

Grid Code Modification Recommendation Paper

MPID 268 - Outturn Availability

06/07/2016



Title of Modification:	Outturn Availability
Modification Number:	MPID 268
Recommended at GCRP meeting number:	GCRP # 2_2016, 26 May 2016
List of Grid Code section(s) affected by proposed Modification:	SDC 1; New Definitions
Current Grid Code Version:	6

The Reason for the Recommended Modification

On 29 September 2015, the SEMC published Decision Paper SEM-15-071 “Process for the Calculation of Outturn Availability”. In this decision paper, the SEMC noted that Outturn Availability is not defined in the Grid Code and directed the TSOs to bring forward an appropriate modification to the Grid Code. (Please note: a corresponding modification to the Trading and Settlement Code is also being progressed in parallel).

Outturn Availability is the name assigned in SEM to the set of availability data for the relevant day received by the SEM systems from the TSO systems following the end of that day. This set of data is subsequently used to develop the availability profile of each generator in the SEM and consequently affects the commercial position of the generator.

The Grid Code does not currently refer to the term Outturn Availability, as the submission of data from the TSO systems to the SEM systems after the relevant day is not within scope of the Grid Code.

The Grid Code specifies in SDC1.4.3.2 that each generator should use reasonable endeavours to ensure that it does not at any time declare the availability at levels or values different to those that the generator could achieve at the relevant time, with a number of exceptions, which are listed in SDC1.4.3.3.

This modification proposal adds the further conditions as set out in the SEMC decision paper.

History of Progression through GCRPs, Working Group and/or Consultation

On 02 December 2015, at the JGCRP meeting in Belfast, the TSO presented an overview of the SEMC Decision Paper SEM-15-071. The TSO introduced a draft of the proposed modifications to the members of the JGCRP.

On 10 March 2016, at the Joint and the Ireland GCRP meetings in Dublin, the TSO presented the proposed modifications having taken into consideration the discussion at the previous JGCRP meeting.

On 26 May 2016, at the Ireland GCRP meeting in Belfast, the TSO presented the proposed modification to the Ireland Grid Code reflecting the actions taken at the previous Joint GCRP meeting, the feedback taken at the Ex-Ante Outturn Availability Forums (Northern Ireland on the 1st March and Ireland on 11th March) and the responses to the SONI Grid Code consultation on the Outturn Availability modification proposal. The members of the panel agreed with the presented proposed modification and recommended that the TSO issue a recommendation paper to the CER.

Summary Note of any Objections to the recommended Change from GCRP Members or Consultation Responses

No objections were made.

Outcome of any GCRP Meeting Actions Relating to the Recommended Modification

1: Definition of Annual Maintenance

A comment was received at the JGCRP meeting from Brian Mongan (Northern Ireland - Generators) that the definition was not time limited to be scheduled maintenance. The TSO reviewed the definition and the following changes to the definition were proposed and agreed by the members:

The word Outage has been added to the defined term, which now reads Annual Maintenance Outage. Annual Maintenance without the word outage was too wide reaching and the intent of this modification proposal is relevant for an Annual Maintenance Outage and this was reflected by the use of the defined term in proposed clause SDC1.4.3.3A, where “outage” was included after the defined term. A corresponding update to where the defined term is referenced in

proposed clause SDC1.4.3.3A (a) has also been made, so the text now reads Annual Maintenance Outage instead of Annual Maintenance. Additional text has been included in the definition to note that an Annual Maintenance Outage is scheduled with reasonable notice to the relevant Generator(s) in advance of the start of the outage and also the word planned has been added to capture that the maintenance of equipment is planned.

Annual Maintenance Outage: A transmission outage that is scheduled with reasonable notice to the relevant **Generator(s)** in advance of the start of the outage for planned maintenance of equipment that is part of an **Outturn Availability Connection Asset**.

2: Clarification of Associated Capital Works

A comment was received at the JGCRP meeting from Colin D’Arcy (Ireland – CCGT Generators) suggesting that more clarity be given to the proposed text in the clause SDC1.4.3.3A(b) and suggested changing the wording ‘related to’ to ‘driven by’. Following a review, the TSO updated the text to clarify that this exception relates to work to the Transmission System that is being carried out that is driven by the relevant Generator or driven by the works related to the Connection Agreement of the relevant Generator.

3: Change from Generation Unit to Generating Unit

The clause SDC1.4.3.3A includes a reference to a Generation Unit. While both Generation Unit and Generating Unit are defined in the EirGrid Grid Code and have the same meaning, a comment was received in the responses to the SONI Grid Code consultation noting that the term Generation Unit is not a defined term in the SONI Grid Code. To address this comment and to maintain consistency between the modification proposals, the text in SDC1.4.3.3A has been updated to replace Generation Unit with Generating Unit.

