

OPERATING CODE NO. 12
(OC12)

SYSTEM TESTS

CONTENTS

(This contents page does not form part of the Grid Code)

<u>Paragraph No/Title</u>	<u>Page Number</u>
OC12.1 INTRODUCTION.....	2
OC12.2 OBJECTIVE	2
OC12.3 SCOPE.....	2
OC12.4 PROCEDURE	3
OC12.4.1 Proposal Notice	3
OC12.4.2 Preliminary Notice And Establishment Of Test Panel	3
OC12.4.3 Test Panel	4
OC12.4.4 Proposal Report.....	5
OC12.4.5 Test Programme.....	6
OC12.4.6 Final Report	6
OC12.4.7 Timetable Reduction.....	6

OC12.1 INTRODUCTION

OC12.1.1 **Operating Code No.12 ("OC12")** relates to **System Tests**, which are tests which involve simulating conditions or the controlled application of irregular, unusual or extreme conditions, on the **Total System** or any part of the **Total System**, but which do not include commissioning or recommissioning tests or any other tests of a minor nature.

OC12.1.2 **OC12** deals with the responsibilities and procedures for arranging and carrying out **System Tests** which have (or may have) an effect on the **Systems** of **NGET** and **Users** and/or on the **System** of any **Externally Interconnected System Operator**. Where a **System Test** proposed by a **User** will have no effect on the **National Electricity Transmission System**, then such a **System Test** does not fall within **OC12** and accordingly **OC12** shall not apply to it. A **System Test** proposed by **NGET** which will have an effect on the **System** of a **User** will always fall within **OC12**.

OC12.2 OBJECTIVE

The overall objectives of **OC12** are:

OC12.2.1 to ensure, so far as possible, that **System Tests** proposed to be carried out either by:

- (a) a **User** (or certain persons in respect of **Systems Embedded** within a **Network Operator's System**) which may have an effect on the **Total System** or any part of the **Total System** (in addition to that **User's System**) including the **National Electricity Transmission System**; or
- (b) by **NGET** which may have an effect on the **Total System** or any part of the **Total System** (in addition to the **National Electricity Transmission System**)

do not threaten the safety of either their personnel or the general public, cause minimum threat to the security of supplies and to the integrity of **Plant** and/or **Apparatus**, and cause minimum detriment to **NGET** and **Users**;

OC12.2.2 to set out the procedures to be followed for establishing and reporting **System Tests**.

OC12.3 SCOPE

OC12 applies to **NGET** and to **Users**, which in **OC12** means:-

- (a) **Generators** other than in respect of **Embedded Medium Power Stations** and **Embedded Small Power Stations** (and the term **Generator** in OC12 shall be constructed accordingly);
- (b) **Network Operators**;
- (c) **Non-Embedded Customers**; and
- (d) **DC Converter Station** owners other than in respect of **Embedded DC Converter Stations**.
- (e) **HVDC System Owners** other than in respect of **Embedded HVDC Systems**.

The procedure for the establishment of **System Tests** on the **National Electricity Transmission System**, with **Externally Interconnected System Operators** which do not affect any **User**, is set out in the **Interconnection Agreement** with each **Externally Interconnected System Operator**. The position of **Externally Interconnected System Operators** and **Interconnector Users** is also referred to in OC12.4.2.

OC12.3.2 Each **Network Operator** will liaise within **NGET** as necessary in those instances where an **Embedded Person** intends to perform a **System Test** which may have an effect on the **Total System** or any part of the **Total System** (in addition to that **Generator's** or other **User's System**) including the **National Electricity Transmission System**. **NGET** is not required to deal with such persons.

OC12.3.3 Each **Network Operator** shall be responsible for co-ordinating with the **Embedded Person** or such other person and assessing the effect of any **System Tests** upon:

- (a) any **Embedded Medium Power Station, Embedded Small Power Stations, Embedded HVDC System** or **Embedded DC Converter Station** within the **Network Operator's System**; or
- (b) any other **User** connected to or within the **Network Operator's System**.

NGET is not required to deal with such persons.

OC12.4 PROCEDURE

OC12.4.1 Proposal Notice

OC12.4.1.1 Where a **User** (or in the case of a **Network Operator**, a person in respect of **Systems Embedded** within its **System**, as the case may be) has decided that it would like to undertake a **System Test** it shall submit a notice (a "**Proposal Notice**") to **NGET** at least twelve months in advance of the date it would like to undertake the proposed **System Test**.

