GLOSSARY AND

DEFINITIONS (GD)

GD1. DEFINED TERMS

In the **Grid Code** the following words and expressions shall, unless the subject matter or the context otherwise requires or is inconsistent therewith, bear the following meanings:

ACS Conditions	Average cold spell conditions.
Active Power Control Set-Point Ramp Rate	The rate of increase or decrease of **Active Power Output** of a **WFPS** in response to an Active Power Dispatch Instruction sent by the **TSO** via SCADA when the **WFPS** is operating in an Active Power control mode. This ramp rate will be calculated by the Generator each time an Active Power Dispatch Instruction is sent by the **TSO** via SCADA based on the change in **Active Power** required and the curtailment time interval set point. The **Active Power Dispatch Instruction** shall be any **MW** value in the range 0 **MW** to **Registered Capacity** of the **WFPS**. The curtailment time interval set point shall be any value in the range 1 to 30 minutes, as specified by the **TSO** via SCADA.
Active Power or MW	The product of the components of alternating current and voltage that equate to true power which is measured in units of watts and standard multiples thereof, for example: 1000 Watts = 1 kW; 1000 kW = 1 **MW**; 1000 **MW** = 1 GW.
Additional Conversion Factors	The factors referred to in PCA3.3.12.
Additional Grid Code Availability Notice	A notice submitted by a **User** to the **TSO** pursuant to SDC1.4.2 relating to additional data on **Availability**.

Additional Grid Code Characteristics Notice	A notice to be submitted to the **TSO** pursuant to SDC1.4.4.2 relating to additional technical data.
Aggregate Interconnector Ramp Rate	The maximum **Ramp Up Rate** for an **Interconnector** or maximum **Ramp Down Rate** as determined by the **TSO**.
Aggregated Demand Site	A group of **Individual Demand Sites** connected to the **Transmission** or **Distribution System** and represented by a **Demand Side Unit Operator**, which together are capable of a **Demand Side Unit MW Capacity** equal to or above 4 **MW** (and which is therefore subject to **Central Dispatch** from the **TSO**). Each **Individual Demand Site** comprising an **Aggregated Demand Site** shall be in one currency zone and shall have a **Demand Side Unit MW Capacity** of no greater than **10 MW**. Unless otherwise specified, information submitted in respect of an **Aggregated Demand Site** shall always be at an aggregated level.
Aggregated Generating Unit	A group of **Generating Unit**s connected to the **Transmission** or **Distribution System** and represented by a **Generator Aggregator**, each of which must not have a **Registered Capacity** greater than 10 **MW**. An **Aggregated Generating Unit** with a total **Registered Capacity** of 4 **MW** or more shall be subject to **Central Dispatch** (and shall therefore be a **CDGU**), but one with a total **Registered Capacity** of less than 4 **MW** may only be subject to **Central Dispatch** subject to agreement with the **TSO**. Unless otherwise specified by the **TSO** or otherwise in the **Grid Code**, information submitted in respect of an **Aggregated Generating Unit** shall always be at an aggregated level.
Aggregated Maximum Export Capacity	In the case of a **Generator Aggregator**, the aggregated value (in **MW,** MVA, kW and/or kVA) provided in each **Connection Agreement** (or connection agreement to the **Distribution System**, as the case may be) for the **Generating Units** for which the **Generator Aggregator** is responsible.
Aggregator	Either a **Generator Aggregator** or a **Demand Side Unit Operator** in respect of an **Aggregated Demand Site**.
Aggregator Systems	A system by which an **Aggregator** controls or operates the plant which is subject to aggregation.
Agreed Testing and	The procedures and methodologies developed by

Monitoring Procedures	the **TSO** for conducting certain **Tests** and undertaking certain **Monitoring** and which form part of the **Grid Code**.
All Island Networks	As defined in the **TSO Licence**
All Island Transmission Networks	As defined in the **TSO Licence**
Ancillary Service	Each of the following services, all of which **are** used to operate a stable and secure **Transmission System**: the provision of **Reactive Power, Operating Reserve and Black Start Capability**, each of which also constitutes a **System Support Service.**
Apparatus	All equipment in which electrical conductors are used, supported or of which they may form a part.
Authority	The Northern Ireland Authority for Utility Regulation.
Automatic Load Shedding	A **Load** shedding scheme utilised by the **TSO** to prevent **Frequency** collapse or other problems and to restore the balance between generation output and **Demand** on the **NI System**.
Automatic Load Shedding Device	A device for initiating **Load** shedding automatically, such as a **Low Frequency Relay**.
Automatic Voltage Regulator or **AVR**	A continuously acting automatic excitation system to control the voltage of a **Generating Unit** as measured at the **Generator Terminals**.
~~**Autonomous Generating Units**~~	~~A **Generating Unit** that is not subject to **Central Dispatch** or subject to **Active Power** control by the relevant **TSO**.~~
Availability	In respect of any period (and, in the case of a **PPA CDGU**, in relation to a **Designated Fuel** and, in the case of a **CDGU** other than a **PPA CDGU**, in relation to a fuel), shall mean: (a) for any **CDGU**, **Controllable WFPS** or **Dispatchable WFPS** the figure (expressed in **MW** as at the **Connection Point** and at the direct connection with the **Distribution System**) stated in accordance with SDC1.4.1.1(a) to be the capability of the **CDGU**, **Controllable WFPS** or **Dispatchable WFPS** to generate electricity during that period. In relation to all **CDGUs** including an **Open Cycle Gas Turbine**

CDGU and/or a **CCGT Installation**, the **Availability** declared by a **Generator** shall correspond to the maximum generation of electricity which that **Generator's CDGU** can achieve during that period. In relation to all **CDGUs**, the **Availability** declared by a **Generator** shall correspond to the level of generation of electricity up to and including the **Contracted Capacity** (for **PPA CDGUs** other than **PPA Open Cycle Gas Turbines**) or **Contracted Capacity (Peak)** (for **PPA Open Cycle Gas Turbines**) or **Registered Capacity** (for non-**PPA** plant) which that **CDGU** can achieve during that period;

(b) for **Demand Side Units**, the **Demand Side Unit MW Capacity** (expressed in **MW** as at the **Connection Point** and at the direct connection with the **Distribution System**) stated in accordance with SDC1.4.1.1(a) to be the capability of the **Demand Side Unit** to reduce **Demand** during that period;

(c) for **Aggregated Generating Units**, the aggregated figures (expressed in **MW** as at the **Connection Points** of each individual **Aggregated Generating Unit**) stated in accordance with SDC1.4.1.1(a) to be the capability of the **Aggregated Generating Units** as a whole to generate electricity during that period;

(d) for an **Interconnector**, the figure (expressed in **MW** at Auchencrosh) stated in accordance with SDC1.4.1.1(a) to be the capability of the **Interconnector** to export or import electricity.

"**Available**" shall be construed accordingly.

Availability Notice — A notice to be submitted to the **TSO** pursuant to SDC1.4.1.1.

Availability Payments — A payment made to a **Generator** for making a **Generating Unit** available.

Average Cold Spell Demand — The forecast of peak daily **Demand** during average cold spell conditions.

Back-up Fuel — **Distillate** or heavy fuel oil.

Black Start	The procedure necessary for a recovery from a **Total Shutdown** or **Partial Shutdown**.
Black Start Capability	The capability of a **Power Station** where at least one of its **CDGUs** or **CCGT Modules** has the ability to **Start-Up** as provided in OC7.4.4.
Black Start Station	A **Power Station** identified pursuant to the relevant **Generator's Connection Agreement** as having the ability for at least one of its **CDGUs** or **CCGT Modules** to **Start-Up** as provided in OC7.4.4.
Business Day	Any day (other than a Saturday or a Sunday) on which banks are open for business in Belfast but excluding those days which the **TSO** may from time to time notify **Generators** as being days on which normal business will not be conducted at the **TSO's** premises.
Block Load	The level of output that a **Generating Unit** immediately produces following **Synchronisation.** For avoidance of doubt, **Block Load** can equal 0 **MW**.
Block Load Cold	**Block Load** during a **Cold Start**.
Block Load Hot	**Block Load** during a **Hot Start**.
Block Load Warm	**Block Load** during a **Warm Start**.
Bulk Supply Point	A point at which the **Distribution System** connects to the **Transmission System**.
Cancelled Start	A response by a **Generator** to an instruction from the **TSO** cancelling a previous instruction to **Synchronise** to the **NI System**.
CCGT Installation	A collection of **CCGT Modules** (registered as a **CCGT Installation** under the PC) comprising one or more gas turbines and one or more steam turbines where, in normal operation, the waste heat from the **CCGT Modules** which are gas turbines is passed to the heat exchanger of the associated **CCGT Modules** which are steam turbines from which it is directly supplied to these steam turbines thereby contributing to the overall combined cycle efficiency of the **CCGT Installation**.
CCGT Installation Matrix	The matrix which must be submitted by a **Generator** under the **Planning Code** and which is used by the **TSOs** for **Scheduling** and **Dispatch** purposes under the **SDCs** as a "look up" table

	determining which **CCGT Module** will be operating at any given **MW Dispatch** level subject to any updated **Availability** information submitted by a **Generator** to a **TSO** under **SDC1**.
CCGT Module	A **Generating Unit** within a **CCGT Installation**.
Central Dispatch	The process of **Scheduling** and issuing **Dispatch Instructions** in relation to **CDGUs, Pumped Storage Plant Demand, Demand Side Units** and/or **Interconnectors** direct to a **Control Facility** by the **TSO** pursuant to the **Grid Code.** In particular: All **Dispatchable WFPSs** shall be subject to **Central Dispatch**; All other **Power Stations** with a **Registered Capacity** of above 10 **MW** shall be subject to **Central Dispatch**; All other **Power Stations** with a **Registered Capacity** of 10 **MW** or less can agree with the **TSO** to be subject to **Central Dispatch**.
Centrally Dispatched Generating Unit (CDGU)	A **Generating Unit** within a **Power Station** subject to **Central Dispatch**, which comprises, unless specified otherwise in relation to a particular use of the term a **Thermal Plant** including a **CCGT Installation**, a **Dispatchable WFPS**, **Hydro Unit** and **Pumped Storage Plant** in respect of its **Pumped Storage Generation**.
Cold Start	Any **Synchronisation** of a **Generating Unit** that has previously not been **Synchronised** for a period of time longer than its submitted **Warm Cooling Boundary**.
Commercial Offer Data	Data of that name submitted by a **User** or an Intermediary to the **MO** pursuant to the **TSC** ~~in relation to prices and, where applicable, **Nominated Profile** for certain **Users**~~.
Commissioning/ Acceptance Test	Testing of a **CDGU**, **Controllable WFPS, Pumped Storage Plant Demand**, **Demand Side Units**, **Aggregated Generating Units**, **Interconnector** or an item of **User's Equipment** required pursuant to the **Connection Conditions** prior to connection or re-connection in order to determine whether or not it is suitable for connection to the **System** and also to determine the new values of parameters to apply to it

	following a material alteration or modification of a **CDGU**, **Controllable WFPS, Pumped Storage Plant Demand**, **Demand Side Units**, **Aggregated Generating Units**, **Interconnector** or of an item of **User's Equipment** and the term "**Commissioning/Acceptance Testing**" shall be construed accordingly.
Committed Project Planning Data	Has the meaning set out in PC6.4.3.
Competent Authority	The **Authority**, or any local, national or supranational agency, authority, department, inspectorate, minister, official, court, tribunal or public or statutory person (whether autonomous or not) of the United Kingdom (or the government thereof) or the European Communities which has jurisdiction over the **TSO** and the relevant **Generator** or the subject matter of a **Generating Unit Agreement** or a **Power Station Agreement** between **NIE Energy** and that **Generator**.
Confirmation Statement	As defined in the **Metering Code**.
Connection Agreement	In the case of a **User** other than the **DNO,** the bilateral agreement between the **TSO** and the **User**, which contains the detail specific to the **User**'s connection to the **Transmission System**.
Connection Conditions or **CC**	The part of the **Grid Code** which is identified as the **Connection Conditions**.
Connection Point	A **Bulk Supply Point** or a point at which a **User's Plant** and/or **Apparatus** connects to the **Transmission System**, which in the case of an **Interconnector** is the connection point specified in the relevant **Connection Agreement**.
Connection Site	A site containing a **Connection Point**.
Connection Charges	The **TSO's** charges to **Users** for connection to the **Transmission System**.
Constrained Group	A group of **Generating Units** located within a constrained part of the **System** as determined by the **TSO**.
Contingency Reserve	Has the meaning set out in OC3.

Contract Customer	A **Customer** whose terms of supply contain provisions enhancing its security of supply negotiated with **NIE Energy** in accordance with guidelines prepared by **NIE Energy** and approved by the **Authority** from time to time, insofar as such terms of supply include the right to be excluded, insofar as possible, from **Load** shedding.
Contracted Capacity	In relation to a **PPA CDGU**, the **NFL Capacity** of the **CDGU** which is set out in paragraph 2 of schedule 1 to the **Generating Unit Agreement** for that **CDGU** or in the relevant **System Support Services Agreement**, as that **NFL Capacity** may be amended from time to time in accordance with that **Generating Unit Agreement** or the relevant **Power Station Agreement** or **System Support Services Agreement**. In relation to a **PPA Open Cycle Gas Turbine CDGU** and/or a **CCGT Installation**, the **Contracted Capacity** figure is the lower figure set out in paragraph 2 of schedule 1 of the **Generating Unit Agreement** or paragraph 2 of schedule 1 of the relevant **System Support Services Agreement**, in each case being the higher of the two figures set out in paragraph 2 of Schedule 1.
Contracted Capacity (Coal)	In relation to a **PPA CDGU** which is capable of firing on two different **Designated Fuels**, the figure (expressed in **MW**) specified as such in paragraph 2 of schedule 1 to the relevant **Generating Unit Agreement** or in the relevant **System Support Services Agreement**.
Contracted Capacity (Peak)	In relation to a **PPA CDGU**, which is an **Open Cycle Gas Turbine CDGU** and/or a **CCGT Installation**, the figure (expressed in **MW**) specified as such (if any) in paragraph 2 of schedule 1 to the relevant **Generating Unit Agreement** (where it is the higher of the two figures set out in paragraph 2 of schedule 1) or in the relevant **System Support Services Agreement** (where it is the higher of the two figures set out in paragraph 2 of schedule 1).
Contracted Technical Parameters	In relation to a **PPA CDGU**, the values of Technical Parameters which are identical to those parameters set out in schedule 1 to the **Generating Unit Agreement** for that **CDGU**, which are there referred to as "**Contracted Operating Characteristics**", as those values are amended from time to time in accordance with that

	Generating Unit Agreement. In the case of a **CDGU** other than a **PPA CDGU**, the values of **Technical Parameters** which are identical to the parameters set out in the relevant **SSS Agreement** and referred to as "**SSS Parameters**", as those values are amended from time to time in accordance with that **SSS Agreement**.
Control Circuit Load Management	A direct **Load** management arrangement whereby certain separate domestic off peak **Loads** can be controlled by the **TSO** via radio teleswitch.
Control Facility	A location used for the purpose of **Monitoring**, control and operation of the **User's Plant** and **Apparatus** and for accepting **Dispatch Instructions** via **Electronic Interface**.
Control Person	The term used as an alternative to "**Safety Coordinator**" on the **Site Responsibility Schedule** only.
Control Phase	The **Control Phase** follows on from the **Programming Phase** and starts with the issue of the **Indicative Operations Schedule** for the next **Trading Day** and covers the period down to real time.
Controllable WFPS	A **WFPS** first connected to the **NI System** on or after 1 April 2005 whose wind turbines comprise a **Registered Capacity** of 5 **MW** or more.
Conversion Factors	The terms referred to at PC.A3.3.11.
Customer	A person to whom electrical power is provided (whether or not he is the same person as the person who provides the electrical power).
Customer Demand Management	Has the meaning set out in OC4.4.2.
Customer Voltage Reduction	A 3 or 6 per cent reduction of voltage supplied to all or any group of **Customers** on a particular part of the **NI System**.
Cycle Operating Mode	The **Open Cycle Mode** or combine cycle **Operating Mode** of a **CCGT Installation** which may need to be specified pursuant to a **Dispatch Instruction** under SDC2.4.2.4(j).
Data Registration Code or **DRC**	The part of the **Grid Code** which is identified as the **Data Registration Code**.
Declared Fuel	A fuel having the characteristics described in schedule 3 of the relevant **Generating Unit Agreement**.

Decremental Price	The marginal price at a particular **MW Output**, for decreasing **Energy** output (or increasing demand) by 1 **MWh**, once that unit has started to generate **Energy** (or increase **Demand**, as the case may be).
Decremental Price Quantity Pairs	**Decremental Prices** and their respective quantity ranges for **Generating Units**, **Demand Side Units** and **Aggregated Generating Units** as part of **Commercial Offer Data**.
Delivery Point	Has the meaning ascribed to it in the relevant **Generating Unit Agreement** or, in the case of a **CDGU** other than a **PPA CDGU, Controllable WFPS** or **Dispatchable WFPS**, in the relevant **Connection Agreement**.
Deload Break Point	The point at which due to technical reason a **Generating Unit** may need to pause during its **MW Output** reduction process.
De-Loaded	The condition in which a **Generating Unit** or **CCGT Installation**, as the case may be, has reduced or is not delivering electrical power to the **System** to which it is **Synchronised** and the terms "**De-Loading**" and "**De-Load**" shall be construed accordingly.
De-Loading Rate	The rate at which a **Generation Unit** or **Generating Unit** (as the case may be) reduces **MW Output** from **Minimum Generation** to zero when it is instructed to cease output. There are up to two possible **De-Loading** rates, which are referred to as **De-Loading Rate 1** and **De-Loading Rate 2**.
Demand	The amount of electrical power consumed comprising of **Active** and **Reactive Power** unless otherwise stated.
Demand Forecasts	For operational purposes, a forecast of Demand made pursuant to OC1. For planning purposes, a forecast of Demand made pursuant to the Planning Code.
Demand Side Unit	An **Individual Demand Site** or **Aggregated Demand Site** with a **Demand Side Unit MW Capacity** of at least 4 **MW**. The **Demand Side Unit** shall be subject to **Central Dispatch**.
Demand Side Unit Energy Profile	The estimated total **Energy** requirement for an **Individual Demand Site** or aggregated for each **Individual Demand Site** which form part of an

	Aggregated Demand Site for each ~~**Trading Period**~~**Imbalance Settlement Period** in the following **Trading Day** ~~**Optimisation Time Horizon** period~~ and which must be submitted to the **TSO** in the **Availability Notice** under SDC 1.4.1.2
Demand Side Unit MW Availability	The forecasted change in **Active Power** which can be achieved in one currency zone by a **Demand Side Unit** for each ~~**Trading Period**~~**Imbalance Settlement Period** in the following **Trading Day**~~**Optimisation Time Horizon** period~~ and which must be submitted by the **User** to the **TSO** in an **Availability Notice** under SDC1.4.1.2.
Demand Side Unit MW Capacity	The maximum change in **Active Power** that can be achieved by a **Demand Side Unit** on a sustained basis for the duration of the **Demand Side Unit's Maximum Down Time** by totalling the potential increase in on-site **Active Power Generation** and the potential decrease in on-site **Active Power Demand** at each **Individual Demand Site**.
Demand Side Unit MW Response	The proportion (in **MW**) of the **Demand Side Unit MW Capacity** that is delivered at a given time following a **Dispatch Instruction** from the **TSO**. This value will be zero unless dispatched by the **TSO**.
Demand Side Unit MW Response Time	The time as specified by the **Demand Side Unit Operator** in the **Technical Parameters** and is the time it takes for the **Demand Side Unit Operator** to be able to implement the **Demand Side Unit MW Response** from receipt of the **Dispatch Instruction** from the **TSO.**
Demand Side Unit Notice Time	The time as specified by the **Demand Side Unit Operator** in the **Technical Parameters** and is the time it takes for the **Demand Side Unit** to begin ramping to the **Demand Side Unit MW Response** from receipt of the **Dispatch Instruction** from the **TSO.**
Demand Side Unit Operator	A person who operates a **Demand Side Unit,** with a **Demand Side MW Capacity** not less than 4 **MW.**
Demand Side Unit Ramp Time	The time it takes for a **Demand Side Unit** to ramp to the **Demand Side Unit MW Response.** It is equal to the **Demand Side Unit MW Response Time** less the **Demand Side Unit Notice Time.**