4: Clarifications to ensure all relevant units are addressed in the modification proposal:

In the responses to the SONI consultation, comments were received querying whether all relevant units were addressed in the proposed modification. The TSOs have reviewed the Grid Codes and proposed Modifications in relation to these comments and have made the following changes to the Modification Proposals:

- **Pumped Storage Plant Demand:** Pumped Storage Plant Demand is declared available or not through EDIL i.e. a yes/no declaration. As such, it is necessary to apply the relevant exclusion for Outturn Availability to Pumped Storage Plant Demand as well as other unit types. The text in clause SDC1.4.3.3A has been updated to add Pumped Storage Plant Demand to the exclusion.
- **Aggregated Generating Unit:** Outturn Availability could possibly apply for an AGU. As such, the text in clause SDC1.4.3.3A has been updated to add AGUs to the exclusion.

Demand Side Units: On review of the Grid Code and the comments received, although there are no applicable DSUs at present, the TSO has updated the Modification Proposal to specifically address DSUs. DSUs are not currently considered in SDC1.4.3.2 or SDC1.4.3.3, but rather have specific clauses SDC1.4.3.4 and SDC1.4.3.5. As such, a new proposed specific exclusion clause, SDC1.4.3.5A will be included for DSUs.

Implication of not Implementing the Modification

The Regulator's direction to the TSOs in decision paper SEM-15-071 will not be implemented and Outturn Availability will remain undefined in the Grid Code.

Grid Code Modification

Red-line Version (deleted text is highlighted in red and strike-through. New text is highlighted in blue).

SDC1.4.3 General Availability Requirements

SDC1.4.3.1 Availability of Generating Units

Each **Generator** and **Generator Aggregator** shall in relation to its **CDGUs**, **Controllable WFPSs** or **Aggregated Generating Units** maintain, repair, operate and fuel the **CDGU** and/or **Controllable WFPS** and/or **Aggregated Generating Unit** as required by **Prudent Utility Practice** and any legal requirements applicable to its jurisdiction, with a view to providing the required **Ancillary Services as provided for in an Ancillary Services Agreement**.

SDC1.4.3.2 Each **Generator**, and where relevant each **Generator Aggregator**, shall, subject to the exceptions in SDC1.4.3.3 and SDC1.4.3.3A, use reasonable endeavours to ensure that it does not at any time declare in the case of its **CDGU**, **Controllable WFPS**, or **Aggregated Generating Unit**, the **Availability**, or **Technical Parameters** at levels or values different from those that the **CDGU**, **Controllable WFPS**, and/or an **Aggregated Generating Unit** could achieve at the relevant time. The **TSO** can reject declarations to the extent that they do not meet these requirements.

SDC1.4.3.3 SDC1.4.3.2 shall not apply to the extent:

- (a) it would require the **Generator** or, where relevant, the **Generator Aggregator** to declare levels or values better than the **Registered Capacity** and **Technical Parameters** as submitted under the **Planning Code** in respect of a **CDGU**, a **Controllable WFPS** and/or an **Aggregated Generating Unit**;
- (b) necessary during periods of **Scheduled Outage** or **Short Term Scheduled Outage** or otherwise with the consent of the **TSO**;
- (c) necessary while repairing or maintaining the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Unit** or equipment necessary to the operation of the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Unit** where such repair or maintenance cannot reasonably, in accordance with **Prudent Utility Practice**, be deferred to a period of **Scheduled Outage** or **Short Term Scheduled Outage**;
- (d) necessary to avoid an imminent risk of injury to persons or material damage to property (including the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Unit**); or
- (e) it is not lawful for the **Generator** to operate the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Units**.

SDC1.4.3.3A SDC1.4.3.2 shall not apply for a **CDGU**, a **Controllable WFPS**, an **Aggregated Generating Unit** or **Pumped Storage Plant Demand** that is disconnected during any one or more of the following:

- (a) any **TSO** scheduled **Annual Maintenance Outage** or portion thereof on the **Outturn Availability Connection Asset** lasting up to and including a maximum of five days in total in a calendar year; or
- (b) where work to the **Transmission System** is being carried out that is driven by the relevant **CDGU, Controllable WFPS, Aggregated Generating Unit** or **Pumped Storage Plant Demand** or driven by works related to the **Connection Agreement** of the relevant **CDGU, Controllable WFPS, Aggregated Generating Unit** or **Pumped Storage Plant Demand**. This does not include work carried out related to another **Generating Unit** with a different **Connection Point** but a shared asset.

The relevant **CDGU, Controllable WFPS, Aggregated Generating Unit** or **Pumped Storage Plant Demand** shall declare **Availability** at a value of zero during any one or more of (a) or (b) above, as advised by the **TSO**.

