

Grid Code Harmonisation for SEM  
Within-Day Testing- Impact on the EirGrid Grid Code

Consultation Version 1

The tracked changes below detail the proposed Modifications to OC8 as a result of the introduction of the SEM and the required changes as detailed in the discussion paper on Within Day Testing. This document can be found on the Grid Code Website:

<http://www.eirgrid.com/EirgridPortal/uploads/Grid%20Code/Within%20Day%20Operational%20Tests%20in%20the%20SEM%20V1.pdf>

The following new definitions are also required:

<b>Full-Day Test</b>	An <b>Operational Test</b> with a total duration of equal to or greater than 6 hours, or where the <b>Active Energy</b> produced during the total duration of the test is equal to or greater than: <ul style="list-style-type: none"> <li>(i) 3 times the <b>Active Energy</b> which would be produced by the <b>Test Proposer’s Plant</b> during 1 hour of operation at the <b>Plant’s Registered Capacity</b>; or</li> <li>(ii) 500 MWh.</li> </ul>
<b>Within-Day Test</b>	An <b>Operational Test</b> with a total duration of less than 6 hours in any <b>Trading Day</b> , where the Active Energy produced during the total duration of the test is less than: <ul style="list-style-type: none"> <li>(i) 3 times the <b>Active Energy</b> which would be produced by the <b>Test Proposer’s Plant</b> during 1 hour of operation at the <b>Plant’s Registered Capacity</b>; and</li> <li>(ii) 500 MWh.</li> </ul>

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**OC8 OPERATIONAL TESTING**

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## **OC8 OPERATIONAL TESTING**

### **OC8.1 INTRODUCTION**

OC8.1.1 OC8 deals with the responsibilities and procedures for arranging and carrying out **Operational Tests** which may have an effect on the **Systems** of the **TSO** and **Users**

OC8.1.2 By their nature, **Operational Tests** may impinge on either or both of:

- (a) the **TSO's** responsibilities in respect of the **Transmission System**, including **Dispatch** of generation; and **Demand Reduction**;
- (b) the operations of **Users** and the quality and continuity of supply of electricity to **Users**.

OC8.1.3 To minimise disruption to the operation of the **Transmission System** and to the **Systems** of other **Users**, it is necessary that tests which affect the operation of the **Transmission System** or **Users' Systems** as under OC8.1.2, are subject to central co-ordination and control.

OC8.1.4 To achieve the primary objective as outlined in OC8.2.1, OC8 sets out procedures for establishing and reporting **Operational Tests**.

### **OC8.2 OBJECTIVE**

OC8.2.1 The primary objective of OC8 is to establish procedures for central co-ordination and control of an **Operational Test** required by the **TSO** or a **User**, where such test will or may:

- (a) affect the secure operation of the **Transmission System**; or
- (b) have a significant effect on the operation of the **Transmission System** or a **User's System**; or
- (c) affect the economic operation of the **Transmission System**, **the Other Transmission System** or a **User's System**; or
- (d) affect the quality or continuity of supply of electricity to **Users**.

OC8.2.2 By way of example, tests that are typical of those which may be expected to be covered by OC8 are listed in OC8.4 to OC8.5. This list is not intended to be exhaustive and other tests which fall within the definition of **Operational Tests** shall also be covered by the procedures outlined in this OC8.

OC8.2.3 OC8 is not intended to deal with tests which may be called routinely by the **TSO** in order to assess compliance of **Users** with their design, operating and connection requirements as specified in the **Grid Code** and in each **User's Connection Agreement, Ancillary Services Agreements** and **System Support Agreement**, or to assess that **Generators** are in compliance with their **Registered Data** as notified by **Declarations**, where appropriate, or to determine that **Generation Units, Generator Aggregators, Dispatchable Demand Customers and Demand Side Unit Aggregators** are in compliance with **Dispatch Instructions**. These issues are covered under OC10 (**Monitoring, Testing and Investigation**).

### OC8.3 SCOPE

OC8 applies to the **TSO** and to all **Users**, which term in this OC8 means:

(a) **Generators** which includes all **Generators** with units with **Registered Capacity** greater than 5–4 MW and **Generator Aggregators**;

(b) **Dispatchable Demand Customers and Demand Side Unit Aggregators**

(~~cb~~) The **Distribution System Operator**; and

(~~ed~~) **Demand Customers**.

### OC8.4 TESTS REQUIRED BY THE TSO

OC8.4.1 The **TSO** as operator of the **Transmission System** will in accordance with **Prudent Utility Practice**, need to carry out **Operational Tests** in order to maintain and develop operational procedures, to train staff, and to acquire information in respect of **Power System** behaviour under abnormal system conditions. The **TSO** will endeavour to limit the frequency of occurrence, scope, extent of effects and type of **Operational Tests** to those that are required by **Prudent Utility Practice**.