Department	The Department of Enterprise, Trade and Industry.
Design and Operating Requirement	In relation to the **Grid Code**, a **Nominated Generating Unit Agreement** (and/or **Nominated Power Station Agreement**), a **SSS Agreement** and a **Connection Agreement**: (a) an express requirement of one of those documents as to the installation or operational capability of a specified item of **Plant** and/or **Apparatus**; (b) a requirement of one of those documents for the existence of procedures necessary to give effect to the matters listed in (a) above; or (c) an express provision in one of those documents as to any other particular operational requirement.
Designated Fuel	A type of fuel specified in the relevant **Generating Unit Agreement** as being a type of fuel which the **TSO** may instruct a **Generator** to burn in relation to a **CDGU** which is capable of firing both on coal (which may include a mixture of coal and oil) and on oil or on Gas or Distillate, as the case may be.
De-Synchronising	The act of taking a **Generating Unit** off the **NI System**, to which it has been **Synchronised**, and like terms shall be construed accordingly.
Detailed Planning Data	Data specified in Part 2 of the Appendix to the **Planning Code**.
Development	A modification relating to a **User's Plant** and/or **Apparatus** already connected to the **Transmission System** or the **Distribution System**.
Disconnect	The act of electrically separating **Users**' (and **Customers**') equipment from the **Transmission System** or **Distribution System** where relevant, and the terms "**Disconnection**" and "**Disconnecting**" shall be construed accordingly.
Dispatch	The issue by the **TSO** of instructions to a **Generator, Pumped Storage Generator**, **Interconnector Owner**, **Demand Side Unit Operator** or **Generator Aggregator** in respect of its **CDGU**, **Pumped Storage Plant Demand**, **Demand Side Unit, Aggregated Generating Units** or **Interconnector** ~~tranche~~ pursuant to

	SDC2 and the term "**Dispatched**" shall be construed accordingly."
Dispatch Characteristics	Those characteristics referred to in the relevant Table in the Appendix to Part A of OC11 or Part B of OC11 (as the context requires).
Dispatch Instruction	An instruction given by the **TSO** to a **CDGU**, **Demand Side Unit, Interconnector** ~~tranche~~ and/or **Pumped Storage Plant Demand** to that **User's** approved **Control Facility** to change the output, fuel or manner of operation of the **CDGU**, **Demand Side Unit**, **Interconnector** ~~tranche~~ and/or **Pumped Storage Plant Demand**. "**Instruct**" and "**Instructed**" shall be construed accordingly.
Dispatch Instruction Test Flag	The flag indicating that a **Dispatch Instruction** will not be deemed to be a **Dispatch Instruction** for settlement purposes, used when the **TSO** approves new or amended test proposals submitted by a **Generator** after **Gate Closure 2** (or there is insufficient time for the **TSO** to evaluate and approve the test proposal before **Gate Closure 2**) and as a result, the **Dispatch Instructions** issued by the **TSO** deviate from the **Final Physical Notifications**.
Dispatchable WFPS or DWFPS	A **Controllable WFPS** which must have a **Control Facility** in order to be dispatched via an **Electronic Interface** by the **TSO**.
Dispatched Fuel	The **Declared Fuel** which a **Generator** is instructed by the **TSO** in a **Dispatched Fuel Notice** or a **Dispatch Instruction** to use for the operation of a **CDGU** for the time being.
Distillate	Liquid fuel, as specified in the relevant schedule to a **Generating Unit Agreement**, or where there is no **Generating Unit Agreement**, as agreed with the **TSO**.
Distribution Code	The code in Northern Ireland of the same name.
Distribution Network Owner (DNO)	NIE acting in its capacity as owner of the **Distribution System**.
Distribution System	The electric lines within the Authorised Area, as defined in the licence held by the **DNO**, owned by the **Distribution Licensee** (but not, for the avoidance of doubt, any lines forming part of the transmission system or any **Interconnector**), and any other electric lines which the **Authority** may specify as forming part of the distribution system, together with (in each case) any **Plant** and

	Apparatus and/or meters owned or operated by the **DNO** used in connection with the distribution of electricity.
DNO Connection Agreement	The bilateral agreement between the DNO and the **DNO Demand Customer,** which contains the detail specific to the **DNO Demand Customer**'s connection to the **Distribution System.**
DNO Demand Customer	A person to whom electrical **Energy** is provided by means of a direct connection to the **Distribution System.**
DSU Short-term Synchronous Operating Mode	The operation of **Generating Unit**(s) at an **Individual Demand Site** of a **Demand Side Unit** where the **Generating Unit**(s) supplies **Demand Customer's** or **DSO Demand Customer's Load** while not **Synchronised** to the **Transmission System** or **Distribution System.** The **Generating Unit**(s) is (are) **Synchronised** to the **Transmission System** or **Distribution System** for short periods of time at **Start-Up** and **Shutdown** of the **Generating Unit**(s) to facilitate a smooth transfer of power.
Dwell Time Down	The duration for which the **Generating Unit** must remain at the **Dwell Time Down Trigger Point** during a change in its **MW Output** while ramping down between instructed **MW Output** and **Minimum Generation**.
Dwell Time Down Trigger Point	A constant **MW** level at which a **Generating Unit** must remain while ramping down between instructed **MW Output** and **Minimum Generation**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Dwell Time Up	The duration for which the **Generating Unit** must remain at the **Dwell Time Up Trigger Point** during a change in its **MW Output** while ramping up between **Minimum Generation** and instructed **MW Output.**
Dwell Time Up Trigger Point	A constant **MW** level at which a **Generating Unit** must remain while ramping up between **Minimum Generation** and instructed **MW Output.** There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.

Earthing	A way of providing a connection between conductors and earth by an **Earthing Device**.
Earthing Device	A means of providing a connection between a conductor and earth being of adequate strength and capability.
Electronic Interface	A system, in accordance with the requirements of the **TSO's** data system, at the **Control Facility**, providing an electronic interface between the **TSO** and a **User**, for issuing and receiving instructions, including **Dispatch Instructions**, as provided for in the **Grid Code** and established pursuant to an agreement between the **TSO** and the **User**.
Emergency Manual Disconnection	**Load** shedding carried out at short notice or no notice when a **Regulating Margin** cannot otherwise be achieved.
End of Restricted Range	The end point in **MW** of a **Forbidden Zone**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
End Point of Start Up Period	The time after which the rate of change of the **Generating Unit Output** is not dependent upon the initial **Warmth** of the **Generating Unit**.
Energy	The electrical energy produced, flowing or supplied by an electrical circuit during a time interval and being the integral with respect to time of the instantaneous power, measured in units of watt-hours or standard multiples thereof, for example: 1000Wh = 1kWh; 1000 kWh = 1 **MW**h; 1000 **MW**h = 1 GWh.
Energy Allowance	Has the meaning ascribed to that term in the relevant **Generator's Generating Unit Agreement**.
Energy Limit	The ~~target~~forecasted maximum amount of **Energy** that can~~to~~ be generated by an **Energy Limited Generating Unit** within the **Trading Day**.
~~**Energy Limit Factor**~~	~~A factor between zero and one, which is applied to the **Energy Limit** for use in calculating the scheduled **Energy** of **Energy Limited Generating Units** in the period between the end of the **Trading Day** and the end of the **Optimisation Time Horizon** period.~~

Energy Limit Period	The period during which an **Energy Limited Generating Unit** will be **Available** to generate.
~~**Energy Limit Start**~~	~~06:00 hours on the **Trading Day**.~~
~~**Energy Limit Stop**~~	~~06.00 hours on the day following the **Trading Day**.~~
Energy Limited Generating Unit	A **Hydro Unit** with a limit on the **Energy** it can deliver in a specified time period.
Event	Has the meaning set out in OC5.4.2.
Event Recorder	An electronic device that measures and records data at locations on the NI System.
Externally Interconnected Party	The operator of an electrical transmission or distribution system outside Northern Ireland which is connected to the **Transmission System** by an **Interconnector**.
Failure to Follow Notice to Synchronise Instruction	An instruction given by the **TSO** to a **Generator** in respect of its **CDGU** confirming that it has failed to **Synchronise** more than 5 minutes after the time specified in the **Notice to Synchronise**.
Failure to Reach Minimum Generation Instruction	An instruction given by the **TSO** to a **Generator** in respect of its **CDGU** confirming that it has **De-Synchronised** where it has tripped before reaching **Minimum Generation**.
Fast Acting	As specified in the relevant section of the **WFPS Settings Schedule**.
Final Outage Programme	The final **Outage** programme in respect of **CDGUs** and/or **Power Station Equipment** prepared by the **TSO** for Year 1 pursuant to OC2.6.3.
Final Physical Notification	In respect of an **Imbalance Settlement Period**, the last **Physical Notification** received for that **Imbalance Settlement Period** before **Gate Closure 2** for that **Imbalance Settlement Period**.
Final Report	Has the meaning set out in OC10.A.4.
Flexible Planned Outage	A **Planned Outage** which can at the request of the **TSO** be deferred by a period or advanced by a period (and the period for which it is planned (and therefore excluding any overrun), including the periods for which it may be advanced or deferred, shall be known as the **Flexible Planned Outage Period**).

Forbidden Zone	A **MW** range within which a **Generator** cannot operate in a stable manner due to an inherent technical limitation of the machine.
Force Majeure	Has the meaning ascribed to that term in the relevant **Generating Unit Agreement**.
Forced Outage	An **Outage** of a **CDGU** (including, in the case of a **CCGT Installation**, one or more **CCGT Modules** within it) as provided in OC2 or item of **Power Station Equipment** of which no notice can be given by the **Generator** to the **TSO**.
Forecast Minimum Generation Profile	The **User's** forecast of the average level of **Minimum Generation** for the **User's Plant** for each ~~**Trading Period**~~**Imbalance Settlement Period** in the **Trading Day**~~**Optimisation Time Horizon**~~.
Forecast Minimum Output Profile	The **User**'s forecast of the average level of minimum **MW Output** for a **Pumped Storage Plant** for each ~~**Trading Period**~~**Imbalance Settlement Period** in the **Trading Day**~~**Optimisation Time Horizon**~~.
Frequency	The number of alternating current cycles per second (expressed in Hertz) at which a **System** is running.
Frequency Control	The control of the **Frequency** on the **Total System**
Frequency Response Ramp Rate	The minimum rate of increase or decrease of **Active Power Output** of a **WFPS** when providing **Frequency Control**, as specified by the **TSO** from time to time in the **WFPS Settings Schedule** published on the SONI website (or such other place or by such other means as may be notified to the **Generator** from time to time).
Frequency Sensitive Mode	The operation of a **Generating Unit** whereby its generation level is varied automatically to compensate for variations in the **Frequency** of the **System**.
Frequency Transient	For the purposes of OC11 and the **Metering Code**, a period when the **NI System Frequency** is at or below 49.5 Hz.
Fuel Rate	Has the meaning ascribed to that term in the relevant **Generator's Generating Unit Agreement**.

Fuel Security Code	The Northern Ireland Fuel Security Code designated by the **Department** as a condition of licences granted under Article 10 of the **Order**.
Full Load	Maximum electrical output of a **Generating Unit** or **CCGT Installation** measured at the **Connection Point** or, in the case of a **Wind Farm Power Station**, the maximum electrical output of the **Wind Farm Power Station** at the power factor stated in the relevant **Connection Agreement** measured as at the **Connection Point** of the **Wind Farm Power Station** and depending, in the case of a **Generating Unit** which is capable of firing on two different **Designated Fuels**, on which **Designated Fuel** is being used to operate the **Generating Unit** but excluding **Maximum Generation**. In respect of a **PPA CDGU**, the **TSO** may take into account the **Conversion Factors** when **Dispatching** such a **CDGU**.
Fully Available	In relation to a **CDGU**, **Controllable WFPS** or **Dispatchable WFPS** (as the case may be) means **Available** to the **CDGU's Contracted Capacity** / **Registered Capacity** (**PPA** plant / non-**PPA** plant respectively) (or full output in the case of a **Controllable WFPS** or **Dispatchable WFPS** In relation to a **PPA Open Cycle Gas Turbine CDGU**, means **Available** to the **CDGU's Contracted Capacity (Peak)**.
Gas	The gas to be delivered in accordance with arrangements agreed between the **TSO** and the **Generator** from time to time or where there are no such arrangements, gas to fuel a **CCGT Installation**.
Gas Turbine Unit	A **Generating Unit** fuelled by **Gas** or distillate.
~~**Gate Closure**~~	~~10.00 hours on the day preceding the relevant **Trading Day** to which a notice relates.~~
Gate Closure 1	In respect of a **Trading Day**, 13.30 hours on the **Trading Day** prior to that **Trading Day.**
Gate Closure 2	In respect of an **Imbalance Settlement Period**, one hour before that **Imbalance Settlement Period.**
~~**Gate Window**~~	~~The period of time within which data transactions may be submitted and accepted for use in the associated market scheduling and pricing software run, as set out in the **TSC**. There are three **Gate Windows** and three corresponding **Trading Windows** associated with each **Trading Day**,~~

	~~denoted EA1 (Ex-Ante 1), EA2 (Ex-Ante 2), and WD1 (Within-day 1).~~
~~**Gate Window Closure**~~	~~The time prior to which data transactions may be submitted and accepted for use in the associated market scheduling and pricing software run, as set out in the **TSC.**~~
~~**Gate Window Opening**~~	~~The time after which data transactions may be submitted and accepted for use in the associated market scheduling and pricing software run, as set out in the **TSC.**~~
General Conditions or **GC**	The part of the **Grid Code** which is identified as the **General Conditions**.
Generating Plant	A **Power Station** subject to **Central Dispatch**
Generating Unit	Other than in the case of **Wind Farm Power Stations**, a turbine generator within a **Power Station**, together with all **Plant** and **Apparatus** at that **Power Station** up to the high voltage bushings at the **Generator Transformer** which relate exclusively to the operation of that turbine generator (which in the case of a steam turbine will include the boiler and heat exchanger and in the case of a gas turbine will include the gas generator/combustion turbine). In the case of **Wind Farm Power Stations**, a wind turbine generator within a **Wind Farm Power Station**, together with all **Plant** and **Apparatus** (including any step-up transformer) which relates exclusively to the operation of that wind turbine generator. It will be either a **Synchronous Generating Unit** or a **Non-Synchronous Generating Unit**.
Generating Unit Agreement	An agreement between a **Generator** and **NIE Energy** pursuant to which **NIE Energy** amongst other matters, agrees to purchase from the **Generator** electricity generated by a **CDGU.**
Generation Licence	A licence to generate electricity granted pursuant to Article 10(1)(a) of the **Order**.
Generation Planning Parameters	Those parameters listed in Appendix 2 of OC2.
Generator	A person who generates electricity under a **Licence** or exemption under the **Order** and who is subject to the **Grid Code** either by virtue of a **Licence** or exemption or pursuant to any agreement with the **TSO** or otherwise.
Generator Aggregator	A person who represents several **Generating Units**, each of which does not have a **Registered Capacity/Contracted Capacity** greater than 10 MW**MW** and the combined **Registered**

	Capacity/Contracted Capacity of which is equal to or greater than 4 **MW**, by in particular preparing notices under SDC1, in relation to those **Generating Units** and receiving **Dispatch Instructions** in relation to those **Generating Units** under SDC2. For the avoidance of doubt, a **Generator Aggregator** cannot aggregate a **Generating Unit** with an output equal to or above 10 **MW**.
Generator Performance Chart	A diagram which shows the **MW** and **Mvar** capability limits within which a **CDGU** or a **CCGT Module** within a **CCGT Installation** or a **Controllable WFPS** or **Dispatchable WFPS** will be expected to operate under steady state conditions in the formats set out in Appendix 1 to OC2, and which shows in addition, for a **Controllable WFPS** or **Dispatchable WFPS**, wind speed and direction against electrical output in **MW**, in "rose" format.
Generator Terminal	The stator terminals of a **Generating Unit**.
Generator Transformer	The main transformer for a **CDGU** through which that power passes from the **Generator Terminals** to the **NI System**.
Governor Droop	In relation to the operation of the governor of a **Generating Unit**, the percentage drop in **NI System Frequency** which would cause the **Generating Unit** under free governor action to change its output from zero to **Full Load**.
Governor Droop Test	In relation to a **CDGU** or **CCGT Module** within a **CCGT Installation**, a test of the **Governor Droop**.
Grid Code	The **Grid Code** prepared pursuant to the **TSO's Licence**, as from time to time revised in accordance with the **TSO's Licence**.
Grid Code Compliance Agreement	An agreement that a **User** whose **Plant** and **Apparatus** is connected to the **Distribution System** is required to enter into with the **TSO** pursuant to its connection agreement with the **DNO**, such agreement being in the form set out in Schedule 4 of the **Transmission Interface Agreement**.
Grid Code Review Panel	The panel with the functions set out in GC6.
High Voltage or **HV**	A voltage exceeding 650 volts.
Hot Cooling Boundary	The period of time, following **De-Synchronisation** of a **Generating Unit** after

	which the **Warmth State** transfers from being hot to being warm.
Hot Standby	In relation to a **Generating Unit**, a condition of readiness of the **Generating Unit's** boiler to enable the **Generating Unit** to be **Synchronised** to the **NI System** and attain an instructed output in a specified timescale.
Hot Start	Any **Synchronisation** of a **Generating Unit** that has previously not been **Synchronised** for a period of time shorter than or equal to its submitted **Hot Cooling Boundary**.
HV Apparatus	**High Voltage** electrical circuits forming part of a **System**.
Hydro Unit	A **Unit** which generates electricity from the movement of water excluding **Pumped Storage**.
Imbalance Settlement Period	A thirty minute period beginning on each hour or half hour.
Implementing Safety Co-ordinator	Has the meaning set out in OC6.4.2.6.
Incident Room	The focal point in the **TSO** or the **User**, as the case may be, for the communication of information between the **TSO** and the senior management representatives of **Users** relating to a **Joint System Incident**.
Incremental Price	The marginal price at a particular **MW Output**, for increasing **Energy** output (or reducing demand) by 1 **MWh**, once that unit has started to generate **Energy** (or reduce **Demand**, as the case may be).
Incremental Price Quantity Pairs	**Incremental Prices** and their respective quantity ranges for **Generating Units**, **Demand Side Units** and **Aggregated Generating Units** as part of **Commercial Offer Data**.
Independent Generating Plant	A **Power Station** which is not subject to **Central Dispatch** and is not a **Controllable WFPS.**
~~**Indicative Market Schedule**~~	~~The schedule prepared by the **Market Operator** pursuant to the **TSC.**~~
Indicative Operations Schedule	~~The~~A schedule prepared by the **TSO** in conjunction with the **Other TSO** pursuant to SDC1.4.8.1.
Individual Demand Site	A single premises of a **Customer** connected to the **Transmission System** or **Distribution System** with a **Demand Side Unit MW Capacity**.

