

SCHEDULING AND DISPATCH CODE NO.1

UNIT SCHEDULING

[[Note: Please note that any paragraphs written in italics in the SDCs apply to one jurisdiction only. For the purposes of public consultation, all common text and text applying to each individual jurisdiction is presented here. In the final version of the EirGrid Grid Code, text relevant only to the Republic of Ireland will be included.]

[Note: Please note that the cross-referencing in this section to other sections of the Grid Code has not been updated since the date of the last GCRP meeting and will need to be updated following the consultation period.]

SDC1.1 INTRODUCTION

SDC1.1.1 **SEM** Provisions

- (a) This Scheduling and Dispatch Code No. 1 ("SDC1") forms part of the **Common Sections** of the **Grid Code**. The **Common Sections** are those parts of the **Grid Code** which are under common governance in both the **Grid Code** and the **Other Grid Code**.
- (b) The form of this SDC1 is the same as the SDC1 in the **Other Grid Code** except for references to relevant power systems and related terms, and except for those provisions which appear in italic font. The provisions in italic font only apply in relation to this **Grid Code** and relate to matters which are not appropriate to include in both codes.
- (c) This SDC1 needs to work in conjunction with a number of other documents, including the **Trading and Settlement Code ("TSC")**. The provisions of the **Grid Code** and the **Other Grid Code** will take precedence over the **TSC**. The **TSC** is the document under which the principal elements of the market for electricity operate. Every **User** which trades in electricity must be a party to the **TSC**. The **Market Operator** is a party to the **TSC**, as is the **TSO** and the **Other TSO**.
- (d) The obligation to submit data in relation to some of the information required to be provided to the **TSO** by this SDC1 may be fulfilled by **Users** where such information submitted under the **TSC** is then provided to the **TSO** by the **Market Operator** under the provisions of the **TSC**, as further provided in this SDC1. The **TSO** may require **Users** to verify or update data received by it via the **Market Operator** in that way.
- (e) Further provisions dealing with the **Common Sections** are contained in the **General Conditions**.

SDC1.1.2 SDC1 sets out the procedure for:

- (a) **Availability**: the daily submission by a **User** to the **TSO** of an **Availability Notice** of any of its:

- (i) **CDGUs;**

[Note: Please note that unless otherwise specified in SDC1, CDGUs include Thermal Plant including CCGT Installations, Hydro Unit, Pumped Storage Generators in respect of their Pumped Storage generation (but not Demand) and Dispatchable WFPSSs.]
 - (ii) **Controllable WFPSSs;**

[Note: Please note that Controllable WFPSSs are not currently subject to Dispatch Instructions but the TSOs can directly control the maximum MW being exported from them. The treatment of Controllable WFPSSs in the SDCs is still being considered.]
 - (iii) **Pumped Storage Generators** in respect of their **Pumped Storage Plant Demand;**
 - (iv) **Interconnectors;**
 - (v) **Demand Side Units;**
 - (vi) **Generator Aggregators** in respect of their **Aggregated Generating Units;** and
 - (vii) **Demand Side Unit Aggregators** in respect of their **Aggregated Demand Side Units.**
- (b) **Technical Parameters:** the daily notification to the **TSO** of the **Technical Parameters**, in respect of the following **Trading Day**, by each **User** in a **Technical Parameters Notice**, and of **Other Relevant Data**;
 - (c) **Commercial Offer Data:** the daily notification of **Commercial Offer Data**;
 - (d) **Updates:** updates of such information (other than **Commercial Offer Data** after **Gate Closure**) as provided for this in SDC1;
 - (e) **Indicative Operations Schedule:** the production and issuing by the **TSO** of an **Indicative Operations Schedule** the day before the **Trading Day** as a statement of which:
 - (i) **CDGUs;**
 - (ii) **Controllable WFPSSs;**
 - (iii) **Pumped Storage Plant Demand;**
 - (iv) **Interconnectors;**
 - (v) **Demand Side Units;**

- (vi) **Aggregated Generating Units;** and/or
- (vii) **Aggregated Demand Side Unit Units**

may be required.

SDC1.1.3 In this SDC1, the term "**Gate Closure**" shall mean 10.00 hours on the day preceding the relevant **Trading Day** to which the notice relates (D-1).

SDC1.2 OBJECTIVE

The objectives of SDC1 are:

- (a) to enable the **TSO** in conjunction with the **Other TSO** to prepare an **Indicative Operations Schedule** (utilising, amongst other things, a **Merit Order**) by 16.00 hours on the day preceding the relevant **Trading Day** (D-1) to be used in the **Scheduling** and **Dispatch** process for that **Trading Day**;
- (b) to thereby ensure (so far as possible) the integrity of the **Transmission System**;
- (c) to ensure the security and quality of supply in relation to the **Transmission System**;
- (d) to ensure that there is sufficient capacity to meet the **Demand** on the Island of Ireland at all times together with an appropriate margin of reserve.

It is also an objective to publish an **Indicative Operations Schedule** as provided for in this SDC1.

SDC1.3 SCOPE

SDC1 applies to the **TSO** and to the following **Users**:

- (a) **Generators** with regard to their:
CDGUs; and
Controllable WFPs.

[Note: As explained above, please note that unless otherwise specified in SDC1, CDGUs include Thermal Plant including CCGT Installations, Hydro Unit, Pumped Storage Generators in respect of their Pumped Storage generation and Dispatchable WFPs.]

- (b) **Pumped Storage Generators** with regard to their **Pumped Storage Plant Demand**;
- (c) **Interconnector Owners** with regard to their **Interconnectors**;

- (d) **Dispatchable Demand Customers** in relation to their **Demand Side Units**; and
- (e) **Generator Aggregators** in respect of their **Aggregated Generating Units**; and
- (f) **Demand Side Unit Aggregators** in respect of their **Aggregated Demand Side Units**.

SDC1.4 PROCEDURE

SDC1.4.1 Availability Notice

SDC1.4.1.1 Requirement

- (a) Each **User** shall, by not later than **Gate Closure** each day, notify the **TSO** by means of an **Availability Notice** in such form as the **TSO** may reasonably notify from time to time or in the form published on the **TSO** website, of the **Availability** and/or **Demand Reduction** as the case may be of each of its **CDGUs, Controllable WFPSs, Pumped Storage Plant, Interconnectors** or **Demand Side Units**, as the case may be.
- (b) A **User** may satisfy this obligation by submitting the data under the **TSC**, unless the **TSO** requires by notice to the **User** the data to be submitted to it directly under the **Grid Code**.
- (c) A **Generator Aggregator** and **Demand Side Unit Aggregator** will satisfy the obligation in this SDC1.4.1.1 by notifying to the **TSO** in an **Availability Notice** in the form described in paragraph (a) above the **Availability** or **Demand Reduction** of its **Aggregated Generating Units** or **Aggregated Demand Side Units** as the case may be.

SDC1.4.1.2 Content

- (a) The **Availability Notice** shall state the **Availability** of the relevant: **CDGU**; or **Controllable WFPSs**; or

the **Demand Reduction** of the **Demand Side Unit**, or the **Maximum Import / Export Capacity** of an **Interconnector**, as the case may be, (including, in the case of a **CCGT Installation**, the **Availability** of each of the **CCGT Modules/CCGT Units** within it) for each trading period in the following **Optimisation Time Horizon** period (subject to revision under SDC1.4.4.6(a)). The **Availability Notice** submitted in relation to an **Optimisation Time Horizon** period will supersede the previous one in relation to that part of the previous **Optimisation Time Horizon** period which is covered by the new one.

[Note: The term "CCGT Module" applies to the SONI Grid Code and the term "CCGT Unit" will apply to the EirGrid Grid Code.]