OC8.4.2 **Operational Tests** required by the **TSO** from time to time shall include, but shall not be limited to the following:

(i) Tests involving the controlled application of **Frequency** and/or **Voltage** variations aimed at gathering information on **Power System** behaviour;

- (ii) **Power System Restoration Tests;**
- (iii) Testing of standing procedures for **System Emergency Conditions** and **Alert** conditions
- (iv) Testing or monitoring of **Power Quality** under various Power System conditions and **Dispatch** configurations.

OC8.4.3 The provisions of OC8.6, OC8.7, OC8.8, OC8.10.4 and OC8.11 shall not apply to **Operational Tests** required by the **TSO** under this OC8.4.

OC8.4.4 Where the **TSO** intends to carry out an **Operational Test** in accordance with this OC8.4 and, in the **TSO's** reasonable opinion, such an **Operational Test** will or may have an **Operational Effect** on a **User's System**, the **TSO** shall, in accordance with OC7 (Information Exchange) provide such notice to the **User** of the scheduled time and effect of the **Operational Test** as is reasonable in all the circumstances and shall keep the **User** informed as to any changes to the scheduled time and nature of the **Operational Test**.

OC8.4.5 Where a **User**, having been informed about an **Operational Test** under OC8.4.4 may, acting reasonably, contact the **TSO** to request additional time to consider the impact of the test on the **User**. The **TSO** shall co-operate with the **User** to assess the risks. The test shall not proceed until all **Users** are satisfied unless, in the **TSO's** view, a **User** is acting unreasonably.

## **OC8.5 TESTS REQUIRED BY THE USERS**

OC8.5.1 Operation of **Users' Plant** in accordance with **Good Industry Practice** requires **Operational Testing** in order to maintain and develop **Operational Procedures**, develop and measure **Plant** performance, comply with statutory or other industry obligations and to train staff.

OC8.5.2 In accordance with ~~**Good Industry Practice**~~ each **User** shall endeavour to limit the frequency of occurrence of **Operational Tests** and to limit the effects of such **Operational Tests** on the **Transmission System**.

OC8.5.3 **Operational Tests can comprise of a Full-Day Test and/or a Within-Day Test.**

**OC8.6 PROCEDURE FOR REQUESTING OPERATIONAL TESTS**

OC8.6.1 **Users** shall submit proposals for an **Operational Test** in a timely fashion in accordance with OC7 (Information Exchange) or alternative procedures agreed with the **TSO**.

OC8.6.2 As part of the proposal **Users**, when requesting an **Operational Test**, shall supply sufficient detail to the **TSO** to allow any operational consequences of the test to be adequately assessed. This shall include the following information:

OC8.6.2.1 the reason for the proposed test indicating whether the **Operational Test** is a test required by statute, required for compliance with licence conditions, statutory regulations, or safety codes, which may require that execution of the **Operational Test** be expedited and given priority over other **Operational Tests**;

OC8.6.2.2 the preferred time or times for the test;

OC8.6.2.3 the milestones for individual stages of the **Operational Test** (if any) which can be completed separately, and/or do not require to be repeated if the **Operational Test** is interrupted by the **TSO** after completion of each stage;

OC8.6.2.4 whether there may be an adverse material impact on the **User** if the **Operational Test** is cancelled at short notice or delayed (reasonable detail being given by the **User** to the **TSO** of the impact).

OC8.6.2.5 where the **User** is a **Generator, Generator Aggregator, Dispatchable Demand Customer, or Demand Side Unit Aggregator**, the **Dispatch** or **Dispatches** required by the **Generator, Generator Aggregator, Dispatchable Demand Customer, or Demand Side Unit Aggregator** for completion of the test, if any, including the duration of **Dispatch** shall be supplied to the **TSO** as part of the proposal. Where the **Generator, Generator Aggregator, Dispatchable Demand Customer, or Demand Side Unit Aggregator** may not know the entire **Dispatches** required for completion of the test until part of the test is completed then the **Generator, Generator Aggregator, Dispatchable Demand Customer, or Demand Side Unit Aggregator** when proposing the test shall:

- (a) divide the test into sections as appropriate;

- (b) indicate and discuss with the **TSO** which sections of the test can be completed in stages and which can not; and
- (c) indicate possible variations of the test for the sections that can be completed in stages.

Additionally, the factors that influence the completion of the stages should be outlined to the **TSO**, namely, if the procedure to be followed for a certain stage depends on the outcome of a previous stage.

OC8.6.3 A request by the **Generator, Generator Aggregator, Dispatchable Demand Customer, or Demand Side Unit Aggregator** for an **Operational Test** requiring a **Generation Unit or a Demand Side Unit** to be **Dispatched** to a particular **MW Output** or operating condition shall not be considered a **Re-declaration** of **Availability, Ancillary Service** capability or **Operating Characteristics**.