Inflexible Planned Outage	A **Planned Outage** the **Start Date** and **Start Time** of which cannot be moved by the **TSO** under OC2.6.4(d) and which accordingly is designated as an **Inflexible Planned Outage** in the relevant **Outage** programme produced pursuant to OC2 (and the period for which it is planned (and therefore excluding any overrun) shall be known as the **Inflexible Planned Outage Period**).
Interconnector	Electric lines and electric **Plant** used for conveying electricity or provision of **Reserves** from outside both of Northern Ireland and the Republic of Ireland directly to or from a substation or converter station in either Northern Ireland or the Republic of Ireland.
Interconnector Filter	A device within an HVDC **Interconnector** which prevents the transmission of harmonics to the **Transmission System** to which that **Interconnector** is connected and which also provides a means of controlling the **Mvar** flow to and from that HVDC **Interconnector**.
Interconnector Owner	A person who owns an **Interconnector**.
~~**Interconnector User**~~	~~A **User** importing or exporting electricity through the **Interconnector,** but excluding a residual capacity holder as defined in the **TSC.**~~
Interested User	As defined in the **Metering Code**.
Inter-jurisdictional Tie Line	The lines, facilities and equipment that connect the transmission system of the Republic of Ireland to the transmission system of Northern Ireland.
Intermediary	The person representing a **Generating Unit** for the purposes provided for in the **TSC**.
Intertripping	A method of tripping a circuit breaker on receipt of a signal initiated from protection at another location.
~~**Intra-Day Trading**~~	~~The facilitation of trading of unallocated capacity on the **Interconnectors** within the **Trading Day** by means of additional **Gate Windows.**~~
Investigation	An investigation carried out by the **TSO** pursuant to OC11.7 in relation to a **Power Station** containing **PPA CDGUs** or an investigation carried out by the **TSO** pursuant to OC11.12 in relation to any other **User Sites** (as the context may require).

Isolating Device	A device for the purpose of rendering **Plant** and **HV Apparatus** either **Isolated** or disabled so that electrical energy cannot pass from the **Apparatus** (or, in the case of **Plant**, from the associated **Apparatus**) to the **HV Apparatus**.
Isolation	The disconnection of **HV Apparatus** from the remainder of the **System** in which that **HV Apparatus** is situated by means either of an **Isolating Device(s)** in the isolating position or adequate physical separation or sufficient gap or the disablement (by means of switching or dismantling) of **Plant** and/or **Apparatus** so that electrical energy cannot pass from the **Apparatus** (or, in the case of **Plant**, from the associated **Apparatus**) to the **HV Apparatus**, other than by an **Isolating Device** and "**Isolated**" shall be construed accordingly.
Joint Grid Code Review Panel	The Panel with the functions set out in GC7.
Joint System Incident	Has the meaning set out in OC7.6.1.
Large Demand Customer	A **Customer** which is connected to the **Transmission System**.
Lease	A lease entered into between the **TO** and a **Generator** with **PPA CDGUs** in respect of a **Power Station** containing such **CDGUs**.
Licence	A licence granted under the **Order**.
Licence Standards	The standards set out or referred to in Condition 20 of the **TSO Licence**.
Load	The **Active Power** or **Reactive Power**, as the context requires, generated, transmitted or distributed and all like terms shall be construed accordingly.
Load Management Arrangements	Arrangements made by agreement between a **Customer** and its **Supplier** whereby the **Customer** agrees to reduce the level of its **Demand** in accordance with that agreement.
Load Up Break Point Cold	The break point which defines the shared **MW** boundary between the two **Loading Rates Cold**. The first **Loading Rate Cold** applies from **Block Load** to the first **Load Up Break Point Cold**, the second **Loading Rate Cold** applies from the first **Load Up Break Point Cold** to the second **Load Up Break Point Cold**, the third **Loading Rate Cold** applies from the second **Load Up Break Point Cold** to the end point of the **Start-Up** period, which should be set equal to the **Minimum Generation**.

Load Up Break Point Hot	The break point which defines the shared **MW** boundary between the **Loading Rates Hot**. The first **Loading Rate Hot** applies from **Block Load** to the first **Load Up Break Point Hot**, the second **Loading Rate Hot** applies from the first **Load Up Break Point Hot** to the second **Load Up Break Point Hot,** the third **Loading Rate Hot** applies from the second **Load Up Break Point Hot** to the end point of the **Start-Up** period, which should be set equal to the **Minimum Generation**.
Load Up Break Point Warm	The break point which defines the shared **MW** boundary between the **Loading Rates Warm**. The first **Loading** rate applies from **Block Load** to the first **Load Up Break Point Warm**, the second **Loading Rate Hot** applies from the first **Load Up Break Point Warm** to the second **Load Up Break Point Warm**, the third **Loading Rate Warm** applies from the second **Load Up Break Point Warm** to the end point of the **Start-Up** period, which should be set equal to the **Minimum Generation**.
Loading Rate	The **Loading Rate Cold**, **Loading Rate Hot** or **Loading Rate Warm** as the case may be.
Loading Rate Cold	The rate at which a **Generating Unit** increases **Output** from **Block Load** to **Minimum Generation** when it is instructed to **Cold Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Loading Rate Hot	The rate at which a **Generating Unit** increases **Output** from **Block Load** to **Minimum Generation** when it is instructed to **Hot Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Loading Rate Warm	The rate at which a **Generating Unit** increases **Output** from **Block Load** to **Minimum Generation** when it is instructed to **Warm Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Local Safety Instructions	Instructions relating to each **TO Site** and each **User Site** approved by the relevant **TO** or **User's** Manager in accordance with OC6.4.1, setting down the methods of achieving the objectives of the **TO's** or the **User's** (as the case may be) **Safety**

	Rules to ensure the safety of personnel carrying out work or testing on **Plant** and/or **Apparatus** to which his **Safety Rules** apply and in the case of a **User**, any other document(s) on a **User Site** which contains rules with regard to maintaining or securing the isolating position of an **Isolating Device**, or maintaining a physical separation or sufficient gap, or the disablement (by means of switching or dismantling) of **Plant** and/or **Apparatus** so that electrical energy cannot pass from the **Apparatus** (or, in the case of **Plant**, from the associated **Apparatus**) to the **HV Apparatus**, other than by an **Isolating Device** or maintaining or securing the position of an **Earthing Device**.
Location	The electrical location on a **System**.
Low Frequency Relay	An electrical measuring relay intended to operate when its characteristic quantity **(Frequency)** reaches the relay settings by decrease in **Frequency**.
Low Voltage or **LV**	A voltage not exceeding 250 volts.
Margin	An appropriate **Operational Planning** margin, set by the **TSO**, of generating capacity over that required to meet **Demand**.
Market Operator	Shall have the meaning set out in the **TSC.**
Maximisation	An increase in **MW Output** above the **Contracted Capacity** (for **CDGU**s other than **Open Cycle Gas Turbines**) or **Contracted Capacity (Peak)** (for **PPA Open Cycle Gas Turbines**) or **Registered Capacity** (for non-**PPA** plant) up to the level of the **Short Term Maximisation Capability**, and the terms "**Maximise**" and "**Maximised**" shall be construed accordingly.
Maximisation Instruction	A **Dispatch** instruction issued by the **TSO** to the **Generator** to **Maximise** the **MW Output** of a **Generating Unit.**
Maximum Down Time	The maximum period of time during which **Demand Side Unit MW Response** at a **Demand Side Unit** can be greater than zero.
Maximum Export Capacity	The value (in **MW,** MVA, kW and/or kVA) provided in accordance with the **User's Connection Agreement** or **DNO Demand Customer**'s **DNO Connection Agreement.**
Maximum Generation	The operation of a **CDGU** to provide an output in excess of **Contracted Capacity** (for **CDGUs**

	other than **Open Cycle Gas Turbines**) or **Contracted Capacity (Peak)** (for **Open Cycle Gas Turbines** and **PPA CCGTs**) or **Registered Capacity** (for non-**PPA** plant).
Maximum Import Capacity	The values (kW and/ or kVA) provided in accordance with the **User's Connection Agreement** or **DNO Demand Customer**'s **DNO Connection Agreement**.
Maximum On Time	The maximum time that a **Generating Unit** can run following **Start Up**.
Maximum Ramp Down Rate	The maximum **Ramp Down Rate** of a **Demand Side Unit**. In the case of a **Demand Side Unit** which consists of an **Aggregated Demand Site** this shall be the aggregated maximum **Ramp Down Rate** of the **Individual Demand Sites**.
Maximum Ramp Up Rate	The maximum **Ramp Up Rate** of a **Demand Side Unit**. In the case of a **Demand Side Unit** which consists of an **Aggregated Demand Site** this shall be the aggregated maximum **Ramp Up Rate** of the **Individual Demand Sites**.
Maximum Storage Capacity	The maximum amount of **Energy** that can be produced from the reservoir of a **Pumped Storage Generator** for a **Trading Day.**
Medium Voltage or **MV**	A voltage exceeding 250 volts but not exceeding 650 volts.
Merit Order	An order, compiled by the **TSO** in conjunction with the **Other TSO** pursuant to SDC 1, of ~~**CDGUs, Controllable WFPSs, Demand Side Units, Pumped Storage Plant Demand** and **Aggregated Generating Units Price Sets** and/or **Interconnector Price Quantity Pairs** or **Price Quantity Pairs** of equivalent units in the Republic of Ireland.~~**Commercial Offer Data** sorted in price order.
Metering Code or **MC**	That part of the **Grid Code** identified as the **Metering Code**.
Minimum Demand Regulation (MDR)	That minimum margin of **Active Power** to provide a sufficient regulating margin for adequate **Frequency Control**.
Minimum Down Time	The minimum period of time during which **Demand Side Unit MW Response** at a **Demand Side Unit** can be greater than zero.

Minimum Off Time	The minimum time that must elapse from the time of a **Generating Unit Shut Down** before it can be instructed to **Start-Up.** In the case of **Demand Side Units,** the time that must elapse while the **Demand Side Unit MW Response** is at zero until the next delivery of **Demand Side Unit MW Response.**
Minimum On Time	The minimum time that must elapse from the time of a **Generating Unit Start-Up** before it can be instructed to **Shut Down**.
Minimum Storage Capacity	The minimum amount of **Energy** that must be produced from the reservoir of a **Pumped Storage Generator** for a **Trading Day.**
Minimum Generation	The minimum **MW Output** which a **Generating Unit** can generate continuously, registered with the **TSO** under SDC1 as a **Technical Parameter**.
Minor Test	An **Operational Test** with a total duration of less than 6 hours in any **Trading Day** or were the active energy produced during the total duration of the test is less than: (i) 3 times the **Active Energy** which would be produced by the **Test Proposer's Plant** during 1 hour of operation at the **Plant's Registered Capacity**; and ~~(i)~~(ii) 500 MWh.
Monitoring	Monitoring of **PPA CDGUs** carried out by the **TSO** pursuant to OC11.5 or monitoring of other **User's Equipment** carried out by the **TSO** pursuant to OC11.10 (as the context requires).
Monitoring Notice	A notice issued by the **TSO** to a **Generator** in respect of a **PPA CDGU** pursuant to OC11.5.3, informing the **Generator** that the **TSO** is **Monitoring** one of its **CDGUs** or a notice issued by the **TSO** to a **User** pursuant to OC11.10.2.3 informing the **User** that the **TSO** is **Monitoring** its **Relevant Plant**.
Narrow Tolerance Bands	Those tolerance bands referred to in Column 4 of the relevant Table in the Appendix to Part A of OC11 or the Appendix to Part B of OC11 (as the context requires).

NFL Capacity	The normal **Full Load** capability of a **CDGU** (expressed in **MW** and stated, where relevant, in relation to a **Designated Fuel**) to generate electricity (using, where relevant, that **Designated Fuel**), determined as at the **Connection Point**.
NI Demand	The **Demand** on the **NI System** less the output of **Independent Generating Plant**.
NI System	Together, the **Transmission System** and the **Distribution System.**
NIE Energy	NIE Energy Limited, a company incorporated under the laws of Northern Ireland with registered number NI 27394 whose registered office is situated at 120 Malone Road, Belfast and its successors and permitted assigns;
NIE plc	In relation to the period prior to 1 November 2007 in its then capacity as Transmission and Distribution System operator
No Load Cost	A price which forms part of **Commercial Offer Data** expressed in € or £/hour and which is invariant in the level of **MW Output** and which applies at all times when the level of **MW Output** is greater than zero.
Nominated Generating Unit Agreement	One of the following **Generating Unit Agreements** entered into between **NIE plc** (and subsequently transferred to **NIE Energy)** and the relevant **Generator** on the **Transfer Date** (which date was 1 April 1992), as amended from time to time: Agreements in respect of Kilroot Power Station: Gas Turbine Generating Unit GT1 Gas Turbine Generating Unit GT2 Agreements in respect of Ballylumford Power Station: Generating Unit No 4 CCGT Unit 10 CCGT Unit 20 Gas Turbine Generating Unit GT1 Gas Turbine Generating Unit GT2 Agreements in respect of Coolkeeragh Power Station: Gas Turbine Generating Unit GT8
Nominated Power Station Agreement	One of the following **Power Station Agreements** entered into between **NIE plc (**and subsequently transferred to **NIE Energy)** and the relevant

	Generator on the **Transfer Date** (which date was 1 April 1992), as amended from time to time: Kilroot Power Station Agreement Ballylumford Power Station Agreement Coolkeeragh Power Station Agreement
~~**Nomination Profile**~~	~~The profile of the **MW Output** intended for a **Generating Unit** in respect of each **Trading Period** in the **Trading Day** as submitted under the **TSC**.~~
Non-Centrally Dispatched Generating Units (NCDGU)	A **Generating Unit** not subject to **Central Dispatch**.
Non-Synchronous Generating Unit	A **Generating Unit** which is connected but not **Synchronised** to the **NI System** with or without electronic converters either direct or through a rectifier/inverter link.
Notice to Synchronise	A **Dispatch Instruction** given by the **TSO** to a **Generator** requiring a **CDGU** to **Synchronise** to the **NI System**.
Notified Unplanned Outage	An **Outage** which has not been planned in advance under OC2, but of which some notice can be given by the **Generator** to the **TSO**.
Open Cycle Gas Turbine Unit	A **Generating Unit** driven by a gas turbine other than a **CCGT Installation** or **CCGT Module**.
Open Cycle Mode	The mode of operation of a **CCGT Installation** where only the **Gas Turbine Unit** is operational (i.e. without operation of any associated **Steam Turbine Units**).
Operating Code or **OC**	That part of the **Grid Code** which is identified as the **Operating Code**.
Operating Margin	**Contingency Reserve** and **Operating Reserve**.
Operating Mode	An **Operating Mode** of a **Generating Unit** is a pre-defined method of operating that **Generating Unit**, as agreed between the **TSO** and the **User**.
Operating Reserve	The additional output from **Generating Plant** and/or the reduction in **Demand** which must be realisable in real time operation to respond in order to contribute to containing and correcting any **NI System Frequency** deviation to an acceptable level in the event of a loss of generation or a loss of import from an **Interconnector** or mismatch between generating output and **Demand**.

Operating Security Standard	The standard referred to in Condition 21 of the TSO **Licence**.
Operation	Has the meaning set out in OC5.4.1.
Operational Effect	Has the meaning set out in OC5.4.3.
Operational Metering	Has the meaning ascribed to it in the MC.
Operational Planning	The process carried out by the **TSO** in accordance with OC2 which involves planning through various timescales, the matching of generating capacity with forecast **NI Demand** together with a reserve of generation to provide the **Margin** taking into account **Outages** of **CDGUs** and **Power Station Equipment** and **Outages** of and constraints on parts of the **NI System,** and taking into account the output of **Independent Generating Plant** and **Interconnectors,** in order to maintain the security and integrity of the **NI System**.
Operational Planning Phase	The period from 1 week to the end of the third year ahead of real time operation.
Operational Procedures	Management instructions and procedures, both in support of the **Safety Rules** and for the local and remote operation of **Plant** and/or **Apparatus** at or from a **Connection Site**.
~~**Optimisation Time Horizon**~~	~~The time period from and including 06:00 hours on the relevant **Trading Day** up to but not including 12:00 hours on the subsequent **Trading Day**.~~
Order	The Electricity (Northern Ireland) Order 1992.
Other Authority	The Commission for Energy Regulation in the Republic of Ireland.
Other Grid Code	The code prepared by the **Other TSO** pursuant to section 33 of the Electricity Regulation Act 1999 of the Republic of Ireland, and approved by the relevant regulatory authority, as from time to time revised, amended, supplemented or replaced with the approval of or at the instance of the relevant regulatory authority.
Other Relevant Data	The data from a **User** referred to in SDC1.4.4.4.
Other Transmission System	The transmission system operated by the **Other TSO** in the Republic of Ireland.
Other TSO	The holder of a licence granted pursuant to Section 14 of the Electricity Regulation Act 1999 in the Republic of Ireland to operate a **Transmission System.**

Outage	In relation to a **Generating Unit**, a total or partial reduction in **Availability** in connection with the repair or maintenance of the **Generating Unit** or any associated **Power Station Equipment**, or resulting from a breakdown or failure of the **Generating Unit** or any associated **Power Station Equipment**. In relation to a **Demand Side Unit** or a **Large Demand Customer**'s site, a total or partial change in **Demand Side Unit MW Capacity** in connection with the repair or maintenance of the **Demand Side Unit** or **Large Demand Customer's** unit or any associated equipment or resulting from a breakdown or failure of the **Demand Side Unit** or **Large Demand Customer's** site or any associated equipment. In relation to the **TSO,** the removal for repair or maintenance, or as a result of failure or breakdown, of any part of the **Transmission System**. In relation to the **DNO**, the construction, the removal for repair or maintenance, or as a result of failure or breakdown, of any part of the distribution lines at 33kV on the **Distribution System**.
Outage Notice	A notice submitted by a **User** under OC2 notifying the **TSO** of an **Unplanned Notified Outage**.
Output	The actual **Active Power** output in **MW** of a **Generating Uni**t as at the **Connection Point** derived from data measured pursuant to the **Metering Code**. In respect of a **PPA CDGU**, the **TSO** may take into account the **Conversion Factors** when **Dispatching** such a **CDGU**.
Overburn Contracted Capacity	In relation to a **CDGU** which is capable of firing on two different **Designated Fuels**, the figure (expressed in **MW**, measured as at the **Connection Point**) identified in schedule 1 to the relevant **Generating Unit Agreement** as "**Overburn Contracted Capacity**".
Ownership Diagram	A diagram created pursuant to CC9.1.4 and prepared following the principles set out in Appendix 2 to the CC.
Partial Shutdown	The same as a **Total Shutdown** except that all generation has ceased in a separate part of the **Total System** and there is no electricity supply across any **Interconnector** or **Inter-jurisdictional Tie Line** or other parts of the **Total System** to that part of the **Total System** and, therefore, that part of the **Total System** is shutdown, with the result that it is not possible for

	that part of the **Total System** to begin to function again without the **TSO's** directions relating to a **Black Start**.
Physical Notifications	A declaration submitted by certain **Users** in accordance with SDC1.4.4.6 and the **TSC** indicating expected **MW Output** profile or **Active Power Demand** profile. **Physical Notifications** shall not take account of any **Dispatch Instructions** already issued to the **User**.
Planned Manual Disconnection	**Load** shedding carried out when it is known in advance that a **Regulating Margin** cannot otherwise be achieved.
Planned Outage	An **Outage** which has been planned in advance of the year in which it is to be taken under **OC2** (and which does not therefore include any overrun of the **Outage**), which may be either a **Flexible Planned Outage** or an **Inflexible Planned Outage**.
Planning Code or **PC**	That part of the **Grid Code** which is identified as the **Planning Code**.
Plant	Fixed and movable items other than **Apparatus**.
Post Event Notice	A notice issued by the **TSO** pursuant to OC11, re-declaring the **Availability** or **Technical Parameters** of a **CDGU**.
Power Islands	Has the meaning set out in OC7.4.6.2.
Power Procurement Manager	**NIE Energy** in its role as **Power Procurement Manager** in accordance with its **Supply Licence**.
Power Station	An installation comprising one or more **Generating Units** (even where sited separately) owned and/or controlled by the same **Generator,** which may reasonably be considered as being managed as one power station or, as the case may be, one **Wind Farm Power Station.**
Power Station Agreement	An agreement so entitled between a **Generator** and **NIE Energy** relating to a **Power Station** of the **Generator** as a whole.
Power Station Equipment	Items of **Plant** in a **Power Station** which are integral to the operation of a **CDGU**, **Controllable WFPS** and/or **Dispatchable WFPS** but which are not used exclusively in the operation of such **CDGU**, **Controllable WFPS** and/or **Dispatchable WFPS**, the **Outage** of which will, or is likely to (when, for example, taken together with other **Power Station Equipment Outages**), reduce the level of **Availability** of a **CDGU**, **Controllable WFPS** and/or **Dispatchable WFPS**.