- (b) Where there is a **System Support Services Agreement / Ancillary Services Agreement** in place, the **Availability Notice** shall specify the **System Support Services / Ancillary Services** which are **Available**.

[Note: Please note that the SONI Grid Code will be referring to System Support Services and the EirGrid Grid Code will be referring to Ancillary Services.]

- (c) In the case of a **Generator Aggregator**, the **Availability Notice** shall state the **Availability** of its **Aggregated Generating Units**.
- (d) In the case of a **Demand Side Unit Aggregator**, the **Availability Notice** shall state the **Demand Reduction** of its **Aggregated Demand Side Units**.

SDC1.4.1.3 **Whole Numbers:** The **MW** figure stated in the **Availability Notice** must be a whole number.

[Note: Please note that although the TSC requires information published by the MO to contain numbers with 3 decimal places, the TSOs are of the opinion that figures contained in an Availability Notice should be in whole numbers. As the units to be scheduled and dispatched under the SDCs will often be very large and, in any event, need to comply with the 4MW minimum threshold, it will not be necessary nor appropriate to request figures other than in whole numbers.]

SDC1.4.1.4 **Atmospheric Conditions:** In the case of **CDGUs** and/or **Controllable WFPs** which are affected by ambient conditions, an **Availability Notice** submitted by a **Generator** must be stated at the **User's** best estimate of the prevailing atmospheric condition for the **Trading Period** to which each part of the **Availability Notice** relates.

SDC1.4.2 **Additional Grid Code Availability Notice**

The following items are required to be submitted by each **User**, with the exception of **Aggregators** and **Dispatchable Demand Customers**, direct to the **TSO**, regardless of whether these have to be submitted under the **TSC**. The requirements in SDC1.4.1 in relation to data apply to this SDC1.4.2 as if repeated here.

SDC1.4.2.1 **Fuels:** In the case where a **CDGU** is capable of firing on different fuels, then the **Generator** must submit an **Availability Notice** setting out the information in SDC1.4.1.2 above for each fuel for the **CDGU**.

SDC1.4.2.2 **CCGT Availability:** The Availability of each **CCGT Module/CCGT Unit** within each **CCGT Installation**;
[Note: The term "CCGT Module" will apply to the SONI Grid Code and the term "CCGT Unit" will apply to the EirGrid Grid Code.]

SDC1.4.2.3 **CCGT Installations:**

- (a) In the case of a **CCGT Installation**, the **CCGT Installation Matrix** submitted by the **Generator** under **PCA2.3.4 of the Planning Code in Northern Ireland** or **PC.A4.3 of the Planning Code Appendix in the**

Republic of Ireland is used and relied upon by the **TSO** as a 'look up table' to determine the number of **CCGT Modules/CCGT Units** within a **CCGT Installation** which will be synchronised to achieve the **MW Output** specified in a **Dispatch Instruction**. When using a **CCGT Installation Matrix** for **Scheduling** purposes, the **TSO** will take account of any updated information on the individual **Availability** of each **CCGT Module/CCGT Unit** contained in an **Availability Notice** submitted by a **Generator** pursuant to this SDC1. The **Availability** figures submitted must be consistent with the Generator's submission under the **TSC**.

[Note: Please note that the standard temperature which will be used as a basis for the CCGT Matrix will be specified in the respective Planning Codes.] [Note: The term "CCGT Module" will apply to the SONI Grid Code and the term "CCGT Unit" will apply to the EirGrid Grid Code.]

- (b) It is accepted that in cases of change in **MW Output** in response to **Dispatch** instructions issued by the **TSO** there may be a transitional variance to the conditions reflected in the **CCGT Installation Matrix**.
- (c) In achieving a **Dispatch** instruction the range or number of **CCGT Modules/CCGT Units** envisaged in moving from one **MW Output** level to the other should not be departed from. Each **Generator** shall notify the **TSO** as soon as practicable after the event of any such variance. There is a provision in SDC1.4.4.6 for the **Generator** to revise the **CCGT Installations Matrix**, subject always to the provisions of SDC1.4.3.2; **[Note: The term "CCGT Module" will apply to the SONI Grid Code and the term "CCGT Unit" will apply to the EirGrid Grid Code.]**
- (d) *The **CCGT Installation Matrix** can only be amended in accordance with PCA2.3.5 of the **SONI Grid Code**.*

[Note: Please note that the above paragraph applies to Northern Ireland only.]

SDC1.4.3 **General Availability Requirements**

SDC1.4.3.1 **Availability of Generating Units**

*The provisions at 1.4.3.1, 1.4.3.2 and 1.4.3.3 do not apply to **NI PPA Generation** which is dealt with in Appendix B.1.*

[Note: Please note that words in italics above will not be incorporated in the EG Grid Code.]

Each **Generator** and **Generator Aggregator** shall in relation to its **CDGUs** or **Aggregated Generating Units** maintain, repair, operate and fuel the **CDGU** and/or **Controllable WFPS** and/or **Aggregated Generating Unit** as required by **Prudent Operating Practice/Prudent Utility Practice** and any legal requirements applicable to its jurisdiction, with a view to providing the required **System Support Services** in Northern Ireland and **Ancillary Services** in the Republic of Ireland.

[Note: Please note that the term “Prudent Operating Practice” will be used in the SONI Grid Code whilst the term “Prudent Utility Practice” will be used in the EirGrid Grid Code.]

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

[Note: Please note that any disputes arising out of this SDC1.4.3.2 should be settled in the same way as any other disputes under the Grid Codes and that it is therefore not necessary to refer to a separate dispute resolution mechanism here.]

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 **Registered Capacity** and **Technical Parameters** as submitted under the **Planning Code** in respect of a **CDGU**, a **Controllable WFPS** and/or **Aggregated Generating Units**;
- (b) necessary during periods of **Scheduled Outage** in the Republic of Ireland or **Planned Outage** in Northern Ireland or **Short Term Scheduled Outage** in the Republic of Ireland or **Planned Maintenance Outage** in Northern Ireland or otherwise with the consent of the **TSO**;
- (c) necessary while repairing or maintaining the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Units** or equipment necessary to the operation of the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Units** where such repair or maintenance cannot reasonably, in accordance with **Prudent Operating Practice/Prudent Utility Practice**, be deferred to a period of **Scheduled Outage** in the Republic of Ireland or **Planned Outage** in Northern Ireland or **Short Term Scheduled Outage** in the Republic of Ireland or **Planned Maintenance Outage** in Northern Ireland;
- (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 Units**); or
- (e) it is not lawful for the **Generator** to operate the **CDGU**, the **Controllable WFPS** and/or the **Aggregated Generating Units**.

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

- (a) Each **Dispatchable Demand Customer** shall use reasonable endeavours to ensure that it does not at any time declare its **Demand Side Unit Demand Reduction** and characteristics 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.

[Note: The SONI and EirGrid Grid Codes do not currently refer to the criteria which a TSO will take into account when deciding to reject a declaration. We do not believe that inserting such criteria is necessary and in any event, such a change would not be justified for the purposes of the SEM.]

