

## Grid Code Harmonisation for SEM

### EirGrid Grid Code OC2 Operational Planning – [Version 4](#)

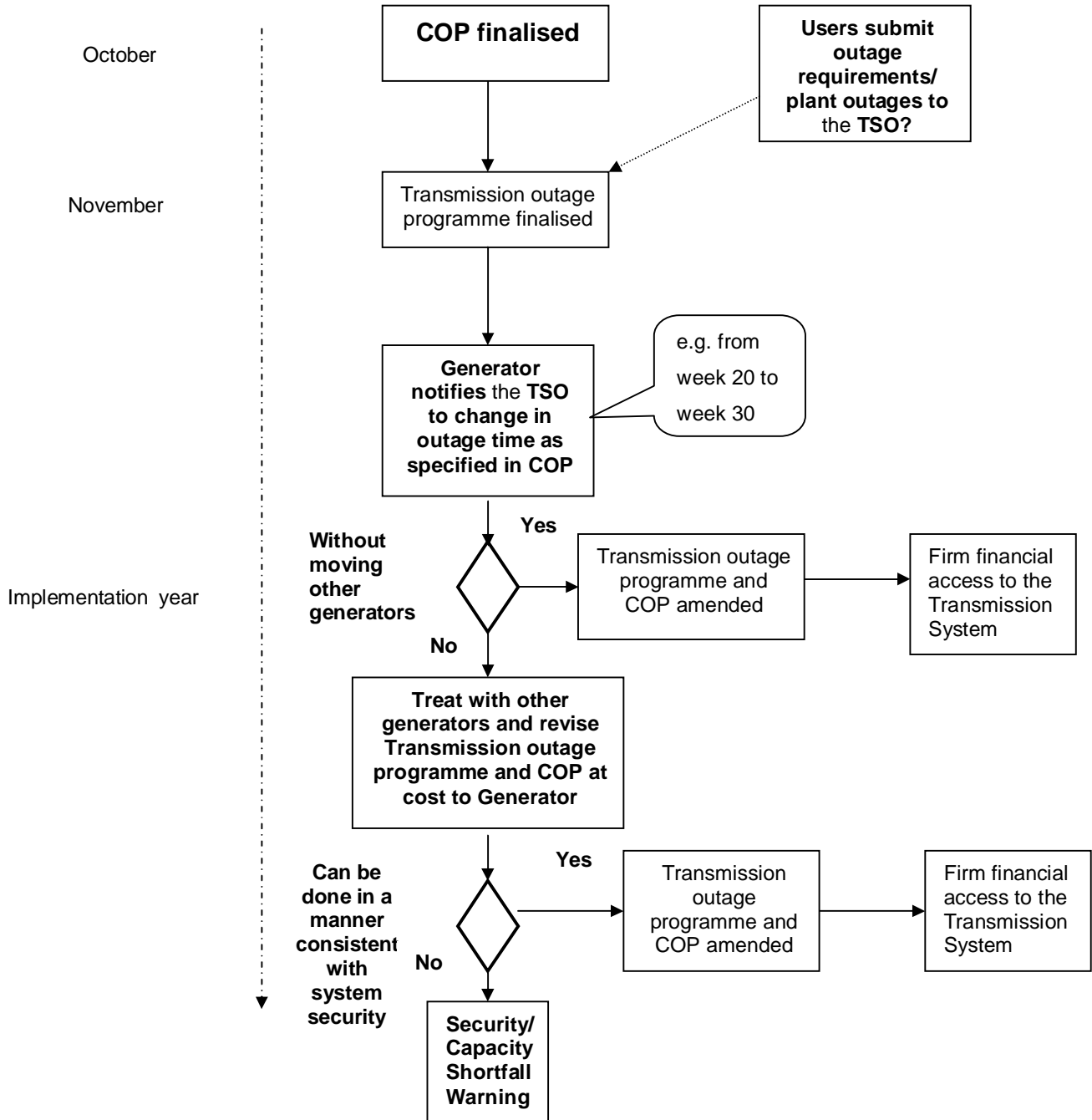
The tracked changes below detail the proposed Modifications to the Operational Planning Code, OC2.