PPA CCGT Installation	A **CCGT Installation** which is subject to a **Nominated Generating Unit Agreement** which is an amendment to that at the **Transfer Date** to the extent it continues to be so subject, which agreement being made between **NIE Energy** on the one hand and Premier Power Limited on the other.
PPA CDGU	A **CDGU** which is subject to a **Nominated Generating Unit Agreement** as at the **Transfer Date** to the extent it continues to be so subject, which agreement being made between **NIE Energy** on the one hand and Kilroot Power Limited, Premier Power Limited or Coolkeeragh ESB Limited on the other.
PPA Generation	Includes **PPA CDGUs** and **PPA CCGT Installations**.
Preliminary Notice	Has the meaning ascribed to it in OC10.A.1.2.
Preliminary Project Planning Data	Has the meaning set out in PC6.4.2.
~~**Price Quantity Pairs**~~	~~**Incremental Prices** and their respective quantity ranges for **Generating Units, Demand Side Units, Aggregated Generating Units** and **Interconnector** tranches as part of **Commercial Offer Data**.~~
Price Sets	The **Incremental Price Quantity Pairs**, **Decremental Price Quantity Pairs**, **Start-up Costs**, **Shutdown Costs** and **No Load Costs** submitted by a **User** under SDC1.
Primary Operating Reserve	The automatic response to **NI System Frequency** changes released increasingly from the time of **Frequency** change and fully available by 5 seconds, and, subject to the agreed **Unit Load Controller** adjustment where applicable, must be sustainable until at least 15 seconds from the time of **Frequency** change.
Priority Dispatch	The **Dispatch** given priority, as afforded under governing legislation in either jurisdiction.
Programming Phase	The period between the **Operational Planning Phase** and the **Control Phase**.
Proposal Notice	Has the meaning ascribed to it in OC10.4.1.2.
Protected Customer	A **Customer** other than a **Contract Customer** in relation to whom, in accordance with guidelines prepared by its **Supplier** and approved by the **Authority**, **Load Shedding** shall, so far as possible, not be exercised.

Protection	Equipment for detecting abnormal conditions on a **System** and initiating fault clearance and activating alarms and indications.
Provisional Outage Programme	The provisional **Outage** programme in respect of **CDGUs** and/or **Power Station Equipment** prepared by the **TSO** for Years 2 and 3 pursuant to OC2.6.2.
Prudent Operating Practice	In relation to a **User** or the **TSO**, the standard of practice attained by exercising that degree of skill, diligence, prudence and foresight which could reasonably be expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances.
Pumped Storage Generation	A **Pumped Storage Plant** in its operation of producing **Energy** by releasing water from an upper reservoir.
Pumped Storage Generator	A **Generator** which owns and/or operates any **Pumped Storage Plant**.
Pumped Storage Plant	A **Generation Plant** that produces **Active Energy** using water from an upper reservoir and consumes **Energy** by pumping water up to the same reservoir.
Pumped Storage Plant Demand	A **Pumped Storage Plant** in its operation of consuming **Energy** by pumping water to an upper reservoir.
Ramp Down Break Point	The **MW** level at which the **Ramp Down Rate** changes. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Ramp Down Rate	The maximum rate of decrease in a **Generating Unit**'s **Output**. The **Ramp Down Rate** applies over the output range from its **Contracted Capacity** (for **PPA CDGU**s other than **PPA Open Cycle Gas Turbines**) or **Contracted Capacity (Peak)** (for **PPA Open Cycle Gas Turbines**) or **Registered Capacity** (for non-**PPA** plant) to **Minimum Generation**. The rate of change may not depend upon the initial **Warmth** of the plant but may depend on the **MW Output**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Ramp Up Break Point	The **MW** level at which the **Ramp Up Rate** changes. There may be circumstances where more

	than one parameter applies and this is indicated by adding a number at the end of the parameter.
Ramp Up Rate	The maximum rate of increase in a **Generating Unit**'s **Output**. This rate of increase continues until the **Generating Unit** reaches the level of output instructed by the control room operator of its **Contracted Capacity** (for **PPA CDGU**s other than **PPA Open Cycle Gas Turbines**) or **Contracted Capacity (Peak)** (for **PPA Open Cycle Gas Turbines**) or **Registered Capacity** (for non-**PPA** plant). The rate of increase may not depend upon the initial **Warmth** of the plant but may depend on the **MW Output**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Reactive Power or **Mvar**	The product of voltage and current and the sine of the phase angle between them measured in units of volt-amperes reactive and standard multiples thereof, i.e.: 1000 var = 1 kvar 1000 kvar = 1 Mvar
Record of Inter-System Safety Precautions or RISSP	The procedures set out in OC6.4.3.
Re-declaration	Notification to the **TSO** by the **User** of any revisions to data, pursuant to SDC1.4.5.
Registered Capacity	The normal **Full Load** capacity of a **Generating Unit** in **MW** measured as at the **Connection Point** and in relation to a **Wind Farm Power Station,** the normal **Full Load** capacity of the collection of one or more wind turbines, each being a **Generating Unit,** in **MW** measured as at the **Connection Point** of the **Wind Farm Power Station.**
Registered Project Planning Data	Has the meaning set out in PC6.4.4.
Regulating Margin	The margin of generating capacity that is **Synchronised** over **Demand** which is required in order to maintain **Frequency Control**.
Replacement Reserve	The additional **MW** output (and/or reduction in **Demand** required compared to the pre-**Event** output (or **Demand)** which is fully available and sustainable from 20 minutes to 4 hours following an **Event**.
Requesting Safety Coordinator	Has the meaning set out in OC6.4.2.5.

Reserve Characteristics	The **MW** level of reserve available at any given **MW Output** of a **CDGU** as set out in the **Sustained Load Diagram**.
Responsible Engineer/Operator	A person nominated by a **User** to be responsible for control of the **User's System**.
Responsible Manager	A manager who has been duly authorised by a **User** or the **TSO** to sign **Site Responsibility Schedules** on behalf of that **User** or the **TSO**, as the case may be.
Re-Synchronisation	The act of achieving the state where the **Frequencies** and phase relationships of parts of the **Total System** are identical.
RISSP-A and **RISSP-B**	Have the meanings set out in OC6.4.3.2.
Rota Load Shedding	Planned **Disconnection** of **Customers** on a rota basis during circumstances when there is a significant shortfall of generation required to meet the total **Demand** for a protracted period.
RTS Notice	Has the meaning ascribed to it in OC2.6.8.1.
Safety Co-ordinator	Has the meaning set out in OC6.4.2.
Safety from the System	That condition which safeguards persons working or testing **HV Apparatus** from the dangers which are inherent in working on items of **HV Apparatus**.
Safety Precautions	Has the meaning set out in OC6.5.1.
Safety Rules	The rules and procedures (as amended or re-stated from time to time) of the **TSO** or a **User** to ensure **Safety From The System**.
Schedule Day	The period from 0000 hours until 2400 hours on the same day.
Schedule Week	The period from 0000 hours on Saturday of any week until 2400 hours on the next following Friday.
Scheduling	The process of compiling an **Indicative Operations Schedule** as set out in SDC1, and the term "**Scheduled**" and like terms shall be construed accordingly.
Scheduling and Dispatch Code (SDC)	The parts of the **Grid Code** which specify the **Scheduling** and **Dispatch** process.

Secondary Operating Reserve	The additional **MW Output** (and/or reduction in Demand) compared to the pre-incident **Output** (or **Demand**) which is fully available and sustainable over the period from 15 to 90 seconds following an **Event**.
Secretary of State	The Secretary of State for Business, Enterprise and Regulatory Reform.
Sections Under Common Governance	In order to support the efficient running of the **Single Electricity Market** certain sections of the **Grid Code** and the **Other Grid Code** are under common governance. Modifications and derogations to these sections of the **Grid Code** will effectively require agreement and direction from the **Authority** and the **Other Authority** and the **TSOs**. SDC1 and SDC2 are **Sections Under Common Governance**.
Shipping Agent	In relation to an **Interconnector**, a person appointed by the Regulatory Authorities to perform the role of the shipping agent (within the meaning of the EU Guideline on Capacity Allocation and Congestion Management in respect of the **Interconnector**.
Short Notice Re-declaration	A **Re-declaration** where changes apply to values relating to ~~**Trading Period**~~**Imbalance Settlement Period**s occurring within 4 hours of receipt by the **TSO** of the **Re-declaration.**
Short Term Maximisation Capability	The capability of a **Generating Unit** to deliver, for a limited duration of time, **MW Output** greater than its **Contracted Capacity** (for **PPA CDGU**s other than **Open Cycle Gas Turbines or CCGT**s) or **Contracted Capacity (Peak)** (for **PPA Open Cycle Gas Turbines** and **PPA CCGT**s) or **Registered Capacity** (for non-**PPA** plant).
Short Term Maximisation Time	The time that the **Short-Term Maximisation Capability** could be maintained.

Short Term Planned Maintenance Outage **STPM Outage**	An **Outage** designated as an **STPM Outage** in or accordance with OC2.6.4(e) (the duration of which shall not, unless the **TSO** in its absolute discretion agrees, exceed 72 hours) but not including any overrun of such **Outage**.
Shutdown	The condition of a **Generating Unit** where the generator rotor is at rest or on barring.
Shutdown Cost or **Shut Down Cost**	The costs associated with shutting down a **Demand Side Unit**.
Significant Incident	Has the meaning set out in OC5.4.6.3.
Significant Test	A **Test** with a total duration of equal to or greater than 6 hours, or where the **Active Energy** produced during the total duration of the test is equal to or greater than: (i) 3 times the **Active Energy** which would be produced by the **Test Proposer's Plant** during 1 hour of operation at the **Plant's Registered Capacity**; or ~~(i)~~(ii) 500 MWh
Single Electricity Market (SEM)	The wholesale all-island single electricity market established and governed pursuant to the relevant legislation and the **TSC**.
Site	A **User Site**, a **TSO Site** or a **TO Site**, as the case may be.
Site Responsibility Schedule	A schedule prepared by the **TSO** and the **TO** and signed by both parties detailing the division of responsibilities at **Connection Sites** towards the ownership, control, operation and maintenance of **Plant** and **Apparatus** and the safety of personnel at the **Connection Site**. The format, principles and basic procedure to be used in the preparation of **Site Responsibility Schedules** are set down in Appendix 1 to the CC.
Soak Time Cold	The duration of time for which the **Generating Unit** must remain at the **Soak Time Trigger Point Cold** during a **Cold Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.

Soak Time Hot	The duration of time for which the **Generating Unit** must remain at the **Soak Time Trigger Point Hot** during a **Hot Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Soak Time Trigger Point Cold	A constant **MW** level at which a **Generating Unit** must remain while loading up between **Block Load** and **Minimum Generation** after a **Cold Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Soak Time Trigger Point Hot	A constant **MW** level at which a **Generating Unit** must remain while loading up between **Block Load** and **Minimum Generation** after a **Hot Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Soak Time Trigger Point Warm	A constant **MW** level at which a **Generating Unit** must remain while loading up between **Block Load** and **Minimum Generation** after a **Warm Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Soak Time Warm	The duration of time for which the **Generating Unit** must remain at that **Soak Time Trigger Point Warm** during a **Warm Start**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Special Actions	Those actions referred to in SDC2.4.3.
Special Protection Scheme	A control or protection scheme to facilitate system operation by the intertripping of circuit breakers or other control actions.
Spinning Reserve	The operation of a **CDGU** whereby it lifts **Load** during and sustains it following a **Frequency Transient**.
Spinning Reserve Capability	The ability of a **CDGU** to provide **Spinning Reserve**.
Spinning Reserve Monitor	An on-line monitor which predicts the **Spinning Reserve Capability** of a **CDGU**.

Spinning Reserve Response	The increase in **MW Output** of a machine, with time, that results from its response to a decrease in **System Frequency**.
Standard Planning Data	Data specified in Part I of the Appendix to the **Planning Code**.
Standard Time	The time derived from the Caesium Atomic Clock at Anthorn, England.
Standing Instruction	An instruction for a specified action notified to a **Generator** in advance by the **TSO** whereby, when the specified circumstances arise (which will be capable of being known by the **Generator**), the **Generator** will take the specified action as though a valid instruction had been issued by the **TSO**.
Standing Technical Offer Data	Technical offer data provided on registration to the **TSC**, and updated in accordance with the **TSC**, by a **User** of each of its **Units** in accordance with the **TSC**.
Start Date	The date on which an **Outage** is to begin.
Start of Restricted Range	The start point in **MW** of a **Forbidden Zone**. There may be circumstances where more than one parameter applies and this is indicated by adding a number at the end of the parameter.
Start-Up	The action of bringing a **Generating Unit** from **Shutdown** to the speed required by the **Generating Unit** to enable it to be **Synchronised** to a **System**.
Start-Up Cost	The costs associated with **Start-Ups**.
Start Time	The time at which an **Outage** is to begin.
Steam Turbine Unit	A **Generating Unit** driven by a Steam Turbine.
Substation	An assemblage of equipment including any necessary housing for the conversion, transformation or control of electrical power.
Substitute Reserve	The additional **MW** output (and/or reduction in **Demand**) required compared to the pre-**Event** output (or **Demand**) which is fully available and sustainable from 4 hours to 24 hours following an **Event**.
Supplier	A holder of a **Supply Licence**.
Sustained Load Diagram	The diagram(s) setting out the reserve capability of a **CDGU** submitted to the **TSO** pursuant to the

	PC and, in the case of a **PPA CDGU** annexed to schedule 8 of the **Generating Unit Agreement** for that **CDGU and**, in the case of a non-**PPA CDGU** annexed to the **System Support Services Agreement** for that **CDGU.**
Sustained Response	Has the meaning set out in OC11.5.5.
Sustained Response Capability	Has the meaning set out in OC11.5.5.
Sustained Response Test	A test carried out by the **TSO** pursuant to the provisions of OC11.6.2.
Synchronised	The condition where an incoming **Generating Unit** or **System** is connected to another **System** so that the **Frequencies** and phase relationships of that **Generating Unit** or **System**, as the case may be, and the **System** to which it is connected are identical and all like terms shall be construed accordingly.
Synchronous Compensation	The operation of rotating synchronous **Apparatus** for the specific purpose of either the generation or absorption of **Reactive Power**.
Synchronous Generating Unit	A **Generating Unit** which is connected and **Synchronised** to the **NI System**.
Synchronous Start-Up Time Cold	The time taken to bring a **Generating Unit** to a **Synchronised** state from a **Cold** (**De-Synchronised**) state.
Synchronous Start-Up Time Hot	The time taken to bring a **Generating Unit** to a **Synchronised** state from a **Hot** (**De-Synchronised**) state.
Synchronous Start-Up Time Warm	The time taken to bring a **Generating Unit** to a **Synchronised** state from a **Warm** (**De-Synchronised**) state.
System	Any **User System** and/or the **NI System** as the case may be.
System Operator Agreement (SOA)	The agreement of the same name entered into by the **TSO** and the **Other TSO**.
System Outage Plan	As defined in OC2.8.
System Support Services	Has the meaning set out in Condition 1 of the **TSO Licence**.
System Support Services Agreement	An agreement between the **TSO** and a **Generator**,

("SSS Agreement")	and in the case of **PPA CDGU**s between the **TSO** and **NIE Energy**, for the provision by a **Generator** of **System Support Services**, which includes **Ancillary Services**.
System Tests	Has the meaning set out in OC10.1.1.
Target Frequency	That **Frequency** determined by the **TSO**, in its reasonable opinion, as the desired operating **Frequency** of the **Total System**. This will normally be 50.00Hz plus or minus 0.05Hz, except in exceptional circumstances as determined by the **TSO**, in its reasonable opinion when this may be 49.90 or 50.10Hz.
~~**Target Reservoir Level Percentage**~~	~~As defined in the **TSC**.~~
~~**Target Reservoir Levels**~~	~~Part of the **Commercial Offer Data** for a **Pumped Storage Generating Unit** and means the target level of the reservoir for the end of the **Trading Day**.~~
Technical Parameters	Those parameters listed in Appendix A to SDC1.
Technical Parameters Notice	A notification as submitted under SDC1.4.4.1.
Tertiary Operating Reserve band 1	The additional **MW** output required compared to the pre-**Event** output which is fully available and sustainable from 90 seconds to 5 minutes following an **Event**.
Tertiary Operating Reserve band 2	The additional **MW** output required compared to the pre-**Event** output which is fully available and sustainable from 5 minutes to 20 minutes following an **Event**.
Test Co-ordinator	Has the meaning set out in OC10.A.1.1.
Test Panel	A panel, whose composition is detailed in the **Appendix** to OC10, which is responsible for various matters including considering a proposed **System Test** and preparing a **Test Programme**.
Test Programme	Has the meaning set out in OC10.4.4.1.
Test Proposer	Has the meaning set out in OC10.4.1.4.
Testing	Testing of **PPA CDGUs** carried out by the **TSO** pursuant to OC11.6 or testing of **User's Equipment** other than **PPA CDGUs** pursuant to OC11.11 (as the context requires) and the term "**Test**" shall be construed accordingly.