## OC8.7 EVALUATION OF PROPOSED OPERATIONAL TESTS

OC8.7.1 The **TSO** shall, on receipt of an **Operational Test** request from the **User**, assess the impact of the proposed test on the operation of the **Power System**. The **TSO** may request additional information from the **User** required to evaluate the impact or impacts of the test.

OC8.7.2 The **TSO** will evaluate the impact (in terms of continuity and quality of supply only) of the **Operational Test** with significantly affected **Users**. Any reasonable objections from any such **Operationally Affected Users** shall be considered. When discussing the **Operational Test** with any affected **User**, the **TSO** shall not disclose what it reasonably believes to be commercially sensitive or otherwise potentially sensitive information to **Users** without the consent of the **User** requesting the test.

OC8.7.3 Where an **Operational Test** proposed by a **Generator, Generator aggregator, Dispatchable Demand Customer, or Demand Side Unit Aggregator** in respect of one of its **Generation Units or Demand Side Unit** requires a **Dispatch** that ~~is outside~~**exceeds** the currently declared values of **Availability, Ancillary Service** capability or **Operating Characteristics** of the **Generation Unit**, then the **TSO** may so **Dispatch** the **Generation Unit** for the period required for the **Operational Test**, in accordance with the relevant provisions of the **Grid Code**.

## OC8.8 APPROVAL FOR OPERATIONAL TESTING

OC8.8.1 Following receipt of an **Operational Test** proposal and evaluation of the **Operational Test's** likely impact, including discussions of test requirements with the **User** requesting the **Operational Test** and with **Operationally Affected Users** as appropriate, the **TSO** will decide if approval for the requested **Operational Test** is granted.

OC8.8.2 The criteria for approving **Operational Test** include:

- (a) the impact of the **Operational Test** on **Transmission System** operation security;
- (b) the impact of the **Operational Test** on **Transmission System** operation economics or on the economics of the operation of the **Other Transmission System**;
- (c) the impact of the **Operational Test** on other **Users' Systems**;
- (d) the effect of the **Operational Test** on continuity and quality of electricity supply.

OC8.8.3 On approval by the **TSO** of an **Operational Test** proposed by a **User**, ~~who is a Generator,~~ the **TSO** shall contact the ~~Generator-User~~ outlining the proposed **Dispatch** procedure and schedule.

OC8.8.3.1 On receipt of the proposed **Dispatch** procedure and schedule of the **Operational Test**, the **Test Proposer** shall notify the **TSO** without undue delay, of the **Test Proposer's** acceptance or rejection of the proposed **Dispatch** procedure and schedule for the test.

OC8.8.3.2 On notification of rejection of the proposed **Dispatch** procedure and schedule for the **Operational Test** by the **Test Proposer**, then the **Operational Test** shall not take place. The **Test Proposer** may enter into discussions with the **TSO** as to an alternative schedule for the **Operational Test**, or may request a different **Operational Test** or may request the **Operational Test** at an alternative time.

OC8.8.3.3 On notification of acceptance of the proposed **Dispatch** procedure and schedule for the **Operational Test** by the **Test Proposer**, the **TSO** shall inform other **Users** as to the scheduled time and nature of the test, if in the opinion of the **TSO** those **Users** will or may be significantly affected by the test, or otherwise as dictated by standing arrangements.

OC8.8.3.4 If **Operationally Affected Users** are not satisfied with the proposed **Operational Test**, they shall advise the **TSO** of their concerns. The **TSO** shall not cancel proposed **Operational Test** unless these objections are reasonable. If **Operationally Affected Users** are still not satisfied with the **Operational Test** being approved, then they may appeal the decision to the **Commission** in accordance with OC8.12.

OC8.8.3.5 Notification by the **TSO** to the **Test Proposer** of the proposed **Dispatch** procedure and schedule for an **Operational Test**, or notification by the **Test Proposer** to the **TSO** of acceptance of the proposed **Dispatch** procedure and schedule, does not constitute a **Dispatch Instruction** from the **TSO** to the **Test Proposer**.

OC8.8.4 On rejection of the proposed **Operational Test** by the **TSO**, the **Test Proposer** may enter into discussions with the **TSO** as to an alternative schedule for the **Operational Test**, or may request a different **Operational Test** or may request the **Operational Test** at an alternative time. If the amended proposal for an **Operational Test** is approved by the **TSO**, and the **User** requesting the **Operational Test** is a **Generator**, then OC8.8.3 shall apply.

OC8.8.5 If the **Test Proposer** is not satisfied that there are reasonable grounds for rejecting the proposed **Operational Test**, then they may appeal to the **Commission** according to OC8.12.