- (b) Each **Demand Side Unit Aggregator** shall use reasonable endeavours to ensure that it does not at any time declare its **Demand Reduction** and characteristics of its **Aggregated Demand Side Units** at levels or values different from those that its **Aggregated Demand Side Units** could achieve at the relevant time, noting that no **Demand Side Unit** or **Aggregated Demand Side Unit** can export **Active Power** to the **NI System / Network**. 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 **Dispatchable Demand Customer** or, where relevant, the **Demand Side Unit Aggregator** to declare levels or values better than **Registered Capacity** and **Technical Parameters** as submitted under the Planning Code in respect of a **Demand Side Unit** and/or **Aggregated Demand Side Units**;
- (b) necessary during periods of **Scheduled Outage in the Republic of Ireland** or **Planned Outage in Northern Ireland** or **Short Term Scheduled Outage in the Republic of Ireland** or **Planned Maintenance Outage in Northern Ireland** or otherwise with the consent of the **TSO**;
- (c) necessary while repairing or maintaining the **Demand Side Unit** and/or the **Aggregated Demand Side Units** or equipment necessary to the operation of the **Demand Side Unit** and/or the **Aggregated Demand Side Units** where such repair or maintenance cannot reasonably, in accordance with **Prudent Operating Practice/Prudent Utility Practice**, be deferred to a period of **Scheduled Outage in the Republic of Ireland** or **Planned Outage in Northern Ireland** or **Short Term Scheduled Outage in the Republic of Ireland** or **Planned Maintenance Outage in Northern Ireland**
- (d) necessary to avoid an imminent risk of injury to persons or material damage to property (including the **Demand Side Unit** and/or the **Aggregated Demand Side Unit**);
- (e) it is not lawful for the **Dispatchable Demand Customer** or **Demand Side Unit Aggregator** to reduce its **Demand** or to operate its **Demand Side Unit**, and/or the **Aggregated Demand Side Units**.

SDC1.4.3.6 Changes in Availability:

- (a) If a **Generator**, a **Generator Aggregator**, a **Dispatchable Demand Customer** or a **Demand Side Unit Aggregator** in respect of a **CDGU**, **Aggregated Generating Units**, a **Demand Side Unit** or **Aggregated Demand Side Units** issues an **Availability Notice** increasing (from zero or otherwise) or decreasing the level of **Availability** or **Demand Reduction** from a specified time, such notice shall be construed as meaning that:
- (i) in the case of a **CDGU** and/or **Aggregated Generating Units**, the **CDGU** and/or **Aggregated Generating Units** is/are capable of being synchronised to the **Transmission System** and **Distribution System** at that specified time;
 - (ii) in the case of a **CDGU** which is an **Open Cycle Gas Turbine**, the **CDGU** is capable of being started at that specified time; or
 - (iii) in the case of a **Demand Side Unit** and/or **Aggregated Demand Side Units**, the **Demand Side Unit** and/or **Aggregated Demand Side Units** is/are capable of reducing Demand at that specified time.
- (b) If a **Generator** or, where relevant a **Generator Aggregator** in respect of a **Controllable WFPS**, issues an **Availability Notice** increasing (from zero or otherwise) or decreasing the level of **Availability** from a specified time, such notice shall be effective from the **Trading Period** following the specified time.

SDC1.4.3.7 If at any time when a **CDGU** and/or **Controllable WFPS** is **Synchronised** to the **System** the **Generator** issues an **Availability Notice** decreasing the level of **Availability** of the **CDGU** and/or **Controllable WFPS** from a specified time, such notice shall be construed as meaning that the **CDGU** and/or **Controllable WFPS** is capable of maintaining **Load** at the level of the prevailing **Availability** until the time specified in the notice, and thereafter shall be capable of maintaining **Load** to the level which would have been achieved if a **Dispatch Instruction** had been given to reduce the **Load**, with effect from the specified time, at the maximum **De-Loading Rate** and/or **Ramp-Up** or **Ramp-Down Rate** declared for the **CDGU** and/or **Controllable WFPS** as a **Technical Parameter** at such time down to the level of **Availability** specified in the new **Availability Notice**.

SDC1.4.3.8 If an **Interconnector Owner** in respect of an **Interconnector** issues an **Availability Notice** increasing (from zero or otherwise) or decreasing the level of **Availability** from a specified time, such notice shall, subject to SDC1.4.4.6(a), be effective immediately following the specified time.

SDC1.4.4 **Technical and Commercial Data Requirements**

SDC1.4.4.1 **Technical Parameters**

- (a) By not later than **Gate Closure**, each **User** shall in respect of each **CDGU**, **Controllable WFPS**, **Aggregated Generating Units**, **Pumped Storage Plant Demand**, **Demand Side Unit**, and/or **Aggregated Demand Side Units**, submit to the **TSO** a **Technical Parameters Notice** in such form as the **TSO** may reasonably notify to each **User** or in

the form published on the **TSO** website from time to time, containing the **Technical Parameters** to apply for the following **Trading Day**.

A **User** may satisfy this obligation by submitting the data under the **TSC**, unless the **TSO** requires by notice to the **User** the data to be submitted to it under the **Grid Code**.

If there is a change to the data submitted under the **TSC**, the **User** must notify the **TSO**.

[Note: See related provisions on Standing Technical Offer Data under SDC1.4.4.7 (a)]

- (b) Flexibility:
- (i) In the case of any **Technical Parameters** as to which the **Generator** and/or **Generator Aggregator** should, acting in accordance with **Prudent Operating Practice/Prudent Utility Practice**, have some flexibility either in the revision itself or in the time at which the revision is to take effect the **TSO** may, acting reasonably, suggest an amended data figure and/or an amended time at which the data figure is to take effect.
 - (ii) Insofar as it is able to do so without breaching any obligations regarding confidentiality contained either in the **TSO Licence** or in any agreement, the **TSO** shall notify the **Generator** and/or **Generator Aggregator** of the reasons for such flexibility request in such degree of detail as the **TSO** considers reasonable in the circumstances.
 - (iii) If the **Generator** and/or **Generator Aggregator** agrees to such suggestion (such agreement not to be unreasonably withheld) the **Generator** shall use reasonable endeavours to accommodate such suggestion and submit a revised **Technical Parameters Notice** accordingly. In any event, the **TSO** may require such further information on the revision as is reasonable and the **Generator** and/or **Generator Aggregator** must give the **TSO** such information as soon as reasonably practicable.

SDC1.4.4.2 **Additional Grid Code Characteristics Notice**

The following items are required to be submitted by each **User**, with the exception of **Aggregators**, direct to the **TSO**:

- (a) Individual **CCGT Module/CCGT Unit** data equivalent to the data required for a **CCGT Installation**. It must also show any revisions to the **Technical Parameters** for each of the **CCGT Modules/CCGT Units** within it. **[Note: The term "CCGT Module" applies to the SONI Grid Code and the term "CCGT Unit" will apply to the EirGrid Grid Code.]**
- (b) Different Fuels: In the case where a **CDGU** is capable of firing on different fuels, then the **Generator** must submit an **Additional Grid**

Code Characteristics Notice in respect of each fuel for the **NI PPA CDGU** (or fuel in the case of a **CDGU** other than a **NI PPA CDGU**), each containing the information set out in SDC1.4.4.1 above for each fuel and each marked clearly to indicate to which fuel it applies.

- (c) **Export Adjustment Factors** applied between the **Generator Terminals** and the **Connection Points**.
- (d) In the case of **Interconnector Owners**, **Interconnector** data, including but not limited to the **Availability of Interconnector Filters**.
- (e) In the case of **Interconnector**, the **Maximum Import Capacity** and the **Maximum Export Capacity**.
- (f) In relation to Demand Side Units and Aggregated Demand Side Units, the **Demand Profile** and the **Initial Demand Reduction Time**.
- (g) *In the case of **NI PPA Generation**, the requirement for a **Generator** to submit a **Technical Parameters Notice** to the **TSO** under SDC1.4.4.1 (a) also includes a requirement to provide any revisions to the **Technical Parameters** compared with the **Contracted Technical Parameters**.*

[Note: Please note that the above paragraph applies to Northern Ireland only.]

SDC1.4.4.3

Reserve capability:

- (a) *In the Republic of Ireland a **Generator** must submit to the **TSO** the **Operating Reserve capabilities** for each category of **Operating Reserve** defined in OC4.6.3 for each of its **CDGUs** for each **Trading Period**.*

[Note: Please note that the above paragraph only applies to the Republic of Ireland only.]