Thermal Plant	A **Generating Unit** that uses any source of thermal **Energy**.
TO Site	A site owned (or occupied pursuant to a lease, licence or other agreement) by the **TO** in which there is a **Connection Point**. For the avoidance of doubt a site owned by a **User** but occupied by the **TO** as aforesaid, is a **TO Site**.
Tolerance Band	The relevant tolerance allowed in **Monitoring** of **PPA CDGUs** under OC11.5 or the relevant tolerance allowed in **Monitoring** non-**PPA CDGUs** under OC11.10.2 (as the context requires) when determining whether **Dispatch Instructions** are being complied with, being either a **Wide Tolerance Band** or a **Narrow Tolerance Band.**
Total Shutdown	The situation existing when all generation has ceased and there is no electricity supply across any **Interconnector** and, therefore, the **Total System** has shutdown with the result that it is not possible for the **Total System** to begin to function again without the **TSO's** directions relating to a **Black Start**.
Total System	Together, the **NI System** and all **User Systems** in Northern Ireland.
Trading and Settlement Code (TSC)	The Single Electricity Market Trading and Settlement Code adopted by the **Market Operator** and approved by the by the **Authority** and the **Other Authority**.
Trading Day	A 24-hour period combining forty-eight 30 minute ~~**Trading Period**~~**Imbalance Settlement Period**s (except on the clock change days in spring and autumn when the period will be 23 and 25 hours respectively with forty-six and fifty 30 minute ~~**Trading Period**~~**Imbalance Settlement Period**s respectively). Each **Trading Day** commences at 23.00~~06.00~~ hours. For **PPA CDGUs** references to **Trading Day** in the **Scheduling and Dispatch Code** shall be read as if they were references to **Schedule Day** for the purposes of the **Power Station Agreements** and **Generating Unit Agreements**.
~~**Trading Period**~~	~~A thirty minute period beginning on each hour or half hour.~~
~~**Trading Window**~~	~~This is the contiguous number of **Trading Periods**, excluding the starting overlap optimisation period and ending overlap~~

	~~optimisation period, for which the relevant market scheduling and pricing software run will determine the market schedule quantities.~~
Transfer Date	Such date as may be appointed by the Department of Enterprise Trade and Investment by order under Article 69(3) of the **Order**.
Transmission System Capacity Statement	The statement in respect of the **Transmission System** which the **TSO** is required to prepare pursuant to paragraph 1, Condition 33, of the **TSO Licence**.
Transmission Interface Agreement (TIA)	The agreement of the same name entered into by the **TO** and the **TSO.**
Transmission Owner (TO)	Northern Ireland Electricity plc in its capacity as the owner of the **NI System**.
Transmission System	The **System** consisting (wholly or mainly) of high voltage electric lines and cables operated by the **TSO** for the purposes of transmission of electricity from one **Power Station** to a sub-station or to another **Power Station** or between sub-stations or to or from any **Interconnector** including any **Plant** and **Apparatus** and meters owned or operated by the **TSO** or **TO** in connection with the transmission of electricity.
Transmission System Operator (TSO)	The holder of the **Licence** granted pursuant to Article 10(1)(b) of the **Electricity (Northern Ireland) Order 1992** to operate a **Transmission System**.
Transmission Use of System Agreement	An agreement between the **TSO** and a **User** setting out the terms relating to use of the **All Island Transmission Networks**.
TSO Control Centre	A location used for the purpose of control and operation of the **Transmission System** which, as at the **Transfer Date**, is at Castlereagh House, but which may be moved. Notice will be given to relevant **Users** if a move should take place.
TSO Financial Year	For the purposes of OC1.4.1, means the period from 1st October in each year to 30th September in the next following year.
TSO Licence	A **Licence** authorising a **TSO** to carry out electricity transmission activities, granted either pursuant to Article 10(1)(b) of the Electricity (Northern Ireland) Order 1992 in Northern Ireland

	or pursuant to section 14 of the Electricity Regulation Act 1999 in the Republic of Ireland.
24 Hour Recall	An agreement between the **TSO** and a **Generator** whereby a **CDGU** subject to a **Notified Unplanned Outage** may be recalled by the **TSO** upon giving 24 hours notice to the **Generator**.
~~**Under Test Flag**~~	~~The flag indicating the under test status accorded to certain **Generating Units** by the **TSO** in accordance with the relevant **Grid Code.** Under test in accordance with the **TSC** is subject to the requirements both that the **Market Operator** has verified the status with the **TSO** and that the relevant **Unit** is so permitted as set out in the **TSC.**~~
Unit Load Controller	A device which regulates the generation level when the **Generating Unit** is operating in **Frequency Sensitive Mode** to ensure (as far as possible) that it does not exceed or fall short of previously set limits.
Use of System Charges	The **TSO**'s charges to users for use of the **All Island Transmission Networks.**
User	A term utilised in various sections of the **Grid Code** to refer to the persons having to comply with a particular section of the **Grid Code**.
User Site	A site owned (or occupied pursuant to a lease, licence or other agreement) by a **User** (which in the case of an **Aggregator**, means the combination of the individual **Aggregated Generating Unit** or **Aggregated Demand Side Unit** sites as the case may be) in which there is a **Connection Point** or, where relevant, a connection to the **Distribution System.** For the avoidance of doubt, a site owned by **TSO** but occupied by a **User** as aforesaid, is a **User Site**.
User System	The **Distribution System** or a system owned or operated by a **User** comprising **Generating Units** together with **Plant** and/or **Apparatus** connecting **Generating Units** and/or **Large Demand Customers'** equipment to the **NI System**.
User's Equipment	The **Plant** and/or **Apparatus** owned and/or operated by a **User**.
Var	A single unit of **Reactive Power**.
Voltage Control	The retention of the voltage on the **System** within acceptable limits.

Warm Cooling Boundary	The period of time, which must be greater than that defined by the **Hot Cooling Boundary**, post **De-Synchronisation** of a **Generating Unit** after which the **Generating Unit's Warmth State** transfers from being warm to cold.
Warm Start	Any **Synchronisation** of a **Generating Unit** that has previously not been **Synchronised** for a period of time equal to or longer than its submitted **Hot Cooling Boundary** and shorter than or equal to its submitted **Warm Cooling Boundary**.
Warmth	The temperature related condition of a **CDGU** which changes according to the length of time since the **CDGU** was last **De-Synchronised**, expressed as various levels of warmth (for example "hot", "warm" and "cold") as may be specified (dependent upon the design of the **CDGU**) in the **Generating Unit Agreement** relating to that **CDGU**.
Warmth State	Either cold, warm or hot, as defined under the timeframes since last **De-Synchronisations** for **Cold Start**, **Warm Start** or **Hot Start** respectively.
Warning Notice	A notice issued by the **TSO** to a **Generator** in respect of a **PPA CDGU** pursuant to OC11.5.3, informing the **Generator** that it has failed to comply with a **Dispatch Instruction** or a notice issued by the **TSO** to a **User** pursuant to OC11.10.2.3 informing the **User** that it has failed to comply with a **Dispatch Instruction** (as the context requires).
Wide Tolerance Bands	Those tolerance bands referred to in Column 2 of the relevant Table in the Appendix to Part A of OC11 or the Appendix to Part B of OC11 (as the context requires).
Willans Line	For a throttle governed steam turbine **Generating Unit** the **Willans Line** is the straight line relationship between heat consumption and electrical output with its origin at the no load consumption. For a **CCGT Installation** the **Willans Line** is the composite of the heat consumption and electrical outputs of the several **CCGT Modules** dependent at any time on the operating mode of the **CCGT Installation**.

Wind Farm Power Station or WFPS	A collection of one or more wind turbines owned and/or operated by the same **Generator** and joined together by a **System** with a single **Connection Point** or connection to the **Distribution System.**
Wind Farm Power Station Settings Schedule or WFPS Settings Schedule	The document of that name setting out in accordance with CC.7.2 certain technical criteria that **Generators** must comply with in respect of their **Wind Farm Power Stations.**
Wind Following Ramp Rate	The maximum rate of increase of **Active Power Output** of a **WFPS** in response to an increase in wind speed or removal of any **TSO** action via SCADA which limits **Active Power Output** of the **WFPS**, as specified by the **TSO** from time to time in the **WFPS Settings Schedule** published on the SONI website (or such other place or by such other means as may be notified to the **Generator** from time to time).
~~**Within-Day Test**~~	~~A **Test** with a total duration of less than 6 hours in any **Trading Day**, where the **Active Power** produced during the total duration of the test is less than:~~ ~~(i) 3 times the **Active Power** which would be produced by the **Plant** undergoing a **Test** during 1 hour of operation at the **Plant's Registered Capacity**; or~~ ~~(ii) 500MWh~~

GD2. CONSTRUCTION OF REFERENCES

In the **Grid Code**:

(i) the table of contents and headings are inserted for convenience only and shall be ignored in construing the **Grid Code**;

(ii) unless the context otherwise requires, all references to a particular paragraph, sub-paragraph, Appendix or Schedule shall be a reference to that paragraph, sub-paragraph Appendix or Schedule in or to that part of the **Grid Code** in which the reference is made;

(iii) unless the context otherwise requires, the singular shall include the plural and vice versa, references to any gender shall include all other genders and references to persons shall include any individual, body corporate, corporation, joint venture, trust, unincorporated association, organisation, firm or partnership and any other entity, in each case whether or not having a separate legal personality;

(iv) references to the words "include" or "including" are to be construed without limitation to the generality of the preceding words;

(v) unless there is something in the subject matter or the context which is inconsistent therewith, any reference to an Order in Council or an Act of Parliament or any section of or schedule to, or other provision of an Order in Council or an Act of Parliament shall be construed at the particular time, as including a reference to any modification, extension or re-enactment thereof then in force and to all instruments, orders and regulations then in force and made or deriving from the relevant Order in Council or Act of Parliament;

(vi) references to "in writing" or "written" include typewriting, printing, lithography and other modes of reproducing words in a legible and non-transitory form;

(vii) where the **Glossary and Definitions** refers to any word or term which is more particularly defined in a part of the **Grid Code**, the definition of that part of the **Grid Code** will prevail over the definition in the **Glossary & Definitions** in the event of any inconsistency;

(viii) a cross-reference to another document or part of the **Grid Code** shall not of itself impose any additional or further or co-existent obligation or confer any additional or further or co-existent right in the part of the text where such cross-reference is contained;

(ix) nothing in the **Grid Code** is intended to or shall derogate from the **TSO's** statutory or licence obligations;

(x) a "holding company" means, in relation to any person, a holding company of such person within the meaning of Section 736, 736A and 736B of the Companies Act 1985 as substituted by Section 144 of the Companies Act 1989;

(xi) a "subsidiary" means, in relation to any person, a subsidiary of such person within the meaning of Section 736, 736A and 736B of the Companies Act 1985 as substituted by Section 144 of the Companies Act 1989;

(xii) references to time are to Belfast time; and

(xiii) if any item (including any technical or operational parameter) is defined or determined by reference to a **Generating Unit Agreement**, then for the purposes of applying this **Grid Code** to a **CDGU** that is not the subject of a **Generating Unit Agreement**, the value of the item shall be taken to be:

(a) as set out in or determined under the **SSS Agreement** (for that **CDGU**);

(b) if paragraph (a) above does not apply, and where the **CDGU** was subject to any **Generating Unit Agreement** which is no longer in force, then as set out in or determined under that **Generating Unit Agreement** as if it were still in effect; and

(c) if paragraph (a) and (b) do not apply, then as agreed between the **TSO** and the **Generator** (both acting reasonably).

OPERATING CODE NO. 10

SYSTEM TESTS

OC10.1 INTRODUCTION

OC10.1.1 Operating Code No. 10 ("OC10") relates to the following types of test (all of which are referred to as "**System Tests**"):

(a) tests to be carried out by a **User** or the **TSO** which involve or may involve simulating conditions or the controlled application of irregular, unusual or extreme conditions on the **User's System** or the **Transmission System** (as the case may be) which may have a material effect on the **Total System**, beyond the **User's System** or the **Transmission System** (as the case may be); and

(b) **Commissioning/Acceptance Tests** of **Plant** and **Apparatus** to be carried out by a **User** or the **TSO** which involve or may involve the application of irregular, unusual or extreme conditions and which may have a material effect on the **Total System**, beyond the **User's System** or the **Transmission System** (as the case may be).

OC10.1.2 OC10 only deals with the responsibilities and procedures for arranging and carrying out tests which have (or may have) a material effect on the **Systems** of both the **TSO** and **Users**. Accordingly, where a test proposed by a **User** will not have a material effect on the **Transmission System** or where a test proposed by the **TSO** will not have a material effect on a **User System**, such test will not fall within this OC10 and OC10 shall not apply to it.

OC10.1.3 OC10 does not cover **Commissioning**/**Acceptance Tests** of a **User's Equipment** which will have no material effect on the **Total System** beyond the **User's System**; such tests will be undertaken solely pursuant to CC10. Neither does it cover the type of tests which are dealt with in OC11, "**Monitoring, Testing and Investigation**".

OC10.1.4 As explained in the Glossary and Definitions section, references to the term "**User System**" shall be read as referring to the **Distribution System** with respect to provisions applicable to the **DNO**.

OC10.2 OBJECTIVE

The overall objectives of OC10 are:

(a) to ensure, so far as possible, that tests proposed to be carried out either by:

(i) a **User** which may have a material effect on the **Total System** or any part of the **Total System** (in addition to that **User's System**) including the **Transmission System**; or

(ii) the **TSO** which may have a material effect on the **Total System** or any part of the **Total System** (in addition to the **Transmission System**);

do not threaten the safety of personnel or threaten to damage **Plant** and/or **Apparatus** and cause minimum detriment to the **TSO** and **Users**; and

(b) to set out the procedures to be followed for establishing and where appropriate reporting such tests and to set out guidelines for which tests need to be notified to the **TSO** prior to the test being carried out.

OC10.3 SCOPE

OC10 applies to the **TSO** and to **Users** which, in this OC10 means:

(a) with the exception only of OC10.5**, Generators** (in respect only of all **Generating Units** connected to the **Transmission System**), **Interconnector Owners**, **Large Demand Customers** and **Aggregators**; and

(b) with the exception of OC10.4.1 only, the **DNO**.

OC10.4. PROCEDURE

OC10.4.1 **Proposal Notice**

OC10.4.1.1 The level of **Demand** on the **NI System** varies substantially according to the time of day and time of year and, consequently, certain **System Tests** which may have a significant impact on the **NI System** (for example, tests of the **Full Load** capability of a **Generating Unit** over a period of several hours) can only be undertaken at certain times of the day and year. Other **System Tests**, for example, those involving substantial **Mvar** generation or valve tests, may also be subject to timing constraints. It therefore follows that notice of **System Tests** should be given as far in advance of the date on which they are proposed to be carried out as reasonably practicable.

OC10.4.1.2 Where a **User** wishes to carry out a **System Test** it shall submit a notice (a "**Proposal Notice**") to the **TSO** as far in advance of the date it would like to undertake the proposed **System Test** as is reasonably practicable. In the event that a **User** submits to the **TSO** a programme for proposed **Commissioning/Acceptance Testing** pursuant to CC10.1.4 which the **TSO** considers may involve the application of irregular, unusual or extreme conditions and which may have a material effect on the **Total System**, beyond the **User's System**, such programme shall be treated as a **Proposal Notice** for the purposes of this OC10**.** Notwithstanding the other requirements in this OC10.4.1.2, in the case of **Significant Tests**, **Users** shall submit proposals to the **TSO** at least five **Business Days** before the test start date or, with the agreement of the **TSO**, no later than 09:00 two **Business Days** before the test start date.

OC10.4.1.3 The **Proposal Notice** shall be in writing, or in such other form as the **TSO** and the relevant **User** may otherwise agree (such agreement not to be unreasonably withheld), and shall contain details of the nature and purpose of the proposed **System Test** and shall indicate the identity and situation of the **Plant** and/or **Apparatus** involved. In the case of a **System Test** (other than an on-**Load** valve test) involving a **CDGU**, the **User** shall state in the **Proposal Notice** the level of **Availability** and the values for **Technical Parameters** which will be declared for the **CDGU** for the period of the test in accordance with SDC1 and shall also include details of the **Dispatch Instructions** which the **User** wishes the **TSO** to issue to it for the purposes of the test which may be outside the **Availability** and **Technical Parameters** to be so declared.

OC10.4.1.4 If the **TSO** is reasonably of the view that the information set out in the **Proposal Notice** is insufficient, it will contact the person who submitted the **Proposal Notice** (the **"Test Proposer"**) as soon as reasonably practicable, with a written request for further information. The **TSO** shall not be required to do anything under this OC10 until it is satisfied with the details supplied in the **Proposal Notice** or pursuant to a request for further information.

OC10.4.1.5 If the **TSO** wishes to undertake a **System Test**, the **TSO** shall be deemed to have received a **Proposal Notice** for that **System Test**.

OC10.4.1.6 The **TSO** will use all reasonable endeavours to accommodate requests for **System Tests** but has absolute discretion as to the timing of such tests (which discretion will be exercised reasonably consistently with previous practice) to ensure the proper operation of the **Transmission System** and so as to ensure that the **Licence Standards** are not breached.

OC10.4.1.7 Without prejudice to the general description of the types of **System Tests** which have to be dealt with under this OC10, as set out in OC10.1.1 above, each **Generator** must submit a **Proposal Notice** to the **TSO** if it proposes to carry out any of the following tests, each of which is therefore a **System Test**:

(a) Var limiter tests;

(b) main steam valve tests; and

(c) **Load** rejection tests.

OC10.4.2 Establishment of **Test Panel**

OC10.4.2.1 Using the information supplied (or deemed to have been supplied) to it under OC10.4.1, the **TSO** will determine, in its reasonable estimation, which **Users**, other than the **Test Proposer**, may be materially affected by the proposed **System Test** and will notify such **Users** accordingly.

OC10.4.2.2 The **TSO** will then determine, in its reasonable opinion, whether a **Test Panel** is required taking into account the degree of severity of its possible effect on the **Systems** of the **TSO** and **Users**. A **Test Panel** will not generally be needed for a routine test and, since the majority of **System Tests** are routine, the establishment of a **Test Panel** will be the exception rather than the rule. If the **TSO**, in its reasonable discretion, decides that a **Test Panel** is necessary, the provisions set out in the **Appendix** to this OC10 will apply.

OC10.4.3 The **TSO** Supervision

OC10.4.3.1 If the **TSO** determines that no **Test Panel** is required, it will determine, acting reasonably, whether and, where appropriate, when the proposed **System Test** can take place and it will consider:

(a) the details of the nature, technical reasons for and timing of the proposed **System Test** and other matters set out in the **Proposal Notice** (together with any further information requested by the **TSO** under OC10.4.1.4);

(b) the economic, operational and risk implications of the proposed **System Test**; and

(c) the possibility of combining the proposed **System Test** with any other tests and with **Plant** and/or **Apparatus Outages** which arise pursuant to the **Operational Planning** requirements of the **TSO** and **Users**.

If the **TSO** determines that the proposed **System Test** cannot take place, it will, insofar as it is able to do so without breaching any obligations regarding confidentiality contained either in the **TSO Licence** or in any agreement, notify the **Test Proposer** of the reasons for such decision in such degree of detail as the **TSO** considers reasonable in the circumstances.

OC10.4.3.2 **Users** identified by the **TSO** under OC10.4.2.1 (and the **Test Proposer**) shall be obliged to supply the **TSO**, upon written request, with such details as the **TSO** reasonably requires in order to consider the proposed **System Test**.

OC10.4.3.3 The **TSO** will consult with each **User** identified by it under OC10.4.2.1 regarding the proposed **System Test** including, in particular, the effects which such test is likely to have on such **User's System**.

OC10.4.4 The **TSO Test Programme**

OC10.4.4.1 As soon as practicable the **TSO** shall, if it approves of the proposed **System Test** taking place (of which it will notify the **Test Proposer**), taking into account the factors specified in OC10.4.3.1, prepare a programme (the "**Test Programme**"), in such detail as the **TSO** considers, in its reasonable opinion, to be appropriate for the test, which will include:

(a) the procedure to be adopted for carrying out the **System Test**, including the switching sequence and proposed timings of the switching sequence;

(b) the manner in which the **System Test** is to be monitored;

(c) a list of those members of staff to be involved in carrying out the **System Test**, including those who will be responsible for site safety; and

(d) such other matters as the **TSO** considers appropriate including (without limitation) matters suggested by **Users** identified by the **TSO** pursuant to OC10.4.2.1.

OC10.4.4.2 The **TSO**, the **Test Proposer** and each **User** identified by the **TSO** under OC10.4.2.1 will determine by agreement the basis on which the costs of the **System Test** (including unanticipated costs, for example, costs arising from modifications etc) shall be borne as between the affected parties (the general principle being that the **Test Proposer** will bear such costs). If agreement cannot be reached (each party having acted in good faith), the **System Test** will be cancelled.

OC10.4.4.3 Without prejudice to the provisions of OC10.4.1, the **TSO** shall be entitled to require the proposed **System Test** to be modified, delayed or cancelled if, in its reasonable opinion, it considers that such test would impose unacceptable effects on the **Transmission System** or any **User System**.

OC10.4.4.4 If the **TSO** requires the proposed **System Test** to be cancelled or if it requires such test to be delayed or modified but the **Test Proposer** considers that such delay or modification is not possible, the proposed **System Test** shall not take place.

OC10.4.4.5 The **Test Programme** will, subject to OC10.4.4.6, bind the **Test Proposer** to act in accordance with the provisions of the **Test Programme** in relation to the proposed **System Test**.