The stars (\*\*) indicate that this section is under “Common Governance”.

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#### **OC2 OPERATIONAL PLANNING**

<b>OC2.1</b>	<b>INTRODUCTION.....</b>	<b>OC2-3</b>
<b>OC2.2</b>	<b>OBJECTIVE .....</b>	<b>OC2-3</b>
<b>OC2.3</b>	<b>SCOPE .....</b>	<b>OC2-<u>34</u></b>
<b>OC2.4</b>	<b>OUTAGE SCHEDULING .....</b>	<b>OC2-4</b>
<b>OC2.5</b>	<b>ASSESSMENT OF CAPACITY ADEQUACY .....</b>	<b>OC2-6</b>
<b>OC2.6</b>	<b>CHANGES TO THE COMMITTED OUTAGE PROGRAMME WITHIN THE IMPLEMENTATION YEAR (YEAR 0).....</b>	<b>OC2-8</b>
<b>OC2.7</b>	<b>OTHER INFORMATION TO BE NOTIFIED .....</b>	<b>OC2-<u>910</u></b>



## **OC2 OPERATIONAL PLANNING**

### **OC2.1 INTRODUCTION**

Secure operation of an electricity system requires that maintenance of production facilities (**Generation Units**) should be carried out in a timely and orderly fashion. This is essential in order to enable the **TSO** to fulfil its obligations relating to operation of the **Transmission System**, and to enable **Generators** to plan their **Outages** in an orderly way with due regard to **Plant** requirements and resource limitations. The mechanisms by which this is achieved are formalised in this Operational Planning Code (Generation).

### **OC2.2 OBJECTIVE**

The primary objective of OC2 is to promote the development and implementation of a **Generation Outage Programme**, consistent with security of supply and requirements for the secure and economic operation of the **Transmission System** and the NI System, and with the needs of **Generators** in respect of **Plant** maintenance requirements and resource limitations.

In order to achieve this objective, OC2 defines:

- (a) the procedure for formal notification of **Outages** by **Generators** to the **TSO**; and
- (a) the procedures by which the **Indicative, Provisional** and **Committed Outage Programmes** are reviewed by the **TSO**, in consultation with **Generators**.

OC2 shall apply to all proposed **Outages** that may affect the ability of a **Generation Unit** to achieve its full **Registered Capacity** appropriate to each **Registered Fuel** in accordance with its **Registered Operating Characteristics**.

**OC2.7** also requires **Generators** to inform the **TSO** of other proposed maintenance of a **Generation Unit** or any associated **Power Station Plant** or **Apparatus**, where such maintenance will affect the availability of **Ancillary Services** in respect of that **Generation Unit**.

### OC2.3 SCOPE

Operational Planning applies to the **TSO** and to the following, each of which is a **User** under this OC2:

- (a) **Generators** which for the purposes of OC2 includes all **Generators** with **Registered Capacity** greater than 5 MW or which are subject to **Central Dispatch**; and
- (b) The **Distribution System Operator (DSO)**.

### OC2.4 OUTAGE SCHEDULING

OC2.4.1 Throughout OC2 the current year shall be defined as year 0, the following year as Year 1, and so on. The **Outage** planning process in respect of a **Generation Unit** shall commence not later than three (3) years prior to the **Scheduled Operational Date** or from the date of the relevant agreements, whichever is the later.