OC12.4.1.2 The **Proposal Notice** shall be in writing and shall contain details of the nature and purpose of the proposed **System Test** and shall indicate the extent and situation of the **Plant** and/or **Apparatus** involved.

OC12.4.1.3 If **NGET** is of the view that the information set out in the **Proposal Notice** is insufficient, it will contact the person who submitted the **Proposal Notice** (the "**Test Proposer**") as soon as reasonably practicable, with a written request for further information. **NGET** will not be required to do anything under **OC12** until it is satisfied with the details supplied in the **Proposal Notice** or pursuant to a request for further information.

OC12.4.1.4 If **NGET** wishes to undertake a **System Test**, **NGET** shall be deemed to have received a **Proposal Notice** on that **System Test**

OC12.4.1.5 Where, under **OC12**, **NGET** is obliged to notify or contact the **Test Proposer**, **NGET** will not be so obliged where it is **NGET** that has proposed the **System Test**. **Users** and the **Test Panel**, where they are obliged under **OC12** to notify, send reports to or otherwise contact both **NGET** and the **Test Proposer**, need only do so once where **NGET** is the proposer of the **System Test**.

OC12.4.2 Preliminary Notice And Establishment Of Test Panel

OC12.4.2.1 Using the information supplied to it under OC12.4.1 **NGET** will determine, in its reasonable estimation, which **Users**, other than the **Test Proposer**, may be affected by the proposed **System Test**. If **NGET** determines, in its reasonable estimation, that an **Externally Interconnected System Operator** and/or **Interconnector User** (or **Externally Interconnected System Operators** and/or **Interconnector Users**) may be affected by the proposed **System Test**, then (provided that the **Externally Interconnected System Operator** and/or **Interconnector User** (or each **Externally Interconnected System Operator** and/or **Interconnector User** where there is more than one affected) undertakes to all the parties to the Grid Code to be bound by the provisions of the Grid Code for the purposes of the **System Test**) for the purposes of the remaining provisions of this **OC12**, that **Externally Interconnected System Operator** and/or **Interconnector User** (or each of those **Externally Interconnected System Operators** and/or **Interconnector Users**) will be deemed to be a **User** and references to the **Total System** or to the **Plant** and/or **Apparatus** of a **User** will be deemed to include a reference to the **Transmission** or distribution **System** and **Plant** and/or **Apparatus** of that **Externally Interconnected System Operator** and/or **Interconnector User** or (as the case may be) those **Externally Interconnected System Operators** and/or **Interconnector Users**. In the event that the **Externally Interconnected System Operator** and/or **Interconnector User** (or any of the **Externally Interconnected System Operators** and/or **Interconnector Users** where there is more than one affected) refuses to so undertake, then the **System Test** will not take place.