OC10.4.4.6 Any problems with the proposed **System Test** perceived by the **Test Proposer** or any affected **User** or the **TSO** which arise or are anticipated after the issue of the **Test Programme** and prior to the day of the proposed **System Test** must be notified by the **Test Proposer** or affected **User** or the **TSO** (as the case may be) to the others as soon as possible in writing. If, in any such case, the **TSO** decides that these anticipated problems merit an amendment to, or postponement of, the **System Test**, it shall notify the **Test Proposer** and affected **Users** accordingly.

OC10.4.4.7 If, on the day of the proposed **System Test**, operating conditions on the **Total System** are such that any of the **TSO**, the **Test Proposer** or an affected **User** wishes to delay or cancel the start or continuance of the **System Test**, they shall immediately inform the others of this decision and the reasons for it. The **TSO** shall then postpone or cancel, as the case may be, the **System Test** and another suitable time and date shall be arranged in accordance with this OC10.4.4.

OC10.5 Interaction with the **DNO**

OC10.5.1 In circumstances where the **DNO** receives the equivalent of a **Proposal Notice** from a user whose **Plant** and **Apparatus** is connected to the **Distribution System**, the **DNO** shall inform the **TSO** as soon as reasonably practicable if it has reason to believe that the proposed **System Test** may have a material effect on the **Transmission System**. Following such notification, the **DNO** shall provide such information as the **TSO** may reasonably require.

OC10.5.2 Where the **DNO** intends to carry out a **System Test** on the **Distribution System**, it shall notify the **TSO** as soon as reasonably practicable if it has reason to believe that such **System Test** may have a material effect on the **Transmission System**. Following such notification, the **DNO** shall provide such information as the **TSO** may reasonably require.

Appendix

OC10.A.1 **Test Panel** Supervision

OC10.A.1.1 If the **TSO** determines pursuant to OC10.4.2.2 that a **Test Panel** is required, it will appoint a representative to co-ordinate the **System Test** (the **"Test Co-ordinator"**) as soon as reasonably practicable after it has, or is deemed to have, received a **Proposal Notice** and in any event prior to the distribution of the **Preliminary Notice** referred to below. The **Test Co-ordinator** shall act as Chairman of the **Test Panel** and shall be a full member of the **Test Panel**.

OC10.A.1.2 The **TSO** will notify all **Users** identified by it under OC10.4.2.1 of the proposed **System Test** by a notice in writing (a "**Preliminary Notice**") and will send a copy of the **Preliminary Notice** to the **Test Proposer**. The **Preliminary Notice** will contain:

(a) the details of the nature and purpose of the proposed **System Test**, the identity and situation of the **Plant** and/or **Apparatus** involved, the identities of the **Users** identified by the **TSO** under OC10.4.2.1 and the identity of the **Test Proposer**;

(b) an invitation to nominate within one month a suitably qualified representative (or representatives if the **Test Co-ordinator** considers that it is appropriate for a particular **User** to nominate more than one representative) to be a member of the **Test Panel** for the proposed **System Test**; and

(c) the name of the **TSO** representative whom the **TSO** has appointed as the **Test Coordinator** and who will be a member of the **Test Panel** for the proposed **System Test** together with the names of any other representatives whom the **TSO** has nominated to be members of the **Test Panel**.

OC10.A.1.3 The **Preliminary Notice** will be sent within one month of the later of either the receipt by the **TSO** of the **Proposal Notice**, or of the receipt of any further information requested by the **TSO** under OC10.4.1.3. Where the **TSO** is the proposer of the **System Test**, the **Preliminary Notice** will be sent within one month of the proposed **System Test** being fully formulated.

OC10.A.1.4 Replies to the invitation in the **Preliminary Notice** to nominate a representative to be a member of the **Test Panel** must be received by the **TSO** within one month of the date on which the **Preliminary Notice** was sent to the **User** by the **TSO**. Any **User** which has not replied within that period will not be entitled to be represented on the **Test Panel**. If the **Test Proposer** does not reply within that period, the proposed **System Test** will not take place and the **TSO** will notify all **Users** identified by it under OC10.4.2.1 accordingly.

OC10.A.1.5 The **TSO** will, as soon as possible after the expiry of that one month period, appoint the nominated persons to the **Test Panel** and notify all **Users** identified by it under OC10.4.2.1 and the **Test Proposer**, of the composition of the **Test Panel**.

OC10.A.2 **Test Panel**

OC10.A.2.1 A meeting of the **Test Panel** will take place as soon as possible after the **TSO** has notified all **Users** identified by it under OC10.4.2.1 and the **Test Proposer** of the

composition of the **Test Panel**, and in any event within one month of the appointment of the **Test Panel**.

OC10.A.2.2 The **Test Panel** shall consider:

(a) the details of the nature, technical reasons for and timing of the proposed **System Test** and other matters set out in the **Proposal Notice** (together with any further information requested by the **TSO** under OC10.4.1.3);

(b) the economic, operational and risk implications of the proposed **System Test**;

(c) the possibility of combining the proposed **System Test** with any other tests and with **Plant** and/or **Apparatus Outages** which arise pursuant to the **Operational Planning** requirements of the **TSO** and **Users**; and

(d) whether, at the conclusion of the **System Test**, the **Test Proposer** should be required to prepare a written report on the **System Test** (a "**Final Report**") in accordance with OC10.A.4 and, if so, the period within which the **Final Report** must be prepared.

OC10.A.2.3 **Users** identified by the **TSO** under OC10.4.2.1, the **Test Proposer** (whether or not they are represented on the **Test Panel**) and the **TSO** shall be obliged to supply the **Test Panel**, upon written request, with such details as the **Test Panel** reasonably requires in order to consider the proposed **System Test**.

OC10.A.2.4 The **Test Panel** shall be convened by the **Test Co-ordinator** as often as he considers necessary to conduct its business.

OC10.A.3 **Test Panel Test Programme**

OC10.A.3.1 As soon as practicable after its first meeting, the **Test Panel** shall, taking into account the factors specified in OC10.A.2.2, prepare a programme (the "**Test Programme**") which will include:

(a) the procedure to be adopted for carrying out the **System Test**, including the switching sequence and proposed timings of the switching sequence;

(b) the manner in which the **System Test** is to be monitored;

(c) a list of those members of staff to be involved in carrying out the **System Test**, including those who will be responsible for site safety; and

(d) such other matters as the **Test Panel** considers to be appropriate.

OC10.A.3.2 The **Test Panel** shall also determine the basis on which the costs of the **System Test** (including unanticipated costs) shall be borne as between the affected parties (the general principle being that the **Test Proposer** will bear such costs). If the **Test Panel** cannot agree on this (each party having acted in good faith), the **System Test** will be cancelled.

OC10.A.3.3 The **Test Co-ordinator** shall be entitled to require the proposed **System Test** to be modified, delayed or cancelled if, in his reasonable opinion, he considers that such test would impose unacceptable effects on the **NI System** or on any **User System**.

OC10.A.3.4 If the **Test Co-ordinator** requires the proposed **System Test** to be cancelled or if he requires such test to be delayed or modified but the **Test Proposer** considers that such delay or modification is not possible, the proposed **System Test** shall not take place and the **Test Panel** will disband automatically.

OC10.A.3.5 If the **Test Co-ordinator** requires the proposed **System Test** to be modified or delayed and such modification or delay is possible, the **Test Panel** shall, as soon as practicable, revise the **Test Programme** accordingly.

OC10.A.3.6 The **Test Programme** will, subject to OC10.A.3.7, bind all recipients to act in accordance with the provisions of the **Test Programme** in relation to the proposed **System Test**.

OC10.A.3.7 Any problems with the proposed **System Test** which arise or are anticipated after the issue of the **Test Programme** and prior to the day of the proposed **System Test** must be notified to the **Test Co-ordinator** as soon as possible in writing. If the **Test Co-ordinator** decides that these anticipated problems merit an amendment to, or postponement of, the **System Test**, he shall notify the **Test Proposer** (unless the test was proposed by the **TSO**) and each **User** identified by the **TSO** under OC10.4.2.1 accordingly.

OC10.A.3.8 If, on the day of the proposed **System Test**, operating conditions on the **Total System** are such that any party involved in the proposed **System Test** wishes to delay or cancel the start or continuance of the **System Test**, they shall immediately inform the **Test Co-ordinator** of this decision and the reasons for it. The **Test Co-ordinator** shall then postpone or cancel, as the case may be, the **System Test** and shall, if possible, agree with the **Test Proposer** (unless the test was proposed by the **TSO**) and all **Users** identified by the **TSO** under OC10.4.2.1 another suitable time and date. If he cannot reach such agreement, the **Test Co-ordinator** shall reconvene the **Test Panel** as soon as practicable, which will endeavour to arrange another suitable time and date for the **System Test**, in which case the relevant provisions of this OC10 shall apply.

OC10.A.4 **Test Panel Final Report**

OC10.A.4.1 At the conclusion of the **System Test**, the **Test Proposer** shall, if so decided by the **Test Panel** pursuant to OC10.A.2.2(d), prepare a **Final Report** for submission to the **TSO** and the other members of the **Test Panel**. The **Final Report** shall be submitted within the period agreed by the **Test Panel** pursuant to OC10.2.2(d).

OC10.A.4.2 The **Test Proposer** may omit from the **Final Report** matters which, in its reasonable opinion, are confidential to it and the **Final Report** shall not be submitted to any person who is not a member of the **Test Panel** unless the **Test Panel**, having considered the confidentiality issues arising, shall have unanimously approved such submission.

OC10.A.4.3 The **Final Report** shall include a description of the **Plant** and/or **Apparatus** tested and a description of the **System Test** carried out, together with the results and, where appropriate, the conclusions and recommendations of the **Test Panel**.

OC10.A.4.4 When the **Final Report** has been prepared and submitted in accordance with OC10.A.4.1, the **Test Panel** will disband automatically. If a **Final Report** is not required by the **Test Panel** then it will disband automatically upon the conclusion of the **System Test**.

OPERATING CODE NO. 11

TESTING, MONITORING AND INVESTIGATION

OC11.1 INTRODUCTION

OC11.1.1 To enable it to comply with its **Licence** and statutory obligations, the **TSO** will carry out certain **Monitoring**, **Testing** and **Investigation** in respect of the performance of **User's Equipment**. Operating Code No. 11 ("OC11") specifies the procedures to be followed.

OC11.1.2 It should be noted that the text in OC11.1, OC11.2 and OC11.3 is generic and is applicable to all **Users**. The remainder of OC11 is separated into two sections. Part A (and its Appendix) is applicable to **PPA CDGUs** only as these units have specific terminology and processes due to the terms of the **Nominated Generating Unit Agreements**. Part B (and its Appendix) is applicable to all **User's Equipment** other than **PPA CDGUs.**

OC11.1.3 **Monitoring, Testing** and **Investigation** under this OC11 are separate procedures. In general terms, **TSO** representatives likely to be present at the **Power Station** or **User Site** for a **Test** or an **Investigation**, but not for **Monitoring**. It should also be noted that **Testing** under OC11 includes **Within-Day Tests**.

OC11.1.4 The detailed procedures and methodologies for conducting certain **Tests** and undertaking certain **Monitoring** are set out in **Agreed Testing and Monitoring Procedures** each of which forms part of the **Grid Code**.

OC11.2 OBJECTIVES

The objective of OC11 is to establish whether **User's Equipment** is operating within its **Design and Operating Requirements** and is operated (to the extent subject to **Central Dispatch**) in compliance with **Dispatch Instructions** . OC11 also specifies the procedures to be followed by the **TSO** and **Users** in carrying out **Monitoring**, **Testing** and **Investigations**. In particular, this facilitates adequate assessment of each of the following:

(a) whether **PPA CDGUs, Demand Side Units** and **Relevant Plant** (as defined in OC11.10.2.1) comply with **Dispatch Instructions**;

(b) whether **CDGUs, Controllable WFPSs, Aggregated Generating Units, Demand Side Units** and other items of **User's Equipment** are (to the extent applicable) in compliance with declarations of **Availability**, **System Support Services** capabilities, **Design and Operating Requirements** and any other data required to be registered for those **CDGUs, Controllable WFPSs, Aggregated Generating Units, Demand Side Units** and other items of **User's Equipment** under the **Grid Code**;

(c) whether **User's Equipment** conforms with power quality requirements of the **Connection Conditions**;

(d) whether **Users** are in compliance with protection requirements and protection settings under the **Grid Code**, **User**s' **Connection Agreements** and **System Support Services Agreements** between **User**s and the **TSO**;

(e) whether **Users** are in compliance with their obligations to provide **Operating Reserve** under **System Support Services Agreements** and the **Grid Code** or, in the case of **PPA CDGUs,** in compliance with their obligations to provide **Spinning Reserve** under **Nominated Generating Unit Agreements** and the **Grid Code**;

(f) whether a **Black Start Station** has the ability to **Black Start**; and

(g) whether **CDGUs** that have the ability to generate on more than one fuel are capable of switching from operation on one fuel to operation on another fuel in compliance with a **Dispatched Fuel Notice** in accordance with the requirements of **SDC2**.

OC11.3 SCOPE

OC11 applies to the **TSO** and to **Users** which in this OC11 means **Generators** (in respect of their **Black Start Stations**, all other **Generating Units** connected to the **Transmission System** and in respect of **CDGUs** and **Controllable WFPSs** connected to the **Distribution System**), **Generator Aggregators**, **Interconnector Owners**, **Demand Side Units** and **Large Demand Customers**.

PART A – PPA CDGUS ONLY

OC11.4 Not Used

OC11.5 PROCEDURE FOR **MONITORING**

OC11.5.1 **Monitoring** may be carried out at any time by the **TSO** and involves the analysis of the output of **Monitoring** equipment (as required or permitted under the **CC** and/or relevant **Connection Agreements** and/or the **MC**), which is relayed to the **TSO**, which shows the output and/or performance of the **CDGU,** and associated **Equipment** in order to see whether the **CDGU,** is complying with its **Dispatch Instructions**.

OC11.5.2 In determining whether a **CDGU** has complied, or is complying, with a **Dispatch Instruction**, the **TSO** shall in each case give due regard to operating conditions on the **NI System**. The **TSO** shall also apply the **Tolerance Bands** set out in the relevant table in the Appendix to this OC11 Part A to the **Monitoring** of the relevant **Dispatch Characteristic**, as indicated in the relevant paragraphs of this OC11 Part A, and shall also apply the **Conversion Factors** and **Additional Conversion Factors** where appropriate. The **TSO** shall, when **Monitoring Active Power** or **Reactive Power**, select either the **Wide Tolerance Band** (for **Monitoring** sustained performance) or the **Narrow Tolerance Band** (for **Monitoring** stability over a short period). When **Monitoring** on the **Narrow Tolerance Band**, the **TSO** will select either the **Maximum Tolerance Band** or the **Minimum Tolerance Band**. In the event of a **Frequency Transient** occurring whilst the **TSO** is **Monitoring** the compliance by a **CDGU** with a **Dispatch Characteristic** (regardless of which **Tolerance Band** is being applied by the **TSO** at the time) to which the **CDGU** responds in accordance with the relevant **User's** obligations to provide **Spinning Reserve Response**, the **CDGU** shall not fail the **Monitoring** by reason of such response.

OC11.5.3 (a) If, having applied the relevant **Tolerance Band**, and, where appropriate, **Conversion Factors** and **Additional Conversion Factors** the **TSO** suspects that a **CDGU** has not complied, or is not complying, with a **Dispatch Instruction**, the **TSO** will, if it wishes to continue with the **Monitoring** inform the relevant **User** by submitting a **Warning Notice** (either orally or in writing) and, subject to the requirements of **System** security (which may require the **Dispatch Instruction** to be cancelled in which case the **Warning Notice** will be deemed to have been withdrawn), the **TSO** will allow the **User** 10 minutes after such notice to comply with the **Dispatch Instruction.**

(b) If in that 10 minute period the **User** still fails to comply with the **Dispatch Instruction**, the **TSO** may give notice to the **User** by submitting a **Monitoring Notice** (either orally or in writing) that the **CDGU** is being **Monitored**.

(c) The **Monitoring Notice** will:

(i) identify the **Dispatch Characteristic(s)** which is being **Monitored** and the underlying **Technical Parameter(s)**;

(ii) specify, if relevant, whether the **Tolerance Band** to be used is the **Wide Tolerance Band** or the **Narrow Tolerance Band**; and

(iii) specify, if relevant, whether the **Narrow Tolerance Band** is to apply as a **Maximum Tolerance Band** or as a **Minimum Tolerance Band**.

(d) The **User** has the right, before the issue of the **Monitoring Notice**, or at any time thereafter by submitting to the **TSO** an **Availability Notice**, a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** (as the case may be), to re-declare **Availability** or the **Technical Parameters** (in accordance with the provisions of SDC1) in respect of the **Dispatch Characteristic(s)** to be **Monitored**, such re-declaration to take effect from the time of receipt of the **Warning Notice** by the **User**. In the event that the **User** submits to the **TSO** an **Availability Notice** or a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** at or about the same time as the **TSO** submits to the **User** a **Post Event Notice** (or **Interim Post Event Notice**) pursuant to OC11.5.4 or OC11.5.5 seeking to re-register the **Availability** or the same **Technical Parameter** (as the case may be) of the **CDGU** in question to a different value, then the value of **Availability** or the value of the relevant **Technical Parameter** shall be deemed to be redeclared to the inferior of the values specified in the two notices.

(e) The period of **Monitoring** shall not exceed the period set out in the relevant table in the Appendix to this OC11 Part A for the relevant **Dispatch Characteristic(s)** and the selected **Tolerance Band**.

OC11.5.4 Consequences of **Monitoring** and **Post Event Notices**

(a) At the end of the period of **Monitoring**, if the **User** has achieved each **Dispatch Instruction** for the period of the **Monitoring** within the relevant **Tolerance Band**, the **CDGU** will be deemed to have complied with each **Dispatch Instruction**.

(b) If the average value of the **Dispatch Characteristic(s)** in any 5 minute period during the period of **Monitoring** falls outside the relevant **Tolerance Band** the **TSO** may by submitting a **Post Event Notice** to the **Generator** re-register the value of **Availability** or of the relevant **Technical Parameter** corresponding to that **Dispatch Characteristic** to the most inferior value outside the **Tolerance Band** for any 5 minute period during the period of **Monitoring** (with effect from the ~~**Trading Period**~~**Imbalance Settlement Period** in which the **Monitoring Notice** was issued) and the **TSO** may also notify the **Generator** not later than 10 minutes before the end of the period of **Monitoring** that it will continue to **Monitor** the **CDGU** for a further period not exceeding that shown in the relevant Table in the Appendix to this OC11 Part A in respect of the particular **Dispatch Characteristic** and with reference to the relevant or selected **Tolerance Band**.

(c) If at the end of the further period of **Monitoring** the average value of the **Dispatch Characteristic(s)** in any 5 minute period during the **Monitoring** falls outside the relevant **Tolerance Band**, the **TSO** may re-register the value of the **Availability** or of the relevant **Technical Parameter** corresponding to that **Dispatch Characteristic** to the most inferior value for any 5 minute period

during the period of **Monitoring** (with effect from the ~~**Trading Period**~~**Imbalance Settlement Period** in which the **Monitoring Notice** was issued). Further periods of **Monitoring** may also take place, in accordance with the procedure set out in paragraph (b) above and the provisions of this paragraph (c) will apply to such further periods of **Monitoring**.

(d) (i) If (other than pursuant to a **Dispatch Instruction** to **De-Load**) the average value of **Output** for any 5 minute period is less than 80% of the average **Output** for either of the two immediately preceding 5 minute periods, the **TSO** may issue a **Post Event Notice** re-registering the **Availability** of the **CDGU** at the level consistent with its average value for that 5 minute period with effect from the beginning of the ~~**Trading Period**~~**Imbalance Settlement Period** in which such 5 minute period commenced.