- (b) A **Generator** must notify the **TSO** as soon as it becomes aware, acting in accordance with **Prudent Operating Practice/Prudent Utility Practice**, if any of its **CDGUs** and/or **Controllable WFPSs** is unable to meet the reserve capability (as contained in a **Sustained Load Diagram** submitted pursuant to the **Planning Code ("PC")** in **Northern Ireland** or the **Ancillary Services Agreement** in the **Republic of Ireland**), whether that is due to a defect in the **CDGU** and/or **Controllable WFPS** or in its associated **Power Station Equipment** submitted pursuant to the **PC** in **Northern Ireland** or the **Ancillary Services Agreement** in the **Republic of Ireland**.

*Such notification must be made by submitting a **Technical Parameters Notice** in relation to **Sustained Response Capability**. **[Note: Clarify meaning]** In accordance with the **Generator's** obligations under SDC1.4.3.2 and paragraphs 1 and 2 of Appendix B to this SDC1, such **Reserve Characteristics** may only be amended (without the **TSO's** consent) in the event of a defect in or failure of a **CDGU** and/or **Controllable WFPS** or any associated **Power Station Equipment**.*

[Note: Please note that the above paragraph in italics only applies to Northern Ireland]

- (c) A change following such notification will only take effect for so long as it takes, acting in accordance with ***Prudent Operating Practice/Prudent Utility Practice***, for the relevant **CDGU** and/or **Controllable WFPS** or associated **Power Station Equipment** to be repaired and such repair must re-instate the reserve capability to its previous level or to such other level as the **TSO** may, acting in accordance with ***Prudent Operating Practice/Prudent Utility Practice***, agree, taking into account the provisions of SDC1.4.4.4(a), and the **Generator** must then submit a **Technical Parameters Notice** re-declaring the reserve capability accordingly. The **Generator** must advise the **TSO** of the nature of any such defect or failure and of the **Generator's** best estimate, acting as a reasonable and prudent **Generator**, of the time it will take to effect the repair to restore the **Reserve Characteristics** to their former level.

SDC1.4.4.4 **Other Relevant Data**

- (a) By not later than **Gate Closure** each day, each **Generator** in respect of each of its **CDGUs** and/or **Controllable WFPS**, and each **Pumped Storage Generator** in respect of **Pumped Storage Plant Demand**, shall in respect of the following **Trading Day** submit to the **TSO** in writing in the form set out on the **TSO** website or in such other form as the **TSO** may reasonably notify to each **Generator** or **Pumped Storage Generator** from time to time), details in relation to the following **Trading Day** of any newly arisen special factors, including abnormal risk to loss, which in the reasonable opinion of the **Generator** or **Pumped Storage Generator** may have a material effect on the likely **MW Output** of such **Generating Unit** (including, for a **CCGT Installation** in relation to each of the **CCGT Modules/CCGT Units** therein) or **Pumped Storage Plant Demand** as the case may be. The notice must be consistent with the **Generator's** and **Pumped Storage Generator's** obligations under SDC1.4.3.2. The provisions of this paragraph also apply to **Interconnector Owners** in relation to their **Interconnector Filters**. ***[Note: The term "CCGT Module" will apply to the SONI Grid Code and the term "CCGT Unit" will apply to the EirGrid Grid Code.]***
- (b) Where a **CDGU** is capable of firing on different fuels, then the **Generator** must submit details in respect of each fuel for the **CDGU**. Each set of details must contain the information set out in (a) above for each fuel and each must be marked clearly to indicate to which fuel it applies.

SDC1.4.4.5 **Commercial Offer Data**

- (a) Each **Generator**, **Pumped Storage Generator**, **Interconnector Owner**, **Dispatchable Demand Customer**, **Generator Aggregator** and **Demand Side Unit Aggregator** shall in respect of each of its **CDGUs** and/or **Controllable WFPSs**, each of its **Pumped Storage Plant Demand**, each of its **Interconnector**, each of its **Demand Side Units**, its **Aggregated Generating Units** and its **Aggregated Demand Side Units** submit to the **TSO**, either directly or by means of an **Intermediary** on its

behalf, **Commercial Offer Data** by **Gate Closure** for the following **Trading Day** in accordance with the **TSC**. A **Generator** and/or **Generator Aggregator** may satisfy this obligation by submitting, either directly or by means of an **Intermediary** on its behalf, the **Commercial Offer Data** under the **TSC**, unless the **TSO** requires by notice to the **Generator, Generator Aggregator** and/or **Interconnector Owner** the data to be submitted to it directly under the **Grid Code**.

- (b) Each **Generator** shall in respect of each of its **Energy Limited Generating Units** submit an **Energy Limit** as well as the **Commercial Offer Data**.
- (c) Each **Pumped Storage Plant** will, with respect to its **Pumped Storage Plant Demand**, submit its **Target Reservoir Level** by **Gate Closure** for the following **Trading Day**.
- (d) All data items submitted under this SDC1.4.4.5 are to be at levels of **MW Output** net of **Unit Load**.

SDC1.4.4.6 Revisions/Re-declarations to data

- (a) **Availability:** A **User** may, subject to SDC1.4.3.2, make revisions to the **Availability Notice** submitted to the **TSO** under SDC1.4.1.1 at any time after submission of the **Availability Notice** in accordance with its obligations to make the **Unit Available** under SDC1.4.3.1 to SDC1.4.3.3 and *Appendix B* to this SDC1 by submission by **Electronic Interface** of a revised **Availability Notice** which shall be in the form set out on the **TSO** website or in such other form as the **TSO** may reasonably notify to each **User** from time to time. Revisions may not be made to an **Availability Notice** submitted by an **Interconnector Owner** following **Gate Closure**.

- (b) In the event that the **TSO** submits a **Post Event Notice** under *OC11 of the SONI Grid Code / OC10 of the EirGrid Grid Code* in relation to any part of the period covered by the **Availability Notice** at any time after submission of the **Availability Notice**, the **User** shall be deemed to have submitted a revised **Availability Notice** consistent with such **Post Event Notice**. The revisions to the **Availability Notice** may include revisions of the levels of **Availability** in the **CCGT Installation Matrix** reflecting the revised **Availability**. The **TSO** shall, insofar as it is reasonably able, take account of such revisions in the preparation of the **Indicative Operations Schedule**.

[Note: Please note that once the amendments to the Grid Codes are finalised, each Grid Code will only make cross-references to its own sections.]

- (c) **Additional Availability:** A **User** may, subject to SDC1.4.3.2, make revisions to the **Additional Grid Code Availability Notice** submitted to the **TSO** under SDC1.4.2 at any time after the submission of the **Additional Grid Code Availability Notice** in accordance with its obligations to make the Unit Available under SDC1.4.3.1 to SDC1.4.3.3 and *Appendix B* to this SDC1 by submission by **Electronic Interface** of a revised **Additional Grid Code Availability Notice**. The Notice shall be

in the form set out on the **TSO** website or in such other form as the **TSO** may reasonably notify each **User** from time to time.