OC2.4.2 In rolling over the **Generation Outage Programme** from one year to the next, for every year except the first year of the planning process:

- (a) submissions by the **Generator** for year 2 should reflect the current **Provisional Outage Programme** for year 3; and
- (b) submissions by the **Generator** for year 1 should reflect the current **Provisional Outage Programme** for year 2.

except, in any such case, to the extent that the **Generator** is reasonably responding to changed circumstances. This does not require **Generators** to explain changes unless required to do so by the **TSO**. The aggregate of all **Generators' Outage Programmes** is the **Generation Outage Programme** that will comprise the **COP, POP** and **IOP**.

OC2.4.3 By the end of March in year 0, **Generators** shall submit to the **TSO**, for each **Generation Unit**, details of **Outages** and estimates of the **Forced Outage Probabilities** for inclusion in:

- (a) the **Committed Outage Programme (COP)** for year 1. Other than in the first year after the planning process has commenced, this will be

based on the previous year's **Provisional Outage Programme** for year 2, which period through the passage of time has now become year 1, and any changes may only reflect the **Generator's** reasonable response to changed circumstances;

- (b) the **Provisional Outage Programme (POP)** for years 2 and 3; and
- (c) the **Indicative Outage Programme (IOP)** for years 4 to 7.

**Generators** shall specify with regard to each of their **Generation Units**, the start date and time and the duration of each **Outage**.

OC2.4.4 In scheduling **Outages**, and in relation to all other matters under OC2, the **Generator** must act reasonably and in good faith. Without limitation to such obligation, each **Generator** should act in accordance with **Good Industry Practice** in planning their **Outages** and, in particular, so as to avoid a situation arising in which a **Generator** is obliged to schedule an **Outage** at short notice by reason of obligations imposed upon the **Generator** by statute as a consequence of the **Generator** not having planned in accordance with **Good Industry Practice**, for example, by not having planned sufficiently in advance its **Outages** for any statutory time limit.

OC2.4.5 When submitting proposed **Outages** for inclusion in the **COP, POP** and **IOP**, **Generators** shall, unless they reasonably substantiate that an **Outage** is inflexible, specify:

- (a) an alternative preferred window, or alternative preferred windows, of opportunity within each year for any **Outage**;
- (b) the minimum **Outage** duration which would be acceptable, if less than the scheduled **Outage** duration;
- (c) situations where the paralleling of **Outages** of two or more of its **Generation Units** may be required, desirable, undesirable or not possible;
- (d) a priority order associated with the various **Outages** scheduled by the **Generator**;
- (e) any **Outages** where it is particularly desirable that they should take place within the year scheduled; or
- (f) any **Outage** where its timing is dependent on **Generation Unit** run hours, equivalent run hours or starts.

OC2.4.6 Details of proposed **Outages** for years 4 to 7 are required to signal adequately in advance major **Outages** which could impact on capacity

adequacy or on the **TSO's** transmission outage maintenance and development programmes and are indicative only. In rolling over the **Generation Outage Programme** from one year to the next each **Generator** shall not be constrained in making any submission by any previous **Indicative Outage Programme**.

OC2.4.7 Between March and June of year 0, the **TSO** shall carry out a security analysis of years 1 to 7 in light of proposed **Outages** and other relevant matters including **Outages** of other **Generation Units**, interconnection, transmission outages, load growth and fuel security. In the event that **Generator's Outages** as proposed have a detrimental effect on **Capacity Adequacy** or system security the **TSO** will highlight the shortfall to all **Generators** and **Suppliers**.

OC2.4.8 Any concerns which the **TSO** may have with the **Generation Outage Programme** must be notified to all **Generators** by the end of June in year 0.

OC2.4.9 Between the end of June in year 0 and the end of September in year 0 any concerns raised by the **TSO** shall be notified to **Generators**. The **TSO** will enter into discussions with **Generators** to find a resolution. If by the end of September in year 0 no resolution has been agreed and in the opinion of the **TSO** there is a capacity shortfall in year 1, the **TSO** will issue a **System Capacity Shortfall Warning** and notify the **Commission**.