## OC8.9 SCHEDULING OF OPERATIONAL TESTS

OC8.9.1 **Operational Tests** will usually, but not necessarily, be scheduled by the **TSO** in accordance with SDC1 .

OC8.9.2 Where ~~a Full-Day Test~~ ~~an Operational~~ is requested by a **GeneratorUser**, the ~~UserGenerator~~ shall ~~submit a Nomination Profile consistent with planned Operational Tests as part of its Commercial Offer Data~~ ~~nominate half-hourly MW outputs and constraints~~ in accordance with **SDC1** and the **Trading and Settlement Code** ~~consistent with planned Operational Tests~~. ~~The User shall also submit all other data as normal as required under the SDC1.~~

~~OC8.9.3 Where an Operational Test is required by the TSO, either~~

~~(a) the **Generator** shall nominate half-hourly MW outputs and constraints in accordance with **SDC1** and the **TSO** shall then dispatch consistent with the planned **Operational Test**, or~~

~~(b) where **Operational Test** costs and conditions are agreed in advance between the **Generator** and the **TSO**, the **Generator** shall nominate in accordance with the **TSO** requirements for the **Operational Test**.~~

OC8.9.43 The **TSO** shall use reasonable endeavours to prioritise **Operational Tests** where the **Test Proposer** has notified the **TSO** that **Operational Tests** are required in accordance with licence conditions, statutory regulations or safety codes or a delay in the execution of the tests may have an adverse material impact on a **User**.

## OC8.10 DISPATCHING OF OPERATIONAL TESTS

OC8.10.1 **Dispatch Instructions** for **Operational Tests** shall be issued by the **TSO** in the normal manner for issuing **Dispatch Instructions** in accordance with **SDC2**.

OC8.10.2 The **TSO** shall use reasonable endeavours to ensure that scheduled **Operational Tests** are dispatched in accordance with the agreed **Dispatch** procedures.

OC8.10.3 Where the **TSO** foresees a requirement or likely requirement to cancel, postpone or otherwise significantly alter an agreed **Dispatch** procedure and schedule, then the **TSO** shall inform the **Test Proposer** as soon as reasonably possible. In this case the provisions of OC.8.10.4 and OC.8.10.5 apply.

OC8.10.4 Where the **TSO** assesses that the impact of an **Operational Test** on **Transmission System** security or on the continuity and quality of supply or operation of a **User** may or is likely to be significantly greater than originally estimated, the **TSO** may contact the **Test Proposer** to discuss a revised test procedure or schedule.

OC8.10.5 The **TSO** may where it considers it necessary cancel, interrupt or postpone an **Operational Test** at any time, but shall where possible utilise the procedures outlined under OC8.10.4 prior to taking such action where the cancellation, interruption or postponement is for other than technical reasons.

OC8.10.65 If the **Test Proposer** wishes to cancel a ~~Full-Day Operational Test~~ either before commencement of the test or during the test, the **TSO** must be notified by the **Test Proposer**, in accordance with OC7. ~~Nominations Availability Notices, Technical Parameters Notices~~ and **Dispatch Instructions** shall remain valid when **Operational Tests** are cancelled.

OC8.10.7 If the **Test Proposer** wishes to cancel a **Within-Day Test**, either before commencement of the test or during the test, the **TSO** must be notified by the **Test Proposer**, in accordance with OC7. The **TSO** will recompile the **Indicative Operations Schedule** and **Dispatch** the unit accordingly.

## **OC8.11 TEST REPORTING**

OC8.11.1 Upon conclusion of the scheduled time for an **Operational Test** the **Test Proposer** shall notify the **TSO** as to whether the test has been completed, or sections of the test if divided into sections under OC8.6.2.3 have been completed.

OC8.11.2 At the conclusion of the **Operational Test**, the **Test Proposer** shall be responsible for preparing a written report on the **Operational Test** (the "**Final Report**") which shall be available within three months of the conclusion of the **Operational Test** to the **TSO**, **Operationally Effected Users** and the **Commission** on request.

OC8.11.3 The **Final Report** shall not be submitted to any person who is not a representative of the **TSO** or the **Test Proposer** unless the **TSO** and the **Test Proposer** having reasonably considered the confidentiality issues arising, shall have unanimously approved such submission.

OC8.11.4 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 as they relate to the **TSO** and **Operationally Effected Users**.

## **OC8.12 DISPUTES**

- OC8.12.1 **Operationally Affected Users** who consider that the implementation of the proposed **Operational Test** will have a significant negative impact on them may appeal to the **Commission** providing details of their objections.
- OC8.12.2 The **Test Proposer** has right of appeal to the **Commission** if it considers that rejection of the proposed **Operational Test** is unreasonable.