- (d) **Technical Parameters:** If any of the data submitted to the **TSO** under SDC1.4.4.1 to SDC1.4.4.4 changes, a **User** must, subject to SDC1.4.3.2, (in the case of data submitted under SDC1.4.4.1 by means of a **Technical Parameters Notice**) make revisions to such data and must notify the **TSO** of any revisions to any previously revised data by submitting by **Electronic Interface** a revised **Technical Parameters Notice** in the form set out on the **TSO** website or in such other form as the **TSO** may reasonably notify to each **User** from time to time, and must notify the **TSO** of any **Other Relevant Data** of which it becomes aware at any time after any original submission in writing. The **TSO** shall, insofar as it is reasonably able, take account of such revisions or notifications. The provisions of SDC1.4.3.2 shall apply to revisions under this paragraph to data submitted under SDC1.4.4.1 to SDC1.4.4.4.
- (e) **Additional Grid Code Characteristics:** A **User** may make revisions to the **Additional Grid Code Characteristics Notice** submitted to the **TSO** under SDC1.4.4.2 at any time after the submission of the **Additional Grid Code Characteristics Notice** by submission of a revised such notice. The Notice shall be in the form set out on the **TSO** website or in such other form as the **TSO** may reasonably notify to each **User** from time to time.
- (f) **Energy Limits for Hydro Units:** A **User** shall resubmit **Energy Limits** on the **Trading Day** regardless of whether the **Energy Limits** have changed since **Gate Closure**. Revised **Energy Limits for Hydro Units** may be submitted at any time up until 18.00 on the **Trading Day** in writing per unit basis.

SDC1.4.4.7

- (a) Defaults:
 - (i) Insofar as any data submitted or deemed to have been submitted on any particular day in any **Availability Notice**, **Technical Parameters Notice**, or notice of **Other Relevant Data** or any revision thereto is inconsistent with any other data in any other such notice, then the applicable data that is required to be submitted pursuant to the **TSC** and which is known as the **Standing Technical Offer Data**, and/or the most recently submitted **Additional Grid Code Availability Notice** and **Additional Grid Code Characteristics Notice** which, if substituted for the inconsistent data, would make the data in such notices consistent, shall apply for the next following **Trading Day**.

[Note: Please note that the default provisions do not work for interconnectors. This is to be considered further from a Grid Code perspective and may require a change to the TSC.]
 - (ii) Insofar as an **Availability Notice** is not submitted, the **User** shall be deemed to have submitted an **Availability Notice** by

Gate Closure stating that the **Availability** of the relevant **CDGU, Controllable WFPS** and/or the **Aggregated Generating Units** for the whole of the following **Trading Day** will be the level of **Availability** and **Operating Mode** declared in respect of the applicable **Standing Technical Offer Data**.

- (iii) Insofar as not revised, the applicable **Standing Technical Offer Data** for **Technical Parameters** shall apply for the next following **Trading Day**.
- (iv) Insofar as not revised, the last notice relating to **Other Relevant Data** to have been submitted shall apply for the next following **Trading Day**.
- (v) In respect of **Hydro Units**, the **Energy Limit** that applied to the previous **Trading Day** will be used.

(b) As a general requirement, the **User** must ensure that the data in any **Availability Notice, Technical Parameters Notice**, or notice of any other relevant data or any revision thereto is consistent with its obligations under SDC1.4.3.2 and SDC1.4.3.4.

SDC1.4.4.8 (a) Telephone Submission: Where this SDC1 requires a **User** to submit a notice, it may instead of submitting it in writing, submit the information required in such a notice (which information must be supplied in full) by telephone subject to the **TSO's** prior consent (identifying unambiguously the type of notice which is thereby being submitted).

(b) The individual who is giving the notice on behalf of the **User** must firstly specify the time at which the notice is being given, then identify himself and ask the individual receiving the notice on behalf of the **TSO** also to identify himself. The information required by the notice shall then be given, including (without limitation) the identity of the **CDGU, Controllable WFPS, Aggregated Generating Units, Pumped Storage Plant, Demand Side Units** and **Aggregated Demand Side Units** in question.

(c) The notice must then be confirmed by facsimile transmission or any other electronic means as agreed with the **TSO** as soon as possible thereafter (and in any event be sent to the **TSO** within 2 hours). Where a facsimile is so sent by way of confirmation, it shall state clearly that it is in confirmation of a notice already given by telephone and must state the exact time at which the notice was given by telephone.

SDC1.4.5 Compilation of the Indicative Operations Schedule

SDC1.4.5.1 An **Indicative Operations Schedule** will be compiled daily by the **TSO** as a statement of which **CDGUs** and/or **Controllable WFPS** and/or transfers across any **Interconnector** and/or **Demand Side Units** and/or **Aggregated Generating Units** and/or **Aggregated Demand Side Units** may be required to operate and their expected **MW Output** for the next following **Trading Day**.

SDC1.4.5.2 Merit Order

A **Merit Order** will be compiled by the **TSO** in conjunction with the **Other TSO** for each **Trading Day** and, subject as provided in this SDC1, used to determine which **CDGU, Pumped Storage Plant Demand, Demand Side Unit, Aggregated Generating Units, Aggregated Demand Side Units** or **Interconnector** tranche to **Schedule and Dispatch** in relation to their **Price Sets**. The **Merit Order** will be on the terms of ascending prices so that the **CDGU, Pumped Storage Plant Demand, Demand Side Unit, Aggregated Generating Units, Aggregated Demand Side Units Price Set** or **Interconnector** at the head of the **Merit Order** will be that which, once committed, has the lowest **Incremental Price** per **MWh**. Each **CDGU, Pumped Storage Plant Demand, Demand Side Unit, Aggregated Generating Units, Aggregated Demand Side Units** and/or **Interconnector** tranche shall appear in the **Merit Order** for each **Price Set** submitted.

[Note: Please note that the approach taken regarding the Merit Order is consistent with the current SONI and GB Grid Codes as well as the TSC.]

SDC1.4.5.3

In compiling the **Indicative Operations Schedule** in conjunction with the **Other TSO**, the **TSO** will take account of and give due weight to the following factors (and the equivalent factors on the **Other Transmission System** which will be looked at separately by the **Other TSO**):

- (i) **Transmission System** (and in Northern Ireland only **Distribution System**) constraints from time to time, as determined by the **TSO**;
- (ii) Reserve constraints from time to time, as determined by the **TSO**;
- (iii) the need to provide an **Operating Margin** (by using the various categories of reserve as specified in *OC3 of the SONI Grid Code/OC4.6 and CC7.3.1.1 of the EirGrid Grid Code* (as the case may be), as determined by the **TSO** acting in conjunction with the **Other TSO**;
- (iv) **Transmission System** stability considerations;
- (v) the level of **MW Output** and availability covered by **Non Centrally Dispatched Generating Units**, by **Plant** subject to **Priority Dispatch** and by **Controllable WFPS**;
- (vi) in respect of **CDGUs** and/or **Controllable WFPSs**, their **Availability, Target Reservoir Levels** for **Pumped Storage** taken against the initial conditions at 0600 hours the previous day, **Energy Limits** for **Hydro Units** and the values of their **Technical Parameters** registered under this SDC1 and other information submitted under SDC1.4.4.4;
- (vii) the **Start-Up Price** of each **CDGU** and/or **Controllable WFPS**;
- (viii) the requirements, as determined by the **TSO** for **Voltage Control** and **Mvar** reserves;
- (ix) **CDGU** and/or **Controllable WFPS** stability, as determined by the **TSO**;

[Note: The above paragraph is a “lift over” from current Grid Codes provisions, which we believe are sufficient as currently drafted.]