OC2.4.10 The **TSO** shall issue to each **Generator** a **Generation Outage Programme** for that **Generator** for years 1 to 3 by the ~~fifth (5th)~~last **Business Day** of ~~October~~September in year 0, including the **COP** for year 1.

## OC2.5 ASSESSMENT OF CAPACITY ADEQUACY

In assessing **Capacity Adequacy** the **TSO** shall estimate **Demand** growth, formulate **Demand** forecasts and consider **Generation Units' Outages** and **Forced Outage Probabilities**.

~~OC2.5.1 For years 4-7 the **TSO** shall:~~

- ~~(a) use **Generators'** submissions for **Outages**;~~
- ~~(b) use **Generators'** submissions for **Forced Outage Probabilities**;~~
- ~~(ba) in a separate exercise, use the **TSO's** assessment of the **Generators'** **Forced Outage Probabilities**, **Generators'** submissions and historical data; and~~

~~(c) based on (a), (b), (ba) and Demand forecasts the TSO shall promulgate an Availability forecast, a Demand forecast and a Capacity Adequacy Indicator for each weekly peak of each year.~~

~~OC2.5.2 For years 2-3 the TSO shall:~~

- ~~(a) use Generators' submissions for Outages;~~
- ~~(b) use Generators' submissions for Forced Outage Probabilities;~~
- ~~(ba) in a separate exercise, use the TSO's assessment of the Generators' Forced Outage Probabilities, Generators' submissions and historical data; and~~
- ~~(c) based on (a), (b), (ba) and Demand forecasts the TSO shall promulgate an Availability forecast, a Demand forecast, the capacity margin and a Capacity Adequacy Indicator for each weekly peak of each year.~~

~~If there is a deficit indicated in any week, the TSO will issue a System Capacity Shortfall Warning.~~

OC2.5.31 Capacity Margin for Year 1

OC2.5.1.1 For year 1 the TSO shall:

- (a) use **Generators'** submissions for **Outages**;
- (b) use **Generators'** submissions for **Forced Outage Probabilities**;
- (c) in a separate exercise, use the **TSO's** assessment of the **Generators' Forced Outage Probabilities, Generators'** submissions and historical data; and
- ~~(e)~~(d) based on (a), (b), ~~(ba)~~ and **Demand** forecasts the **TSO** shall promulgate an **Availability** forecast, a **Demand** forecast, the capacity margin and a **Capacity Adequacy Indicator** for each daily peak of year 1. This information shall be published on the **TSO** website at 15.00 on the first **Business Day** of October in year 0 and will be updated on the first **Business Day** of each month until December of year 1.

\*\*OC2.5.1.2 If there is a deficit indicated in any week, the TSO and the Other TSO will shall jointly issue a System Capacity Shortfall Warning.

OC2.5.42 Capacity Margin for Year 0

OC2.5.2.1 Each day during year 0 after the fifth (5th) **Business Day** of January for a forecast period of four weeks, the **TSO** shall:

- (a) use **Generators'** submissions for **Outages**;
- (b) use **Generators'** submissions for **Forced Outage Probabilities**;
- ~~(c) (ba)~~ in a separate exercise, use the **TSO's** assessment of the **Generators' Forced Outage Probabilities**, **Generators'** submissions and historical data; and
- (d) based on (a), (b), ~~(bac)~~ and **Demand** forecasts the **TSO** shall formulate an **Availability** forecast, a **Demand** forecast, the capacity margin and a **Capacity Adequacy Indicator** for each daily peak. This information shall be published on the **TSO** website at 15.00 each **Business Day**.

\*\*OC2.5.2.2 If there is a deficit indicated on any day, the **TSO** and the Other TSO will ~~shall~~ jointly issue a **System Capacity Shortfall Warning**.

## **OC2.6 CHANGES TO THE COMMITTED OUTAGE PROGRAMME WITHIN THE IMPLEMENTATION YEAR (YEAR 0)**

**OC2.6.1** A request for a change to an **Outage** included in the **Committed Outage Programme** or an additional **Outage** may be initiated either by the **TSO** or by a **Generator** at any time.