SDC1.4.3.4 **Availability of Demand Side Units**

Each **Demand Side Unit Operator** shall, subject to the exceptions in SDC1.4.3.5 and [SDC1.4.3.5A](#), use reasonable endeavours to ensure that it does not at any time declare the **Demand Side Unit MW Availability** and the **Demand Side Unit** characteristics of its **Demand Side Unit** at levels or values different from those that the **Demand Side Unit** could achieve at the relevant time. The **TSO** can reject declarations to the extent that they do not meet these requirements.

SDC1.4.3.5 SDC1.4.3.4 shall not apply to the extent:

- (a) it would require the **Demand Side Unit Operator** to declare levels or values better than **Demand Side Unit MW Capacity** and **Technical Parameters** as submitted under the Planning Code in respect of a **Demand Side Unit**;
- (b) necessary during periods of **Scheduled Outage** or **Short Term Scheduled Outage** or otherwise with the consent of the **TSO**;
- (c) necessary while repairing or maintaining the **Demand Side Unit** or equipment necessary to the operation of the **Demand Side Unit** where such repair or maintenance cannot reasonably, in accordance with **Prudent Utility Practice**, be deferred to a period of **Scheduled Outage** or **Short Term Scheduled Outage**.
- (d) necessary to avoid an imminent risk of injury to persons or material damage to property (including the **Demand Side Unit**);

- (e) it is not lawful for the **Demand Side Unit Operator** to change its **Demand Side Unit MW Response** or to operate its **Demand Side Unit**.

SDC1.4.3.5A SDC1.4.3.4 shall not apply for a **Demand Side Unit** that is disconnected during any one or more of the following:

- (a) any **TSO** scheduled **Annual Maintenance Outage** or portion thereof on the **Outturn Availability Connection Asset** lasting up to and including a maximum of five days in total in a calendar year; or
- (b) where work to the **Transmission System** is being carried out that is driven by the relevant **Demand Side Unit** or driven by works related to **Connection Agreement** of the relevant **Demand Side Unit**. This does not include work carried out related to another **Generating Unit** with a different **Connection Point** but a shared asset.

The relevant **Demand Side Unit** shall declare **Availability** at a value of zero during any one or more of (a) or (b) above, as advised by the **TSO**.

SDC1.4.3.9 Outturn Availability

Outturn Availability shall be set equal to the declared value of **Availability**.

Glossary

<p>Annual Maintenance Outage</p>	<p>A transmission outage that is scheduled with reasonable notice to the relevant Generator(s) in advance of the start of the outage for planned maintenance of equipment that is part of an Outturn Availability Connection Asset.</p>
<p>Meshed Transmission Station</p>	<p>A Transmission Station which is looped into the Transmission System.</p>
<p>Outturn Availability</p>	<p>The set of Availability data for the relevant CDGU, Controllable WFPS, Aggregated Generating Unit, Pumped Storage Plant Demand or Demand Side Unit</p>

	as declared pursuant to SDC1.4 and submitted by the TSO to SEM after the end of the Trading Day .
Outturn Availability Connection Asset	Any equipment that is part of the Transmission System between and including the Connection Point and the busbar clamps at the Meshed Transmission Station for which the TSO schedules outages.

Green-line Version

SDC1.4.3 General Availability Requirements

SDC1.4.3.1 Availability of Generating Units

Each **Generator** and **Generator Aggregator** shall in relation to its **CDGUs, Controllable WFPSs** or **Aggregated Generating Units** maintain, repair, operate and fuel the **CDGU** and/or **Controllable WFPS** and/or **Aggregated Generating Unit** as required by **Prudent Utility Practice** and any legal requirements applicable to its jurisdiction, with a view to providing the required **Ancillary Services** as provided for in an **Ancillary Services Agreement**.

SDC1.4.3.2 Each **Generator**, and where relevant each **Generator Aggregator**, shall, subject to the exceptions in SDC1.4.3.3 and SDC1.4.3.3A, use reasonable endeavours to ensure that it does not at any time declare in the case of its **CDGU, Controllable WFPS, or Aggregated Generating Unit**, the **Availability, or Technical Parameters** at levels or values different from those that the **CDGU, Controllable WFPS, and/or an Aggregated Generating Unit** could achieve at the relevant time. The **TSO** can reject declarations to the extent that they do not meet these requirements.