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- (x) other matters to enable the **TSO** and the **Other TSO** to meet its **Licence Standards**;
- (xi) the requirements, as determined by the **TSO** for **System Support Services** in Northern Ireland and **Ancillary Services** in the Republic of Ireland and for maintaining **Frequency Control**;
- (xii) **Monitoring** and/or **Testing** and/or **Investigations** to be carried out, or being carried out, under *OC11 of the **SONI Grid Code**/OC10 of the **EirGrid Grid Code*** (as the case may be), Testing to be carried out, or being carried out, at the request of a User under *OC11.8 of the **SONI Grid Code**/OC8 of the **EirGrid Grid Code*** and/or **Commissioning/Acceptance Testing** under the CC;

[Note: Please note that the word "Acceptance" applies to the SONI Grid Code only.]
- (xiii) **System Tests, Operational Tests and Commissioning Tests**;

[Note: Please note that the words in italics apply to the EirGrid Grid Code only.]
- (xiv) the inability of any **CDGU** and/or **Controllable WFPS** to meet its full reserve capability;
- (xv) **Inter-jurisdictional Tie Line** limits;
- (xvi) other facts as may be reasonably considered by the **TSO** to be relevant to the **Indicative Operations Schedule**;
- (xvii) **Generator Declared Inflexibilities** and abnormal risks;
- (xviii) the position of an **Interconnector** in the unconstrained **Indicative Market Schedule**;

[Note: Please note that the Schedule referred to above will be fixed, meaning that it cannot change after Gate Closure.]
- (xix) losses on the **Transmission** system and on the **Other Transmission System**;
- (xx) **Nomination Profiles** where relevant; and
- (xxi) *[in the case of **PPA CDGUs** any "take or pay" contract for the purchase of fuel to which such a **Generator** is a party and the terms of which have been agreed by the **TSO** and which impact on the **TSO** and/or in the case of a **Generator** the terms of any other contract to which the **TSO** is a party and which may, in its opinion, be relevant.*

[Note: Please note that the above paragraph applies to Northern Ireland only]

SDC1.4.5.4 Taking account of and applying the factors referred to in SDC1.4.5.3, the **Indicative Operations Schedule** shall be compiled by the **TSO** in conjunction with the **Other TSO** to **Schedule** such **CDGUs, Controllable WFPS, Pumped Storage Plant Demand, Demand Side Units, Aggregated Generating Units, Aggregated Demand Side Units** and/or such **Interconnector** which have been declared **Available** in an **Availability Notice** (and the equivalents on the **Other Transmission System**):

- (i) in accordance with the **Merit Order**, starting with the **CDGU, Controllable WFPS, Pumped Storage Plant Demand, Demand Side Units, Aggregated Generating Units, Aggregated Demand Side Units Price Set**, and/or such **Interconnector** at the head of the **Merit Order**;
- (ii) as will in aggregate (after taking into account electricity delivered other than from **CDGUs, Controllable WFPSs, Aggregated Generating Units**, and/or **Interconnector** and variation in **Demand** from **Pumped Storage Plant Demand, Demand Side Units** and **Aggregated Demand Side Units**) be sufficient to match at all times (to the extent possible having regard to the **Availability** or **Demand Reduction** of **CDGUs, Controllable WFPSs, Pumped Storage Plant Demand, Demand Side Units, Aggregated Generating Units, Aggregated Demand Side Units** and **Interconnectors**) the forecast [**System**] **Demand** (derived under OC1 of the **Grid Code** and the **Other Grid Code**) together with such margin of reserve as the **TSO** working in conjunction with the **Other TSO** shall consider to be appropriate; and
- (iii) as will in aggregate be sufficient to match minimum forecast **Demand** levels together with a sufficient **Minimum Demand Regulation**.

The taking account of and application of the factors in SDC1.4.5.3 will mean that, in general, the strict **Merit Order** may not necessarily be followed.

SDC1.4.5.5 After the completion of the **Scheduling** process, but before the issue of **Indicative Operations Schedule**, the **TSO** may consider it necessary to make adjustments to the **MW Output** of the **Scheduling** process. Such adjustments could be made necessary by any of the following factors (and the equivalent factors on the **Other Transmission System** which will be looked at separately by the **Other TSO**):

- (a) changes to **Availability** or **Demand Reduction** and/or **Technical Parameters** of **CDGUs** and/or **Controllable WFPS** and/or **Generator Aggregators** and/or **Dispatchable Demand Customers** and/or **Demand Side Unit Aggregators**, notified to the **TSO** after the commencement of the **Scheduling** process;
- (b) changes to **System Demand** forecast on the Island of Ireland;
- (c) changes to wind power forecasts on the Island of Ireland;
- (d) changes to **Transmission** and **Distribution System** constraints, emerging from the necessarily iterative process of **Scheduling** and network security assessment;

- (e) changes to **CDGU** and/or **Controllable WFPS** requirements following notification to the **TSO** of the changes in capability of a **Generator** to provide a **Special Action** as described in SDC2;
- (f) changes to **CDGU** and/or **Controllable WFPS** requirements within **Constrained Groups**, following re-appraisal of **System Demand** forecasts on the Island of Ireland within that **Constrained Group**;
- (g) changes to any conditions which in the reasonable opinion of the **TSO**, would impose increased risk to the **Transmission** and **Distribution System** and would therefore require an increase in the **Operating Margin**.
- (h) known (or emerging) limitations and/or deficiencies of the **Scheduling** process.

[Note: Please note that SDC1.4.5.5 has been amended to reflect required co-operation between both TSOs.]

SDC1.4.5.6

When:

- (a) adverse weather is anticipated;
- (b) there is a high risk to the whole or part of the **Transmission System** and the **Other Transmission System**;
- (c) **Demand Control** has been instructed by the **TSO**; or
- (d) a **Total** or **Partial Shutdown** exists;

these factors may mean that a **CDGU**, **Controllable WFPS**, **Pumped Storage Plant Demand**, **Demand Side Unit**, **Aggregated Generating Units**, **Aggregated Demand Side Units** and/or **Interconnector** is/are chosen other than in accordance with the **Merit Order** to a greater degree than would be the case when merely taking into account and giving due weight to the factors listed in SDC1.4.5.3 in order to seek to maintain the integrity of the **Transmission System**.

SDC1.4.5.7

- (a) The **Synchronising** and **De-Synchronising** times (and, in the case of **Demand Side Units** and **Pumped Storage Plant Demand**, the relevant effective time) shown in the **Indicative Operations Schedule** are indicative only and it should be borne in mind by **Generators** and/or **Generator Aggregators** that the **Dispatch Instructions** could reflect more or different **CDGU** and/or **Controllable WFPS**, **Pumped Storage Plant Demand** or **Demand Side Unit** requirements than in the **Indicative Operations Schedule**. The **TSO** may issue **Dispatch Instructions** in respect of any **CDGU** and/or **Controllable WFPS**, **Pumped Storage Plant Demand** or **Demand Side Unit** which has not declared an **Availability** or **Demand Reduction** of 0 MW in an **Availability Notice**. **Users** with **CDGUs** and/or **Controllable WFPS**, **Pumped Storage Plant Demand** or **Demand Side Unit** must ensure that their units are able to be **Synchronised**, or in the case of **Demand Side Units** and **Pumped Storage Plant Demand**, used at the times **Scheduled** but only if so **Dispatched** by the **TSO** by issue of a **Dispatch Instruction**. **Generators** and **Dispatchable Demand Customers** shall,

as part of a revision to the **Technical Parameters**, indicate to the **TSO** the latest time at which a **Dispatch Instruction** is required to meet the scheduled **Synchronising** time or in the case of **Demand Side Units** and **Pumped Storage Plant Demand**, the **Scheduled** relevant effective time.

- (b) The provisions of SDC1.4.5.7(a) shall apply to **Generator Aggregators** and **Demand Side Unit Aggregators**, subject to the exception that the **Synchronising**, **De-Synchronising** and relevant effective times specified in the **Indicative Operations Schedule** shall be in relation to the **Aggregated Generator Units** or **Aggregated Demand Side Units** as a whole as opposed to each unit individually.