- OC12.4.2.2 **NGET** will appoint a person to co-ordinate the **System Test** (a "**Test Co-ordinator**") as soon as reasonably practicable after it has, or is deemed to have, received a **Proposal Notice** and in any event prior to the distribution of the **Preliminary Notice** referred to below. The **Test Co-ordinator** shall act as Chairman of the **Test Panel** and shall be an ex-officio member of the **Test Panel**.
- (a) Where **NGET** decides, in its reasonable opinion, that the **National Electricity Transmission System** will or may be significantly affected by the proposed **System Test**, then the **Test Co-ordinator** will be a suitably qualified person nominated by **NGET** after consultation with the **Test Proposer** and the **Users** identified under OC12.4.2.1.
 - (b) Where **NGET** decides, in its reasonable opinion, that the **National Electricity Transmission System** will not be significantly affected by the proposed **System Test**, then the **Test Co-ordinator** will be a suitably qualified person nominated by the **Test Proposer** after consultation with **NGET**.
 - (c) **NGET** will, as soon as reasonably practicable after it has received, or is deemed to have received, a **Proposal Notice**, contact the **Test Proposer** where the **Test Co-ordinator** is to be a person nominated by the **Test Proposer** and invite it to nominate a person as **Test Co-ordinator**. If the **Test Proposer** is unable or unwilling to nominate a person within seven days of being contacted by **NGET** then the proposed **System Test** will not take place.
- OC12.4.2.3 **NGET** will notify all **Users** identified by it under OC12.4.2.1 of the proposed **System Test** by a notice in writing (a "**Preliminary Notice**") and will send a **Preliminary Notice** to the **Test Proposer**. The **Preliminary Notice** will contain:
- (a) the details of the nature and purpose of the proposed **System Test**, the extent and situation of the **Plant** and/or **Apparatus** involved and the identity of the **Users** identified by **NGET** under OC12.4.2.1 and the identity of the **Test Proposer**;
 - (b) an invitation to nominate within one month a suitably qualified representative (or representatives, if the **Test Co-ordinator** informs **NGET** that it is appropriate for a particular **User** including the **Test Proposer**) to be a member of the **Test Panel** for the proposed **System Test**;
 - (c) the name of the **NGET** representative (or representatives) on the **Test Panel** for the proposed **System Test**; and
 - (d) the name of the **Test Co-ordinator** and whether he was nominated by the **Test Proposer** or by **NGET**.
- OC12.4.2.4 The **Preliminary Notice** will be sent within one month of the later of either the receipt by **NGET** of the **Proposal Notice**, or of the receipt of any further information requested by **NGET** under OC12.4.1.3. Where **NGET** is the proposer of the **System Test**, the **Preliminary Notice** will be sent within one month of the proposed **System Test** being formulated.
- OC12.4.2.5 Replies to the invitation in the **Preliminary Notice** to nominate a representative to be a member of the **Test Panel** must be received by **NGET** within one month of the date on which the **Preliminary Notice** was sent to the **User** by **NGET**. Any **User** which has not replied within that period will not be entitled to be represented on the **Test Panel**. If the **Test Proposer** does not reply within that period, the proposed **System Test** will not take place and **NGET** will notify all **Users** identified by it under OC12.4.2.1 accordingly.
- OC12.4.2.6 **NGET** will, as soon as possible after the expiry of that one month period, appoint the nominated persons to the **Test Panel** and notify all **Users** identified by it under OC12.4.2.1 and the **Test Proposer**, of the composition of the **Test Panel**.
- OC12.4.3 Test Panel
- OC12.4.3.1 A meeting of the **Test Panel** will take place as soon as possible after **NGET** has notified all **Users** identified by it under OC12.4.2.1 and the **Test Proposer** of the composition of the **Test Panel**, and in any event within one month of the appointment of the **Test Panel**.

- OC12.4.3.2 The **Test Panel** shall consider:
- (a) the details of the nature and purpose of the proposed **System Test** and other matters set out in the **Proposal Notice** (together with any further information requested by **NGET** under OC12.4.1.3);
 - (b) the economic, operational and risk implications of the proposed **System Test**;
 - (c) the possibility of combining the proposed **System Test** with any other tests and with **Plant** and/or **Apparatus** outages which arise pursuant to the **Operational Planning** requirements of **NGET** and **Users**; and
 - (d) implications of the proposed **System Test** on the operation of the **Balancing Mechanism**, in so far as it is able to do so.
- OC12.4.3.3 **Users** identified by **NGET** under OC12.4.2.1, the **Test Proposer** and **NGET** (whether or not they are represented on the **Test Panel**) shall be obliged to supply that **Test Panel**, upon written request, with such details as the **Test Panel** reasonably requires in order to consider the proposed **System Test**.
- OC12.4.3.4 The **Test Panel** shall be convened by the **Test Co-ordinator** as often as he deems necessary to conduct its business.
- OC12.4.4 Proposal Report
- OC12.4.4.1 Within two months of first meeting, the **Test Panel** will submit a report (a "**Proposal Report**"), which will contain:
- (a) proposals for carrying out the **System Test** (including the manner in which the **System Test** is to be monitored);
 - (b) an allocation of costs (including un-anticipated costs) between the affected parties (the general principle being that the **Test Proposer** will bear the costs); and
 - (c) such other matters as the **Test Panel** considers appropriate.
- The **Proposal Report** may include requirements for indemnities (including an indemnity from the relevant **Network Operator** to **NGET** and other **Users** in relation to its **Embedded Persons**) to be given in respect of claims and losses arising from the **System Test**. All **System Test** procedures must comply with all applicable legislation.
- OC12.4.4.2 If the **Test Panel** is unable to agree unanimously on any decision in preparing its **Proposal Report**, the proposed **System Test** will not take place and the **Test Panel** will be dissolved.
- OC12.4.4.3 The **Proposal Report** will be submitted to **NGET**, the **Test Proposer** and to each **User** identified by **NGET** under OC12.4.2.1.
- OC12.4.4.4 Each recipient will respond to the **Test Co-ordinator** with its approval of the **Proposal Report** or its reason for non-approval within fourteen days of receipt of the **Proposal Report**. If any recipient does not respond, the **System Test** will not take place and the **Test Panel** will be dissolved.
- OC12.4.4.5 In the event of non-approval by one or more recipients, the **Test Panel** will meet as soon as practicable in order to determine whether the proposed **System Test** can be modified to meet the objection or objections.
- OC12.4.4.6 If the proposed **System Test** cannot be so modified, the **System Test** will not take place and the **Test Panel** will be dissolved.
- OC12.4.4.7 If the proposed **System Test** can be so modified, the **Test Panel** will, as soon as practicable, and in any event within one month of meeting to discuss the responses to the **Proposal Report**, submit a revised **Proposal Report** and the provisions of OC12.4.4.3 and OC12.4.4.4 will apply to that submission.
- OC12.4.4.8 In the event of non-approval of the revised **Proposal Report** by one or more recipients, the **System Test** will not take place and the **Test Panel** will be dissolved.