### **OC2.6.2 Request initiated by the TSO**

**OC2.6.2.1** The **TSO** may at any time request from a **Generator** a change in the timing or duration of any **Outage** of one of the **Generator's Generation Units** in the **Committed Outage Programme**.

**OC2.6.2.2** A **Generator** may respond either by declining the request, or by agreeing to the request (in which case the **COP** shall be deemed to be amended accordingly). **Generators** shall make every reasonable effort to co-operate with changes requested by the **TSO**.

**OC2.6.2.3** If a **Generator** responds by agreeing to the request subject to specific conditions, the **TSO** may respond by either confirming agreement to those conditions, in which case the conditions specified by the **Generator** shall be

deemed to have been accepted, or by declining agreement. Where the **TSO** agrees to the conditions the **COP** shall be deemed to be amended accordingly. Where the **TSO** declines to agree to the conditions, then the **TSO** may negotiate with the **Generator** as to revised or alternative conditions, which would be acceptable.

**OC2.6.3 Outage change initiated by a Generator**

OC2.6.3.1 **Generators** may at any time request the **TSO** for a change in the timing or duration of any **Outage** of one of the **Generator's Generation Units** in the **Committed Outage Programme**.

OC2.6.3.2 Where a change to the **COP** is proposed by a **Generator**, the **TSO** shall evaluate whether the change is likely to have a detrimental effect on **Capacity Adequacy** or on the secure operation of the **Transmission System**. This shall be done within a reasonable time frame, taking into consideration the extent of the change and the timing of the **Outage**

OC2.6.3.3 Where, in accordance with OC2.5, the request is not likely to have a detrimental effect on **Capacity Adequacy** or the secure operation of the **Transmission System** then the **TSO** shall amend the **COP** accordingly. The **Generator** shall be advised by the **TSO** that the change has been accepted.

OC2.6.3.4 Where, in accordance with OC2.5, the **Outage** change is likely to have a detrimental effect on **Capacity Adequacy** or requirements for the secure operation of the **Transmission System** then the **TSO** shall not amend the **COP**. The **TSO** shall contact the **Generator** and inform the **Generator** that the change to the **COP** has not been accepted, the **TSO** shall at the **Generator's** request enter into discussions with the **Generator** to facilitate an alternative modification which may meet the requirements of the **Generator** while not having an unacceptable effect on **Capacity Adequacy** or requirements for secure operation of the **Transmission System**. In the event that the **Generator** wishes to avail of an alternative modification, it shall submit a change request in accordance with OC2.6.3.1.

OC2.6.3.5 Where the **Generator** has been notified that the change to the **COP** has not been accepted, but in the view of the **Generator** it must force the **Generation Unit** to be unavailable due to technical or safety issues, then the **Generator** shall inform the **TSO** immediately in accordance with the requirements to submit **Declarations of Availability**.

**OC2.7 OTHER INFORMATION TO BE NOTIFIED**

OC2.7.1 **Generators** will inform the **TSO** of any proposed maintenance, in addition to **Outages**, which will, or is likely to, affect the capability of the **Generation Unit** to provide **Ancillary Services**, as soon as is reasonably possible.

OC2.7.2 The **TSO** may, where security of supply or the secure operation of the **Transmission System** or the NI System would be at risk, request alterations to maintenance notified under Section OC2.7.1. The **TSO** shall make reasonable endeavours to give as much notice as possible for such requests for alterations. Where the **TSO** makes such a request, the **Generator** shall use reasonable endeavours to comply with the request in arriving at the **Generator's** final programme for such maintenance.

OC2.7.3 The **DSO** shall co-operate with the **TSO** and **Embedded Generators** in all phases of outage planning to promote **Capacity Adequacy** and ensure system security.