SDC1.4.5.8 Content of Indicative Operations Schedule

The information contained in the **Indicative Operations Schedule** will indicate, where appropriate, on an individual **CDGU**, **Controllable WFPS**, **Pumped Storage Plant Demand**, **Demand Side Unit**, **Aggregated Generating Units** and/or **Aggregated Demand Side Units** basis, the period and **Loading** for which it is **Scheduled** during the following **Trading Day**. In the case of a **CDGU** which is capable of firing on two different fuels, it will also indicate the fuel for which it is **Scheduled** during the following **Trading Day**. If no fuel is contained in the **Indicative Operations Schedule**, then the most recently specified fuel shall be treated as having been indicated. Equivalent rules apply to fuels at **CDGUs** other than **NI PPA CDGUs**.

SDC1.4.5.9 Issue of Indicative Operations Schedule

- (a) The **Indicative Operations Schedule** will be published for **Users** by 1600 hours each day preceding the relevant **Trading Day**, provided that all the necessary information from the **Users** was made available by not later than **Gate Closure**. However, if on any occasion the **TSO** is unable to meet this time, the **TSO** also reserves the right to extend the timescale for the issue of the first **Indicative Operations Schedule** to the extent necessary. Following the issue of the **Indicative Operations Schedule**, the **TSO** may issue revised **Indicative Operations Schedules** up until one hour before the start of the **Trading Day**.
- (b) The **TSO** may issue **Dispatch Instructions** to **CDGUs**, **Controllable WFPSs**, **Pumped Storage Plant Demand** and/or **Demand Side Units** and/or **Aggregated Generating Units** and/or **Aggregated Demand Side Units** [and/or **Interconnector**] before the issue of the **Indicative Operations Schedule** for the **Trading Day** to which the **Dispatch** instruction relates if the length of **Notice to Synchronise** the relevant **CDGUs** and/or **Controllable WFPSs**, **Pumped Storage Plant Demand** and/or **Demand Side Unit** requires the **Dispatch** instruction to be given at that time. When the length of the time required for **Notice to Synchronise** is within 30 minutes of causing the **CDGU** and/or **Controllable WFPSs**, **Pumped Storage Plant Demand** and/or **Demand Side Units** to be unable to meet the indicative **Synchronising** time in the **Indicative Operations Schedule** or a subsequent indicative **Synchronising** time and no **Dispatch Instruction** has been received, the **Generator** must inform the **TSO** without delay.

SDC1.4.5.10 Regulation

It is a requirement for running the **Transmission System** and **Distribution System** that all **Synchronised CDGUs** and/or **Controllable WFPSS** must at all times be capable of reducing **MW Output** sufficient to allow a sufficient **Regulating Margin** for adequate **Frequency Control**. The **TSO** will monitor the **MW Output** data of the **Indicative Operations Schedule** against forecast of **System Demand** on the Island of Ireland to see whether the level of regulation for any period is insufficient, and may take any shortfall into account in **Scheduling** and **Dispatch**.

SDC1.4.5.11 Data Requirements

Appendix A Part 1 sets out the **Technical Parameters** for which values are to be supplied by a **User** in respect of each of its **CDGUs** and/or **Controllable WFPSS** and/or **Pumped Storage Plant Demand** and/or **Demand Side Units** and/or **Aggregated Demand Side Units** and/or **Aggregated Generating Units** by not later than **Gate Closure** on the day prior to the **Trading Day**.

Appendix A Part 2 sets out the additional data items required in respect of an **Additional Grid Code Characteristics Notice**.

SDC1 – APPENDIX A

Generation Scheduling and Dispatch Parameters

| Variable | Applies to |
|-----------------------------------|---|
| Block Load Cold | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Block Load Hot | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Block Load Warm | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Demand Profile | Demand Side Units only |
| Deload Break Point | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Deloading Rate 1 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Deloading Rate 2 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Dwell Time 1 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Dwell Time 2 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Dwell Time 3 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Dwell Time Trigger Point 1 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Dwell Time Trigger Point 2 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Dwell Time Trigger Point 3 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |

| Variable | Applies to |
|---|---|
| End Point of Start Up Period | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Energy Limit | Energy Limited Generating Units only |
| Energy Limit Factor | Energy Limited Generating Units only |
| Energy Limit Start | Energy Limited Generating Units only |
| Energy Limit Stop | Energy Limited Generating Units only |
| Forecast Availability Profile | All Generating Units except Autonomous Generating Units |
| Forecast Minimum Output Profile | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Forecast Minimum Stable Generation Profile | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Load Up Break Point Cold (1) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Load Up Break Point Cold (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Load Up Break Point Hot (1) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Load Up Break Point Hot (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Load Up Break Point Warm (1) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Load Up Break Point Warm (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Cold (1) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Cold (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Cold (3) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |

| Variable | Applies to |
|--|---|
| Loading Rate Hot (1) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Hot (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Hot (3) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Warm (1) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Warm (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Loading Rate Warm (3) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Max Ramp Down Rate (must be a number greater than zero) | Demand Side Units only, except Demand Side Unit Aggregators' Units |
| Max Ramp Up Rate (must be a number greater than zero) | Demand Side Units only, except Demand Side Units represented by a Demand Side Unit Aggregator |
| Maximum Down Time | Demand Side Units only |
| Maximum Down Time | Demand Side Units only, except Demand Side Units represented by a Demand Side Unit Aggregator |
| Maximum Generation | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Maximum On Time | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Maximum Storage Capacity | Pumped Storage Plants only |
| Minimum Down Time | Demand Side Units only, except Demand Side Units represented by a Demand Side Unit Aggregator |
| Minimum Generation | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Minimum off time | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |

| Variable | Applies to |
|--|--|
| Minimum on time | All Generating Units, Demand Side Units, Aggregated Generating Units and Demand Side Units , except Autonomous Generating Units |
| Minimum Storage Capacity (Other relevant technical parameters) | Pumped Storage Plants only All Generating Units except Autonomous Generating Units and Aggregated Generating Units |
| Pumping capacity | Pumped Storage Plants only |
| Ramp Down Break Point 1 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Break Point 2 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Break Point 3 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Break Point 4 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Rate 1 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Rate 2 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Rate 3 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Rate 4 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Down Rate 5 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Break Point 1 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Break Point 2 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Break Point 3 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Break Point 4 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Rate 1 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Rate 2 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Rate 3 | All Generating Units , except Autonomous Generating Units and Demand Side Units |

| Variable | Applies to |
|---|--|
| Ramp Up Rate 4 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Ramp Up Rate 5 | All Generating Units , except Autonomous Generating Units and Demand Side Units |
| Short Term Maximisation Capability | All Generating Units except Demand Side Units represented by a Demand Side Unit Aggregator , Autonomous Generating Units , Aggregated Generating Units , Interconnector Residual Capacity Units , or Interconnector Error Units |
| Soak Time Cold (1) | All Generating Units , except Autonomous Generating Units , Generator Aggregators' Generating Units and Demand Side Units |
| Soak Time Cold (2) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Hot (1) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Hot (2) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Trigger Point Cold (1) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Trigger Point Cold (2) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Trigger Point Hot (1) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Trigger Point Hot (2) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Trigger Point Warm (1) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Trigger Point Warm (2) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |
| Soak Time Warm (1) | All Generating Units , except Autonomous Generating Units , Aggregated Generating Units and Demand Side Units |

| Variable | Applies to |
|--|---|
| Soak Time Warm (2) | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Synchronous Start-Up Time Cold | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Synchronous Start-Up Time Hot | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Synchronous Start-Up Time Warm | All Generating Units , except Autonomous Generating Units, Generator Aggregators' Generating Units and Demand Side Units |
| Target Reservoir Level Percentage | Pumped Storage Plants only |
| Start of Restricted Range 1 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| End of Restricted Range 1 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| Start of Restricted Range 2 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |
| End of Restricted Range 2 | All Generating Units , except Autonomous Generating Units, Aggregated Generating Units and Demand Side Units |

[2. Additional data items required in an Additional Grid Code Characteristics Notice for SONI only]

