to prepare their Demand Reduction arrangements and take actions as necessary to enable compliance with NGET instructions that may follow. (Percentages of Demand Reduction above 20% may not be achieved if NGET has not issued the warning by 16:00 hours the previous day.)
NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNING – Demand Control Imminent	OC7.4.8.7	Fax/Teleph one or other electronic means	Specified Users only: (to whom an instruction is to be given) Network Operators, Non- Embedded Customers	None	Within 30 minutes of anticipated instruction	Possibility of Demand Reduction within 30 minutes	Network Operators specified to prepare to take action as necessary to enable them to comply with any subsequent NGET instruction for Demand reduction.
NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNING – Risk of System Disturbance	OC7.4.8.8	Fax/Teleph one or other electronic means	Generators, DC Converter Station owners Network Operators, Non- Embedded Customers, Externally Interconnected System Operators who may be affected.	Suppliers	Control room time scales	Risk of, widespread system disturbance to whole or part of the National Electricity Transmission System	Recipients take steps to warn operational staff and maintain plant or apparatus such that they are best able to withstand the disturbance.

## < END OF OPERATING CODE NO. 7 >