(ii) If (following a **Dispatch Instruction** to **De-Load**) the average value of **Active Power** for any 5 minute period is less than 80% of the average value of **Active Power** which would have been generated by the **CDGU** for such 5 minute period had it been **De-Loaded** at its maximum **De-Loading** rate (registered as a **Technical Parameter**), the **TSO** may issue a **Post Event Notice** re-registering the **Availability** of the **CDGU** at the level consistent with the average value for that 5 minute period with effect from the beginning of the ~~**Trading Period**~~**Imbalance Settlement Period** in which such 5 minute period commenced.

(e) Prior to submitting a **Post Event Notice**, the **TSO** may deliver an **Interim Post Event Notice** to the **User** not later than 2 hours after:

(i) in the case of an event of the type specified in (d) (i) or (ii) above the end of the ~~**Trading Period**~~**Imbalance Settlement Period** during which the event occurred; or

(ii) in the case of instances of **Monitoring**, the end of the relevant period of **Monitoring**;

if it is not reasonably practicable for the **TSO** to deliver a **Post Event Notice** to the **User** within that time.

(f) An **Interim Post Event Notice** shall specify:

(i) the ~~**Trading Period**~~**Imbalance Settlement Period** during which the event of the type specified in (d) (i) or (ii) above occurred and, in the instance of **Monitoring**, the ~~**Trading Period**~~**Imbalance Settlement Period** during which the relevant **Warning Notice** was issued; and

(ii) the matters or values which the **TSO** intends to redeclare in a **Post Event Notice** as a result of what happened.

(g) Each **Generating Unit Agreement** contains provisions on the validity of **Post Event Notices** which shall apply to the **Grid Code.**

OC11.5.5 **Spinning Reserve Monitoring** (including **Governor Droop Monitoring**)

(a) In the case of **CDGUs**, the following provisions of this OC11.5.5 shall apply to the **Monitoring** of **Spinning Reserve** and **Governor Droop** unless Schedule 8 of the relevant **Nominated Generating Unit Agreement** otherwise requires. For the purposes of this OC11.5, in the event of any conflict between the provisions of this OC11.5 and the provisions of Schedule 8 of the relevant **Nominated Generating Unit Agreement**, the provisions of Schedule 8 shall apply. **Monitoring** of **Governor Droop** in relation to **Open Cycle Gas Turbine CDGUs** may be undertaken pursuant to the provisions of this OC11.5 set out above.

(b) For the purposes of this OC11 Part A:

(i) in respect of any **Frequency Transient**:

(aa) "**Pretransient Load**" means instantaneous **Load** level (in **MW**) of the **CDGU** at 5 seconds before the **Frequency Transient** commenced;

(bb) the response of the **CDGU** to such **Frequency Transient**, in terms of **Load** lift (in **MW**) above **Pretransient Load**, continuously over the period of 5 minutes starting when the **Frequency Transient** commenced, is referred to as "**Spinning Reserve Response**" and comprises **Initial Response** and **Sustained Response**;

(cc) the **Spinning Reserve Response** achieved by the **CDGU** in response to such **Frequency Transient** is referred to as the "**Achieved**" response;

(c) **Spinning Reserve Response**

For the purposes of this OC11 Part A:

(i) the **Spinning Reserve Response** for the period from 10 seconds to 5 minutes after the commencement of a **Frequency Transient** is referred to as "**Sustained Response**";

(ii) a **CDGU** is required to attain and maintain at all times in this period a **Sustained Response** not less than the instantaneous value determined under (d) below (the "**Contracted**" response);

(iii) without prejudice to the relevant **Contracted Technical Parameter** (or to the requirement to attain **Contracted Sustained Response**), there is no specific requirement under this OC11.5.5(c) as to **Spinning Reserve Response** in the period from 0 to 10 seconds ("**Initial Response**");

(d) **Contracted Response**

For the purposes of this OC11 Part A, for any **Frequency Transient**, the **Contracted Sustained Response** (in **MW**) is whichever is the least of:

(i) the unconstrained response, which is the value for **Spinning Reserve** corresponding to the **Pretransient Load** on the **Sustained Load Diagram**. If the **Pretransient Load** is less than **Minimum Generation** for the **CDGU**, the unconstrained response shall be zero;

(ii) the **Availability** constrained response, which is:

A - PTL

where:

A = the **Availability** of the **CDGU** at the time at which the **Frequency Transient** commenced; and

PTL = **Pretransient Load** (**MW**);

(iii) the **Governor Droop** constrained response (SRG), determined as follows:

SRG =CC/Fg * {(Fp - Ft) - 2A/3}

where:

CC = **Contracted Capacity** (**MW**);

Fg = determined as:

50Hz * D/100

where D is specified **Governor Droop** (%) notified in the most recent relevant **Technical Parameters Notice**;

Fp = **NI System Frequency** (Hz) at the time 5 seconds before the **Frequency Transient** commenced;

Ft = the instantaneous **NI System Frequency** (Hz) at any time during the **Frequency Transient;**

A = determined as:
(Fp - Ft) - (Fg * B)
except where this term has a negative value, in which case A is 0;
where B is determined as:

except where this term has a negative value, in which case B is 0;
where PTL is **Pretransient Load**.

(e) OC3, "**Operating Margin**", specifies the timescales within which the **Operating Reserve** from **CDGUs** must be provided (and which are further described in SDC3, "**Frequency Control**"), as follows:

(i) **Primary Operating Reserve**: from the time of a **Frequency** change, which must be fully available by 5 seconds, and which must be sustainable (subject to the **Unit Load Controller** adjustment, where applicable) for at least 15 seconds. For the period from 0 to 5 seconds, **Primary Operating Reserve** therefore falls within the category of **Initial Response**. Thereafter (from 5 seconds to 15 seconds) **Primary Operating Reserve** falls within the category of **Sustained Response**;

(ii) **Secondary Operating Reserve**: which is fully available and sustainable over the period from 15 to 90 seconds following an **Event**. **Secondary Operating Reserve** therefore falls within the category of **Sustained Response**;

(iii) **Tertiary Operating Reserve band 1**: which is fully available and sustainable for a period from 90 seconds to 5 minutes following an **Event**. Where **Tertiary Operating Reserve band 1** is provided by a steam turbine **CDGU** already **Synchronised** to the **NI System**, this will, to the extent it is provided within 5 minutes from the time of a **Frequency** change, fall within the category of **Sustained Response**. **Tertiary Operating Reserve band 1** provided by gas turbine **Units** does not fall within the category of **Sustained Response** because gas turbine **Units** do not have a **Spinning Reserve Capability**;

(iv) **Tertiary Operating Reserve band 2**: which is fully available and sustainable for a period from 5 minutes to 20 minutes following an **Event**. **Tertiary Operating Reserve band 2** therefore does not fall within the category of **Sustained Response** (which is not **Monitored** after 5 minutes from the time of the **Frequency** change);

(v) **Replacement Reserve**: which is fully available and sustainable for a period from 20 minutes to 4 hours following an **Event**; and

(vi) **Substitute Reserve**: which is fully available and sustainable for a period from 4 hours to 24 hours following an **Event**.

(f) **Not used**

(g) **Achieved Response**

(i) The event recorders described in Sub-Code 3 of the **MC** will capture (at 0.1 second intervals), and upon the occurrence of a **Frequency Transient**, the **Frequency** logging equipment constituting part of **Operational Metering** will record (from not less than 5 seconds before the **Frequency Transient** commenced) and retain, the instantaneous **Load** level of the **CDGU**.

(ii) The **Spinning Reserve Response Achieved** by the **CDGU** will be determined from the data referred to in (i) above and will be compared with the **Contracted** response.

(h) **Sustained Response Capability**

(i) For the purposes of the **Grid Code** the **"Sustained Response Capability"** is a factor (not greater than one) which represents actual or anticipated **Achieved Sustained Response** as a fraction of (where less than) **Contracted Sustained Response**. **Sustained Response Capability** may be:

(aa) declared by the **Generator** by submitting a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** on the basis of anticipated response (generically, for all possible **Frequency Transients** and sets of relevant circumstances);

(bb) determined by the **TSO** (and notified to the **Generator** in a **Post Event Notice**) following the occurrence of a **Frequency Transient**, based on the instantaneous values of the **Contracted Sustained Response** and **Achieved Sustained Response** for which the **Sustained Response Deviation** (as defined below) was determined; or

(cc) determined on the basis of the result of a **Test** as described in OC11.6.2.

(ii) For the purposes of this OC11 Part A, in respect of any **Frequency Transient**, the "**Adjusted Contracted Sustained Response**" **(ACSR)** is the **Contracted Sustained Response (CSR)** adjusted by the prevailing **Sustained Response Capability (SRC)**, determined as follows:

ACSR = CSR * SRC

(i) **Spinning Reserve Deviation**

For the purposes of this OC11 Part A:

(aa) the "**Sustained Response Deviation**" is the greatest amount (in **MW**) by which, following a **Frequency Transient**, at any time

over the relevant period, the instantaneous value of **Sustained Response Achieved** deviated below the **Adjusted Contracted Sustained Response**;

(bb) the **Spinning Reserve Deviation** is the **Sustained Response Deviation**; and

(cc) the **Spinning Reserve Deviation** shall be zero if it would otherwise be negative.

(j) **Spinning Reserve Failure**

For the purposes of this OC11 Part A, there is a "**Spinning Reserve Failure**" whenever following a **Frequency Transient**, the **Spinning Reserve Response Achieved** deviated (as described in (g) above) below the **Contracted** response and the **Spinning Reserve Deviation** is the amount of such deviation (determined in accordance with (g) above).

(k) Successive **Frequency Transients**

Where a **Frequency Transient** has occurred while the **CDGU** was **Synchronised**, the **CDGU** will not be required to respond to any further **Frequency Transient** for 5 minutes after the end of the first **Frequency Transient**; and the provisions of this OC11 Part A shall apply accordingly.

(l) The **Generator** shall be entitled at any time, by submitting a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** to the **TSO**, to re-declare the **Sustained Response Capability** or the **Governor Droop** value of a **CDGU**. Within 48 hours of receiving the **Technical Parameters Notice** or the **Technical Parameters Revision Notice** from the **Generator**, the **TSO** may require the **Generator** to carry out a **Sustained Response Test** or a **Governor Droop Test** and if the test is failed, the **TSO** may by issuing a **Post Event Notice** to the **Generator**, re-register the **Spinning Reserve Capability** or the **Governor Droop** value for that **CDGU**, such re-registration to take effect from the beginning of the ~~**Trading Period**~~**Imbalance Settlement Period** in which the **Technical Parameters Notice** or the **Technical Parameters Revision Notice** took effect.

OC11.5.6 In addition to the provisions set out in OC11.5.5, a **Generator** shall, having redeclared or having had a **Technical Parameter** of one of its **CDGUs** re-registered as a result of non-compliance, notify the **TSO** when it has rectified the fault which caused that non-compliance or believes reasonably that the **CDGU** is no longer so failing to comply by submitting a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** to the **TSO** under SDC1. Upon the **TSO** receiving such notification, the relevant **Technical Parameter** will be deemed to be re-declared to either its original value or to the value specified in the **Technical Parameters Notice** or the **Technical Parameters Revision Notice** (which may be a lesser value which is an improved value to that to which it had been re-registered). The re-declared value will be regarded for all purposes as the applicable value for that **Technical Parameter**.

OC11.5.7 The **TSO** may then, of course, **Monitor** that re-declared value in accordance with the provisions of this OC11 Part A and may, if the **CDGU** fails to comply with the re-registered **Technical Parameter,** follow the procedures set out in OC11.5.

OC11.6 PROCEDURE FOR **TESTING**

OC11.6.1 **Testing** (other than relating to **Spinning Reserve**)

(a) In circumstances where the **TSO** reasonably considers that, in relation to a **CDGU** or item of **User's Equipment**, a **Generator** might be failing to comply or might in the foreseeable future fail to comply with the relevant **Design and Operating Requirements**, the **TSO** may, upon giving reasonable notice identifying the **Design and Operating Requirement** concerned, send representatives to the relevant **Power Station** in order to verify by **Testing** or inspection (in the case of **Testing,** conducted by the **Generator**) whether in relation to the **CDGU** or item of **User's Equipment,** as the case may be**,** the **Design and Operating Requirement** is being complied with. The **Test** or inspection may involve the giving of specific **Dispatch Instructions** within the provisions of SDC2, including instructions in connection with **Black Starts** and **Dispatched Fuel Notices**. The period of notice which is reasonable will depend upon all the circumstances, including the **Design and Operating Requirement** in question.

(b) A **Generator** must allow the **TSO** representative's access to all relevant parts of its **Power Station** for the purposes of this OC11 Part A.

(c) Where a **Test** falls within the scope of an **Agreed Testing and Monitoring Procedure**, the procedure for conducting the **Test** and the criteria for passing the **Test** will be as set out in the applicable **Agreed Testing and Monitoring Procedure**. Where a **Test** falls outside the scope of the **Agreed Testing and Monitoring Procedures**, the procedure for the **Test**, and the criteria for passing the **Test**, will, if not agreed between the **TSO** and the **Generator**, be as determined by the **TSO** acting reasonably and as notified to the **Generator** at the time. In all cases, the **Generator** must comply with all reasonable instructions of the **TSO** in carrying out the **Test**.

(d) If the procedure for the **Test**, and the criteria for passing the **Test**, are determined by the **TSO** under OC11.6.1(c) and, within 48 hours after completion of the **Test**, the **Generator** notifies the **TSO** in writing that it objects to the procedure and/or the criteria which were used for the **Test**, then the question of whether the **Test** procedure and/or the criteria were valid shall:

(i) in the case of a **Design and Operating Requirement** contained in the **Generator's** relevant **Nominated Generating Unit Agreement** (or **Nominated Power Station Agreement**), be decided by the Expert in accordance with the relevant dispute resolution procedure set out in that Agreement; or

(ii) in the case of a **Design and Operating Requirement** contained in the **Grid Code**, be decided in accordance with the relevant dispute

resolution procedure set out in the **Generator's** relevant **Connection Agreement**; or

(iii) in the case of a **Design and Operating Requirement** contained in the **Generator's** relevant **Connection Agreement**, be decided in accordance with the relevant dispute resolution procedure set out in the **Generator's** relevant **Connection Agreement**;

and, in any such case, the effects of the **Test** shall be suspended until such time as it has been determined that the procedure for the **Test** or the criteria for passing the **Test** were valid. If it is determined that the procedure for the **Test** or the criteria for passing the **Test** were not valid, then the **Test** shall not be effective for the purposes of the relevant **Agreement** or the **Grid Code**, as the case may be. The **TSO** may, however, conduct a further **Test** in accordance with this OC11.6 (including this OC11.6(d)), taking into account any relevant recommendations of the Expert, in determining the procedure and/or criteria for such further **Test.**

(e) (i) In determining whether the **CDGU** or item of **User's Equipment,** as the case may be, has passed a **Test**, due regard will be given by the **TSO** to operating conditions on the **NI System** and (where applicable) the relevant **Tolerance Bands** will be applied to the relevant matters being **Tested** as set out in the Appendix to this OC11 Part A and the **Conversion Factors** and the **Additional Conversion Factors** shall also be applied where appropriate.

(ii) If, within 48 hours after completion of the **Test**, the **Generator** notifies the **TSO** in writing that it disagrees that the results show that the **CDGU** or item of **User's Equipment**, has failed the **Test**, then the question of whether the **Test** has been passed or failed shall:

(aa) in the case of a **Design and Operating Requirement** contained in the **Generator's** relevant **Nominated Generating Unit Agreement** (or **Nominated Power Station Agreement**), be decided by the Expert in accordance with the relevant dispute resolution procedure set out in that Agreement; or

(bb) in the case of a **Design and Operating Requirement** contained in the **Grid Code**, be decided in accordance with the relevant dispute resolution procedure set out in the **Generator's** relevant **Connection Agreement**; or

(cc) in the case of a **Design and Operating Requirement** contained in the **Generator's** relevant **Connection Agreement**, be decided in accordance with the relevant dispute resolution procedure set out in the **Generator's** relevant **Connection Agreement**;

and, in any such event, the effects of the **Test** shall be suspended until such time as it has been determined that the **CDGU** or item of **User's Equipment** has failed the **Test**.

(f) If in relation to the **CDGU** or item of **User's Equipment**, as the case may be, the **Generator** fails the **Test** then:

(i) if the **Design and Operating Requirement** is one under the **Grid Code**, the **TSO** may, in the case of those **Design and Operating Requirements** where a parameter or other data item can be registered (that is, those other than CC parameters), re-register the value of the relevant **Design and Operating Requirement** to reflect the lower level of compliance shown by the **Test**;

(ii) the **Generator** will, if the **Design and Operating Requirement** is one under a **Nominated Generating Unit Agreement** to which it is a party, be subject to such consequences (if any) as may arise under that agreement; or

(iii) the **Generator** will, if the **Design and Operating Requirement** is one under a **Connection Agreement** to which it is a party, be subject to such consequences (if any) as may arise under that agreement.

OC11.6.2 **Testing** relating to **Spinning Reserve**

(a) In certain circumstances and in relation to steam turbine **CDGUs** in relation to their **Steam Turbine Units** only, **Sustained Response Capability** and **Governor Droop** may, unless **Schedule 8** of the relevant **Generating Unit Agreement** otherwise requires, be tested as described in this OC11.6.2. For the purposes of this OC11.6.2, in the event of any conflict between the provisions of this OC11.6.2 and the provisions of Schedule 8 of the relevant **Generating Unit Agreement**, the provisions of Schedule 8 shall apply.

(b) The following provisions apply as to **Testing** of **Sustained Response Capability** for steam turbine **CDGUs** in relation to their **Steam Turbine Units**:

(i) A **Test** (**"Sustained Response Test"**) in respect of **Sustained Response Capability** may be requested in the following circumstances:

(aa) by the **Generator**, at any time; in which case the **TSO** will by the same time on the second **Business Day** thereafter specify the time (within 3 days) for the **Test** which shall be as soon as reasonably practicable having regard to **System** constraints (but in any event within 3 days); and

(bb) by the **TSO**, on not less than 24 hours' notice of the start of the **Test**:

(i) at any time, if the **TSO** has reasonable grounds to believe that the **Sustained Response Capability** is impaired; or

(ii) within 48 hours (the **Test** to start within 72 hours) after the **Generator** redeclared up the value of the **Sustained Response Capability** either:

(1) where the **Sustained Response Capability** had earlier been declared down following a **Frequency Transient**; or

(2) where following a previous **Test** under this paragraph OC11.6.2.(b)(i) (bb) (ii) **Sustained Response Capability** had been determined at a level lower than previously declared by the **Generator**.

(ii) If the **TSO** requests a test pursuant to OC11.6.2(b)(i)(bb)(ii) above and the **Sustained Response Capability** determined pursuant to such **Test** is lower than the value which had been redeclared (as described in (1) or (2) thereof) by the **TSO**, the value determined pursuant to such test shall be applied retrospectively (from the ~~**Trading Period**~~**Imbalance Settlement Period** in which the **TSO's** redeclaration was made) in calculating the value of the "Sustained Response Inflexibility Factor" (as such term is defined in the relevant **Nominated Generating Unit Agreement**) under paragraph 10.9 of Schedule 2 to each **Nominated Generating Unit Agreement** relating to steam turbine **CDGUs** in relation to their **Steam Turbine Units**.

(iii) The **Sustained Response Test** is a **Test** of sustained **Load** increases at particular initial **Load** levels, in comparison with expected values shown on the diagram included in the relevant **Nominated Generating Unit Agreement** (the **"Sustained Load Diagram"**). The **Test** is carried out using turbine speeder input and involves fast **Load** increases of various magnitudes (up to the applicable value on the **Sustained Load Diagram**) at up to 3 different initial **Loads** nominated by the party which called for the **Test**. During the **Test** the event recorder is used to monitor relevant parameters.