OC12.4.5 Test Programme

OC12.4.5.1 If the **Proposal Report** (or, as the case may be, the revised **Proposal Report**) is approved by all recipients, the proposed **System Test** can proceed and at least one month prior to the date of the proposed **System Test**, the **Test Panel** will submit to **NGET**, the **Test Proposer** and each **User** identified by **NGET** under OC12.4.2.1, a programme (the "**Test Programme**") stating the switching sequence and proposed timings of the switching sequence, a list of those staff involved in carrying out the **System Test** (including those responsible for site safety) and such other matters as the **Test Panel** deems appropriate.

OC12.4.5.2 The **Test Programme** will, subject to OC12.4.5.3, bind all recipients to act in accordance with the provisions of the **Test Programme** in relation to the proposed **System Test**.

OC12.4.5.3 Any problems with the proposed **System Test** which arise or are anticipated after the issue of the **Test Programme** and prior to the day of the proposed **System Test**, must be notified to the **Test Co-ordinator** as soon as possible in writing. If the **Test Co-ordinator** decides that these anticipated problems merit an amendment to, or postponement of, the **System Test**, he shall notify the **Test Proposer** (if the **Test Co-ordinator** was not appointed by the **Test Proposer**), **NGET** and each **User** identified by **NGET** under OC12.4.2.1 accordingly.

OC12.4.5.4 If on the day of the proposed **System Test**, operating conditions on the **Total System** are such that any party involved in the proposed **System Test** wishes to delay or cancel the start or continuance of the **System Test**, they shall immediately inform the **Test Co-ordinator** of this decision and the reasons for it. The **Test Co-ordinator** shall then postpone or cancel, as the case may be, the **System Test** and shall, if possible, agree with the **Test Proposer** (if the **Test Co-ordinator** was not appointed by the **Test Proposer**), **NGET** and all **Users** identified by **NGET** under OC12.4.2.1 another suitable time and date. If he cannot reach such agreement, the **Test Co-ordinator** shall reconvene the **Test Panel** as soon as practicable, which will endeavour to arrange another suitable time and date for the **System Test**, in which case the relevant provisions of **OC12** shall apply.

OC12.4.6 Final Report

OC12.4.6.1 At the conclusion of the **System Test**, the **Test Proposer** shall be responsible for preparing a written report on the **System Test** (the "**Final Report**") for submission to **NGET** and other members of the **Test Panel**. The **Final Report** shall be submitted within three months of the conclusion of the **System Test** unless a different period has been agreed by the **Test Panel** prior to the **System Test** taking place.

OC12.4.6.2 The **Final Report** shall not be submitted to any person who is not a member of the **Test Panel** unless the **Test Panel**, having considered the confidentiality issues arising, shall have unanimously approved such submission.

OC12.4.6.3 The **Final Report** shall include a description of the **Plant** and/or **Apparatus** tested and a description of the **System Test** carried out, together with the results, conclusions and recommendations.

OC12.4.6.4 When the **Final Report** has been prepared and submitted in accordance with OC12.4.6.1, the **Test Panel** will be dissolved.

OC12.4.7 Timetable Reduction

OC12.4.7.1 In certain cases a **System Test** may be needed on giving less than twelve months notice. In that case, after consultation with the **Test Proposer** and **User(s)** identified by **NGET** under OC12.4.2.1, **NGET** shall draw up a timetable for the proposed **System Test** and the procedure set out in OC12.4.2 to OC12.4.6 shall be followed in accordance with that timetable.

< END OF OPERATING CODE NO. 12 >