SDC1.4.3.3 SDC1.4.3.2 shall not apply to the extent:

- (a) it would require the **Generator** or, where relevant, the **Generator Aggregator** to declare levels or values better than the **Registered Capacity** and **Technical Parameters** as submitted under the **Planning Code** in respect of a **CDGU, a Controllable WFPS** and/or an **Aggregated Generating Unit**;

- (b) necessary during periods of **Scheduled Outage** or **Short Term Scheduled Outage** or otherwise with the consent of the TSO;
- (c) necessary while repairing or maintaining the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Unit** or equipment necessary to the operation of the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Unit** where such repair or maintenance cannot reasonably, in accordance with **Prudent Utility Practice**, be deferred to a period of **Scheduled Outage** or **Short Term Scheduled Outage**;
- (d) necessary to avoid an imminent risk of injury to persons or material damage to property (including the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Unit**); or
- (e) it is not lawful for the **Generator** to operate the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Units**.

SDC1.4.3.3A SDC1.4.3.2 shall not apply for a **CDGU**, a **Controllable WFPS**, an **Aggregated Generating Unit** or **Pumped Storage Plant Demand** that is disconnected during any one or more of the following:

- (c) any TSO scheduled **Annual Maintenance Outage** or portion thereof on the **Outturn Availability Connection Asset** lasting up to and including a maximum of five days in total in a calendar year; or
- (d) where work to the **Transmission System** is being carried out that is driven by the relevant **CDGU**, **Controllable WFPS**, **Aggregated Generating Unit** or **Pumped Storage Plant Demand** or driven by works related to the **Connection Agreement** of the relevant **CDGU**, **Controllable WFPS**, **Aggregated Generating Unit** or **Pumped Storage Plant Demand**. This does not include work carried out related to another **Generating Unit** with a different **Connection Point** but a shared asset.

The relevant **CDGU**, **Controllable WFPS**, **Aggregated Generating Unit** or **Pumped Storage Plant Demand** shall declare **Availability** at a value of zero during any one or more of (a) or (b) above, as advised by the TSO.

SDC1.4.3.4 Availability of Demand Side Units

Each **Demand Side Unit Operator** shall, subject to the exceptions in SDC1.4.3.5 and SDC1.4.3.5A, use reasonable endeavours to ensure that it does not at any time declare the **Demand Side Unit**

MW Availability and the **Demand Side Unit** characteristics of its **Demand Side Unit** at levels or values different from those that the **Demand Side Unit** could achieve at the relevant time. The **TSO** can reject declarations to the extent that they do not meet these requirements.

SDC1.4.3.5 SDC1.4.3.4 shall not apply to the extent:

- (a) it would require the **Demand Side Unit Operator** to declare levels or values better than **Demand Side Unit MW Capacity** and **Technical Parameters** as submitted under the Planning Code in respect of a **Demand Side Unit**;
- (b) necessary during periods of **Scheduled Outage** or **Short Term Scheduled Outage** or otherwise with the consent of the **TSO**;
- (c) necessary while repairing or maintaining the **Demand Side Unit** or equipment necessary to the operation of the **Demand Side Unit** where such repair or maintenance cannot reasonably, in accordance with **Prudent Utility Practice**, be deferred to a period of **Scheduled Outage** or **Short Term Scheduled Outage**.
- (d) necessary to avoid an imminent risk of injury to persons or material damage to property (including the **Demand Side Unit**);
- (e) it is not lawful for the **Demand Side Unit Operator** to change its **Demand Side Unit MW Response** or to operate its **Demand Side Unit**.

SDC1.4.3.5A SDC1.4.3.4 shall not apply for a **Demand Side Unit** that is disconnected during any one or more of the following:

- (c) any **TSO** scheduled **Annual Maintenance Outage** or portion thereof on the **Outturn Availability Connection Asset** lasting up to and including a maximum of five days in total in a calendar year; or
- (d) where work to the **Transmission System** is being carried out that is driven by the relevant **Demand Side Unit** or driven by works related to **Connection Agreement** of the relevant **Demand Side Unit**. This does not include work carried out related to another **Generating Unit** with a different **Connection Point** but a shared asset.

The relevant **Demand Side Unit** shall declare **Availability** at a value of zero during any one or more of (a) or (b) above, as advised by the **TSO**.

SDC1.4.3.9 **Outturn Availability**

Outturn Availability shall be set equal to the declared value of **Availability**.

Glossary

Annual Maintenance Outage	A transmission outage that is scheduled with reasonable notice to the relevant Generator(s) in advance of the start of the outage for planned maintenance of equipment that is part of an Outturn Availability Connection Asset .
Meshed Transmission Station	A Transmission Station which is looped into the Transmission System .
Outturn Availability	The set of Availability data for the relevant CDGU, Controllable WFPS, Aggregated Generating Unit, Pumped Storage Plant Demand or Demand Side Unit as declared pursuant to SDC1.4 and submitted by the TSO to SEM after the end of the Trading Day .
Outturn Availability Connection Asset	Any equipment that is part of the Transmission System between and including the Connection Point and the busbar clamps at the Meshed Transmission Station for which the TSO schedules outages.