[Note: Please note that this part of the Appendix applies to Northern Ireland only.]

| Variable | Applies to |
|--|---|
| <i>Time from initiation of a start to achieving Dispatched Load</i> | CDGUs which are Open Cycle Gas Turbines or CCGTs |
| Governor Droop | All CDGUs , except Aggregated Generating Units |
| Sustained Response Capability | All CDGUs , except Aggregated Generating Units |
| <i>Two shifting limitation (limitation on the number of Start-ups per Trading Day)</i> | All CDGUs , except Aggregated Generating Units |
| <i>The MW and Mvar capability limits within which the CDGU is able to operate as shown in the relevant [Generator Performance Chart]</i> | All CDGUs , except Aggregated Generating Units |

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| Variable | Applies to |
|--|--|
| [Note: Consider whether this chart is need in SDC1. If so, need to consider a definition for this term.] | |
| Maximum number of on Load cycles per 24 hour period, together with the maximum Load increases involved | All CDGUs , except Aggregated Generating Units |
| ^Maximum number of changes to the Dispatched Fuel per 24 hour period | All CDGUs , except Aggregated Generating Units |
| Maximum quantity of oil in “ready-use tanks” and associated pipework | All CDGUs , except Aggregated Generating Units |
| ^Maximum number of changes to the Designated Fuel per 24 hour period | All CDGUs , except Aggregated Generating Units |
| ^Minimum notice to change the Designated Fuel . | All CDGUs , except Aggregated Generating Units |
| Settings of the Unit Load Controller for each CDGU for which a Unit Load Controller is required under CCS1.5.5 of the SONI Grid Code | All CDGUs , except Aggregated Generating Units |
| Declared Maximisation Capacity | All CDGUs , except Aggregated Generating Units |
| Time between De-Synchronising different CDGUs in a Power Station which, in the case of Coolkeeragh Power Station only, shall be stated for both paired and single CDGUs . | All CDGUs , except Aggregated Generating Units |

[2. Additional data items required in an Additional Grid Code Characteristics Notice for EirGrid only]

[Note: Please note that this part of the Appendix applies to the Republic of Ireland only.]

| Variable | Applies to |
|--|---|
| Black Start Capability (yes/no) | CDGUs , excluding Dispatchable WFPSs and Aggregated Generating Units |
| Declared Reactive Power (Consumption) | CDGUs , excluding Dispatchable WFPSs and Aggregated Generating Units |
| Declared Reactive Power (Production) | CDGUs , excluding Dispatchable WFPSs and Aggregated Generating Units |
| Declared POR | CDGUs , excluding Dispatchable WFPSs and Aggregated Generating Units |

| Variable | Applies to |
|---|--|
| Declared SOR | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Declared TOR1 | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Declared TOR2 | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Declared Replacement Reserve | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Minimum MW for POR | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Minimum MW for SOR | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Minimum MW for TOR1 | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Minimum MW for TOR2 | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Minimum MW for Replacement Reserve | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| POR Decrement Rate | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| SOR Decrement Rate | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| TOR1 Decrement Rate | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| TOR2 Decrement Rate | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Replacement Reserve Decrement Rate | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Governor Droop | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Correction Factor (Mvar Consumption) | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Correction Factor (Mvar Production) | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Export Adjustment Factor 1 | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Export Adjustment Factor 2 | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |
| Unit Loss Factor | CDGUs, excluding Dispatchable WFPSs and Aggregated Generating Units |

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SDC1 - APPENDIX B

NI PPA Availability Provisions

1. *In relation to **NI PPA Generation**, each **Generator** shall subject always to the terms and conditions of any applicable **Generating Unit Agreement** throughout the term of the **Generating Unit Agreement** relating to a particular **NI PPA CDGU** and/or **Controllable WFPS**, maintain, repair, operate and fuel the **CDGU** and/or **Controllable WFPS** as required by **Prudent Operating Practice** and any legal requirements with a view to providing the **Contracted Capacity** and the **Technical Parameters** provided that in determining when so to maintain or repair the **CDGU** and/or **Controllable WFPS**, the **Generator** may have regard to the amount of **Availability Payments** (including reductions in and rebates of **Availability Payments**) which may at any time be earned (or suffered) by it under the relevant **Generating Unit Agreement** and to its obligations under clause 5.1 of the relevant **Power Station Agreement**.*

2. *In relation to **NI PPA Generation**, the **Generator** shall use reasonable endeavours to ensure that it does not at any time declare by issuing or allowing to remain outstanding an **Availability Notice**, or a **Technical Parameters Notice** which declares the **Availability** or **Technical Parameters** of the **CDGU**, **Controllable WFPSs** and/or **Demand Side Units** including, in the case of a **CCGT Installation**, its **Operating Mode**) at levels or values different from those that the **NI PPA CDGU**, **Controllable WFPS** and/or **Demand Side Unit** could achieve at the relevant time except:-*
 - (a) *during periods of **Planned Outage** or **Short Term Planned Maintenance Outage** or otherwise with the consent of the **TSO**;*
 - (b) *while repairing or maintaining the **NI PPA CDGU** and/or **Controllable WFPS** or equipment necessary to the operation of the **NI PPA CDGU** and/or **Controllable WFPS** where such repair or maintenance cannot reasonably, in accordance with **Prudent Operating Practice**, be deferred to a period of **Planned Outage** or **Short Term Planned Maintenance Outage**;*
 - (c) *where necessary to avoid an imminent risk of injury to persons or material damage to property (including the **NI PPA CDGU** and/or **Controllable WFPS**);*
 - (d) *if it is not lawful for the **Generator** to operate the **NI PPA CDGU** and/or **Controllable WFPS**; or*
 - (e) *to the extent that the **Generator** is affected by **Force Majeure** under the **Generating Unit Agreement**;*

*provided that nothing in the **Grid Code** shall require the **Generator** to declare levels or values better than **Contracted Capacity** and **Technical Parameters** in respect of a **NI PPA CDGU** and/or **Controllable WFPS**.*

3. *[In relation to any steam turbine **PPA CDGU** at Kilroot Power Station, **NIE** may, in respect of any **Settlement Period** (and/or successive **Settlement Periods**) give notice (an "**Overburn Notice**") to the relevant **Generator** with as much notice as*

possible and in any event (except in the circumstances specified in (iii) below) not less than 24 hours before the start of such **Settlement Period** (or the first such period) with the following effect and subject as follows:

- (i) the **Contracted Capacity** (Coal) shall thereby be increased to **Overburn Contracted Capacity** in respect of such **Settlement Period** (or periods) following which the **Generator** shall redeclare the **Availability** of the **CDGU** in an **Availability Notice** (and, for the avoidance of doubt, such increase shall only apply for the **Settlement Periods** specified in the **Overburn Notice**);
- (ii) the aggregate number of **Settlement Periods** in any period of 24 hours and in any period of 12 months for which **Overburn Notices** may be given shall be no greater than the limits set out in paragraph 3 of schedule 1 to the relevant **Generating Unit Agreement**;
- (iii) **NIE** will waive the rebate of **Availability Payments** for late declaration of **Availability** under paragraph 13.2 of schedule 2 to the relevant **Generating Unit Agreement** if the **Overburn Notice** is issued by **NIE** less than 24 hours in advance of the start of the relevant **Settlement Period**.]

[Note: Please note that the provisions above were inserted to reflect legacy arrangements in Northern Ireland currently dealt with in the Power Purchase Arrangements]

References to fuel

- 4. References to “fuel” at SDC1.4.2.1, SDC1.4.4.2 and SDC1.4.4.4(b) shall be read as references to “**Designated Fuel**”. References to “fuel” at SDC1.4.5.8 shall be read as a reference to “**Designated Fuel, Declared Fuel** or fuel as the case may be”.