(iv) For each initial **Load** level, the maximum **Load** increase which was sustained for 5 minutes will set the value (of **Load** increase) at which the **Test** was passed ("the achieved sustained increase"). If for any initial **Load** level the achieved sustained increase deviated from (and below) the relevant expected value on the **Sustained Load Diagram** by more than the greater of 2**MW** and 5% (the "test tolerance"), the party which called for the **Test** may redeclare the value of the **Sustained Response Capability (SRC)** (but subject to the right of the **Generator** subsequently to redeclare), determined as:

SRC = Va/{(1-T) * Ve}

where:

Va = the value (in **MW**) of the **Achieved Sustained Response**;

Ve = the relevant expected value (in **MW**) on the **Sustained Load Diagram**; and

T = the **Test** tolerance, which shall be 5%, and expressed as a decimal fraction of one for the purposes of the above equation.

(c) The following provisions apply as to **Testing** of **Governor Droop** in relation to steam turbine **CDGUs** in relation to their **Steam Turbine Units** (**Governor Droop** may be tested in relation to gas turbine **CDGUs** under OC11.6.1):

(i) For the purposes of this OC11 Part A, "**Specified Governor Droop**" means the highest incremental **Governor Droop** at any **Load** below 90% of **Contracted Capacity**. For a given **Specified Governor Droop** (**SGD**):

(aa) the lowest incremental **Governor Droop** at any **Load** between zero and 90% of **Contracted Capacity** shall be:

0.4 * SGD

(bb) the highest incremental **Governor Droop** at any **Load** above 90% of **Contracted Capacity** shall be:

3 * SGD

(ii) A **Test** of **Governor Droop** may be requested by the **TSO**, on not less than 24 hours' notice, at any time if the **TSO** has reasonable grounds to believe that the **Specified Governor Droop** of the **CDGU** in relation to its **Steam Turbine Units** is higher than its declared value. The **Test** is carried out with the turbine at speed but with the **CDGU** not **Synchronised**, and determines the relationship between governor hydraulic output and turbine speed, as turbine speed is decreased, from several speeder set points. Incremental **Governor Droop** values are calculated for the turbine **Load** range from the recorded results of the **Test**.

(iii) The **TSO** may then redeclare the value of **Specified Governor Droop** to the value determined according to such **Test** (to the extent that it is higher than the value previously declared by the **Generator**).

(d) (i) To the extent that the **TSO** and a **Generator** are unable to agree on any further details or procedures for carrying out the **Sustained Response Test** or testing of **Governor Droop**, an Expert may be requested, pursuant to the relevant **Nominated Generating Unit Agreement**, to determine such details or procedures, which will then be adopted and thereafter applied in any further **Testing** by the parties.

(ii) In the event of a dispute as to the result of a **Sustained Response Test** or a **Test** of **Governor Droop**, the matter shall be referred to an Expert for determination pursuant to the relevant **Nominated Generating Unit Agreement**.

OC11.7 **INVESTIGATIONS**

(a) The **TSO** may, upon giving reasonable notice (in any event not less than 2 **Business Days**), send representatives to a **Power Station** in order to investigate any equipment or operational procedure.

(b) An **Investigation** may take place only for the purposes of enabling the **TSO** to fulfil its obligations relating to the operation of the **Transmission System** (and where in the reasonable opinion of the **TSO** in the absence of an **Investigation** it would be unable properly to fulfil such obligations).

(c) An **Investigation** shall not take place during or less than 2 days before or after a period of **Monitoring** (carried out following the issue of a **Warning Notice**) or **Test** in respect of **Plant** or equipment at the relevant **Power Station** .

(d) The **TSO's** notice under (a) shall specify:

(i) the nature and purpose of the **Investigation** and the reasons therefor;

(ii) the equipment or operational procedure subject to the **Investigation**; and

(iii) the procedure (as reasonably determined by the **TSO**) for the **Investigation**.

(e) The scope of an **Investigation** and the information and parts of the **Power Station** to which the **TSO** shall be entitled to access shall be limited to that required for the purposes of the **Investigation** as specified in the **TSO's** notice under (d).

(f) The **Generator** shall comply with the reasonable requests of the **TSO** in carrying out the **Investigation**, and allow the **TSO** representative access to all relevant parts of the **Power Station** to conduct the **Investigation**.

(g) An **Investigation** shall not of itself result in consequences for the **Generator** under the **Grid Code** or any **Nominated Generating Unit Agreement**, **Nominated Power Station Agreement** or **Connection Agreement**.

(h) These provisions shall be without prejudice to **TSO's** rights of access under any other document or agreement.

OC11.8 TESTING AT THE REQUEST OF A **GENERATOR**

OC11.8.1 A **Generator** shall, subject to OC11.8.2, be entitled, by notice in writing setting out the desired procedure (or, if the **TSO** acting reasonably so agrees, taking into account the nature of the test being requested, by oral request specifying the desired procedure, such oral request to be confirmed in writing as soon as reasonably practicable thereafter), to request the **TSO** to assist it (by **Dispatch**) in carrying out a test on any of its **CDGUs**, as such **Generator**, acting reasonably in accordance with **Prudent Operating Practice**, may request. In the case of a test (other than an on-**Load** valve test) on a **CDGU**, the

procedure set out in the notice or specified in the oral request (as the case may be) shall include the level of **Availability** and the values for **Technical Parameters** which will be declared for the **CDGU** for the period of the test in accordance with SDC1 and shall also include details of the **Dispatch Instructions** which the **Generator** wishes the **TSO** to issue to it for the purposes of the test which may be outside the **Availability** and **Technical Parameters** to be so declared. Notwithstanding the other requirements in this OC11.8.2, in the case **Significant Tests**, **Generators** shall submit proposals to the **TSO** at least five **Business Days** before the test start date or, with the agreement of the **TSO**, no later than 09:00 two **Business Days** before the test start date.

OC11.8.2 The **TSO** shall be entitled to refuse to conduct any test requested under OC11.8.1 (or refuse to conduct it in accordance with the procedure or at the time requested) if, in the **TSO's** reasonable opinion, it is unsafe for the **NI System** to conduct such a test or if it is otherwise not practicable to do so (or to do so in accordance with the procedure or at the time requested) for **System** or any other reasons, including if all reasonable costs and expenses of the **TSO** are not, in the **TSO's** reasonable view, adequately covered by the **User**. The **TSO** may only continue to refuse to conduct the test (or to conduct it in accordance with the procedure) for so long as these reasons continue.

OC11.8.3

(a) If the **TSO** refuses to conduct the test, either at all or in accordance with the procedure or at the time requested, the **TSO** and the **Generator** may discuss an alternative form of test or procedure for conducting the test or timing of the test to see whether agreement can be reached.

(b) If the **TSO** agrees to the test taking place, to the procedure for conducting the test and to the time of the test, either in response to the original request or following the discussion referred to in (a) above, it will notify the **Generator** accordingly.

(c) If the **TSO** does not (following the discussion referred to in (a)) agree to the test taking place, then it will not take place, provided that as indicated in OC11.8.2 above, the **TSO** may only continue to refuse to conduct the test for so long as the reasons set out in that paragraph continue to apply.

(d) If the **TSO** does not (following such discussion) agree to the procedure for conducting the test, then if the test is to go ahead, the **TSO's** requirements relating to the procedure will prevail, unless the reasons set out in OC11.8.2 above no longer continue.

(e) If the **TSO** does not (following such discussion) agree to the timing of the test, then if the test is to go ahead, the **TSO's** requirements relating to timing will prevail.

OC11.8.4

(a) The **TSO** may then, in accordance with the agreed (or otherwise settled) procedure and timing and if agreed by the **Generator**, send representatives to the **Power Station** in order to witness the test.

(b) The **Generator** must, if agreed under (a) above, allow the **TSO** witnesses access to all relevant parts of its **Power Station** in order to witness such a test.

(c) The **TSO** shall take all reasonable steps to ensure that any representatives that it sends to the **Power Station** pursuant to (a) above comply at all times with all

relevant safety requirements of the **Generator** of which they are made aware and with all reasonable directions of the **Generator** and (but subject to (b) above) any reasonable restrictions on access whilst at the **Power Station** in question.

OC11.9 **COMMISSIONING/ACCEPTANCE TESTING**

The CC reflects the **Commissioning/Acceptance Testing** which will be required under each **Connection Agreement** for **User's Equipment** prior to being certified as acceptable to be and remain connected (or to be reconnected) to the **Transmission System** and for modifications to existing **User's Equipment.**

OC11 PART A – APPENDIX

TABLE A

TABLE OF **TOLERANCE BANDS** FOR **DISPATCH INSTRUCTIONS**

DISPATCH CHARACTERISTIC	**Wide Tolerance Band**	Maximum period of **Monitoring** at **Wide Tolerance Band**	**Narrow Tolerance Band**	Max. period of **Monitoring** at **Narrow Tolerance Band**
Active Power (**MW**)	±5**MW** or ± 5% of **Dispatched Load** whichever is greater	6 hours	**Maximum Tolerance Band:** + 1**MW** and -5**MW**. **Minimum Tolerance Band**: -1**MW** and +5**MW**.	30 minutes
Reactive Power (Mvar)	±10 **Mvar**	2 hours	±5 **Mvar**	1 hour
Loading Rate (**MW**/min)	±5% or ±2 minutes for period to achieve **Load** whichever is longer	period to achieve **Load**	Not Applicable	Not Applicable
Synchronising Time	±5 minutes	Not Applicable	Not Applicable	Not Applicable
Governor Droop	3.5-5.5%	Not Applicable	Not Applicable	Not Applicable

OC11 PART A – APPENDIX

TABLE B

TABLE OF **TOLERANCE BANDS** FOR **DISPATCH INSTRUCTIONS: GAS TURBINE UNITS**

DISPATCH CHARACTERISTIC	**Wide Tolerance Band**	Maximum period of **Monitoring** at **Wide Tolerance Band**	**Narrow Tolerance Band**	Max. period of **Monitoring** at **Narrow Tolerance Band**
Active Power (MW)	**± 3MW**	**2 hours**	**Maximum Tolerance Band: +1MW and -5MW Minimum Tolerance Band: -1MW and +5MW**	**30 Minutes**
Reactive Power (Mvar)	**± 5Mvar**	**2 hours**	**± 3Mvar**	**30 minutes**
Loading Rate (**MW**/min)	**± 5%**	**period to achieve Load**	**Not applicable**	**Not applicable**
Synchronous Compensation	**± 5Mvar**	**2 hours**	**± 3Mvar**	**30 minutes**
Governor Droop	**4%**	**Not applicable**	**Not applicable**	**Not applicable**

PART B – ALL USER'S EQUIPMENT OTHER THAN PPA CDGUS

OC11.10 **MONITORING**

OC11.10.1 Procedure for **Monitoring**

OC11.10.1.1 **Monitoring** of **User's Equipment** is normally continuous or continuous for periods of time, and involves the analysis of the output of **Monitoring** equipment (as required or permitted under the CC and/or relevant **Connection Agreements** and/or **SSS Agreements** and/or the **MC**), **Generator Aggregator System Operator Agreement(SOA)**or by such other methods as the **TSO** shall reasonably determine are appropriate in the circumstances. It does not require advance notification from the **TSO** to **Users**.

OC11.10.2 Compliance with **Dispatch Instructions**

OC11.10.2.1 The **TSO** will **Monitor CDGUs, Aggregated Generating Units, Demand Side Units** and **Interconnectors (**referred to in the following paragraphs of this OC11.10 as **"Relevant Plant") in** accordance with the following provisions of this OC11.10.2 when it wishes to determine whether they are being operated in compliance with **Dispatch Instructions**.

OC11.10.2.2 In determining whether **Relevant Plant** has complied, or is complying, with a **Dispatch Instruction**, the **TSO** shall in each case give due regard to operating conditions on the **NI System**. The **TSO** shall also apply the **Tolerance Bands** set out in the relevant table in the Appendix to this OC11 Part B to the **Monitoring** of the relevant **Dispatch Characteristic**, as indicated in the relevant paragraphs of this OC11 Part B, and shall also apply the **Conversion Factors** and **Additional Conversion Factors** where appropriate. The **TSO** shall, when **Monitoring Active Power** or **Reactive Power**, select either the **Wide Tolerance Band** (for **Monitoring** sustained performance) or the **Narrow Tolerance Band** (for **Monitoring** stability over a short period). When **Monitoring** on the **Narrow Tolerance Band**, the **TSO** will select either the **Maximum Tolerance Band** or the **Minimum Tolerance Band**. In the event of a **Frequency Transient** occurring whilst the **TSO** is **Monitoring** the compliance by **Relevant Plant** (regardless of which **Tolerance Band** is being applied by the **TSO** at the time) to which the **CDGU** responds in accordance with the relevant **User's** obligations to provide **Operating Reserve**, the **CDGU** shall not fail the **Monitoring** by reason of such response.

OC11.10.2.3 (a) If, having applied the relevant **Tolerance Band**, and, where appropriate, **Conversion Factors** and **Additional Conversion Factors** the **TSO** suspects that any **Relevant Plant** has not complied, or is not complying, with a **Dispatch Instruction**, the **TSO** will, if it wishes to continue with the **Monitoring** inform the relevant **User** by submitting a **Warning Notice** (either orally or in writing) and, subject to the requirements of **System** security (which may require the

Dispatch Instruction to be cancelled in which case the **Warning Notice** will be deemed to have been withdrawn), the **TSO** will allow the **User** 10 minutes after such notice to comply with the **Dispatch Instruction**.

(b) If in that 10 minute period the **User** still fails to comply with the **Dispatch Instruction**, the **TSO** may give notice to the **User** by submitting a **Monitoring Notice** (either orally or in writing) that the **Relevant Plant** is being **Monitored**.

(c) The **Monitoring Notice** will:

(i) identify the **Dispatch Characteristic(s)** which is being **Monitored** and the underlying **Technical Parameter(s**);

(ii) specify, if relevant, whether the **Tolerance Band** to be used is the **Wide Tolerance Band** or the **Narrow Tolerance Band**; and

(iii) specify, if relevant, whether the **Narrow Tolerance Band** is to apply as a **Maximum Tolerance Band** or as a **Minimum Tolerance Band**.

(d) The **User** has the right, before the issue of the **Monitoring Notice**, or at any time thereafter by submitting to the **TSO** an **Availability Notice**, a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** (as the case may be), to re-declare **Availability** or the **Technical Parameters** (in accordance with the provisions of SDC1) in respect of the **Dispatch Characteristic(s)** to be **Monitored**, such re-declaration to take effect from the time of receipt of the **Warning Notice** by the **User**. In the event that the **User** submits to the **TSO** an **Availability Notice** or a **Technical Parameters Notice** or a **Technical Parameters Revision Notice** at or about the same time as the **TSO** submits to the **User** a **Post Event Notice** (or **Interim Post Event Notice**) pursuant to the following provisions of this OC11.10.2 seeking to re-register the **Availability** or the same **Technical Parameter** (as the case may be) of the **Relevant Plant** in question to a different value, then the value of **Availability** or the value of the relevant **Technical Parameter** shall be deemed to be redeclared to the inferior of the values specified in the two notices.

(e) The period of **Monitoring** shall not exceed the period set out in the relevant table in the Appendix to this OC11 Part B for the relevant **Dispatch Characteristic(s)** and the selected **Tolerance Band**.

OC11.10.2.4 At the end of the period of **Monitoring**, if the **User** has achieved each **Dispatch Instruction** for the period of the **Monitoring** within the relevant **Tolerance Band**, the **Relevant Plant** will be deemed to have complied with each **Dispatch Instruction**.

OC11.10.2.5 If the average value of the **Dispatch Characteristic(s)** in any 5 minute period during the period of **Monitoring** falls outside the relevant **Tolerance Band** the **TSO** may by submitting a **Post Event Notice** to the **Generator** or **Demand Side Unit Operator,** re-register the value of **Availability** or the value of the relevant **Technical Parameter** corresponding to that **Dispatch Characteristic** to the most inferior value outside the **Tolerance Band** for any 5 minute period during the period of **Monitoring** (with effect from the ~~**Trading Period**~~**Imbalance Settlement Period** in which the **Monitoring Notice** was issued) and the **TSO** may also notify the **Generator** or **Demand Side Unit**

Operator, not later than 10 minutes before the end of the period of **Monitoring** that it will continue to **Monitor** the **Relevant Plant** for a further period not exceeding that shown in the relevant Table in the Appendix to this OC11 Part B in respect of the particular **Dispatch Characteristic** and with reference to the relevant or selected **Tolerance Band**.

OC11.10.2.6 If at the end of the further period of **Monitoring** the average value of the **Dispatch Characteristic(s)** in any 5 minute period during the **Monitoring** falls outside the relevant **Tolerance Band**, the **TSO** may re-register the value of the **Availability** or the value of the relevant **Technical Parameter** corresponding to that **Dispatch Characteristic** to the most inferior value for any 5 minute period during the period of **Monitoring** (with effect from the ~~**Trading Period**~~**Imbalance Settlement Period** in which the **Monitoring Notice** was issued). Further periods of **Monitoring** may also take place, in accordance with the procedure set out in OC11.10.2.5 and the provisions of this OC11.10.2.6 will apply to such further periods of **Monitoring**.

OC11.10.2.7 (a) If (other than pursuant to a **Dispatch Instruction** to **De-Load**) the average value of **Output** for any 5 minute period is less than 80% of the average **Output** for either of the two immediately preceding 5 minute periods, the **TSO** may issue a **Post Event Notice** re-registering the **Availability** of the **Relevant Plant** at the level consistent with its average value for that 5 minute period with effect from the beginning of the ~~**Trading Period**~~**Imbalance Settlement Period** in which such 5 minute period commenced.

(b) If (following a **Dispatch Instruction** to **De-Load**) the average value of **Active Power** for any 5 minute period is less than 80% of the average value of **Active Power** which would have been generated by the **Relevant Plant** for such 5 minute period had it been **De-Loaded** at its maximum **De-Loading** rate (registered as a **Technical Parameter**), the **TSO** may issue a **Post Event Notice** re-registering the **Availability** of the **CDGU** at the level consistent with the average value for that 5 minute period with effect from the beginning of the ~~**Trading Period**~~**Imbalance Settlement Period** in which such 5 minute period commenced.

OC11.10.2.8 Prior to submitting a **Post Event Notice**, the **TSO** may deliver an **Interim Post Event Notice** to the **User** not later than 2 hours after:

(a) in the case of an event of the type specified in OC11.10.2.7 (a) or (b) the end of the ~~**Trading Period**~~**Imbalance Settlement Period** during which the event occurred; or

(b) in the case of instances of **Monitoring**, the end of the relevant period of **Monitoring,**

if it is not reasonably practicable for the **TSO** to deliver a **Post Event Notice** to the **User** within that time.

OC11.10.2.9 An **Interim Post Event Notice** shall specify:

(a) the ~~**Trading Period**~~**Imbalance Settlement Period** during which the event of the type specified in OC11.10.2.7 (a) or (b) occurred and, in the instance of

Monitoring, the ~~**Trading Period**~~**Imbalance Settlement Period** during which the relevant **Warning Notice** was issued; and

(b) the matters or values which the **TSO** intends to redeclare in a **Post Event Notice** as a result of what happened.

OC11.10.2.10 A **Post Event Notice** shall not be validly issued:

(a) if submitted to the **User** under OC11.10.2.5 later than 5pm on the 5th **Business Day** following the day on which the **Monitoring** was undertaken or, in the case of an event of the type specified in OC11.10.2.7(a) or (b), later than 5pm on the 5th **Business Day** following the day on which the event occurred;

(b) if submitted to the **User** under OC11.10.2.5 later than 2 hours after the end of the relevant period of **Monitoring** or, in the case of an event of the type specified in OC11.10.2.7 (a) or (b), later than 2 hours after the ~~**Trading Period**~~**Imbalance Settlement Period** in which the event occurred and no **Interim Post Event Notice** was issued in accordance with OC11.10.2.9; or

(c) to the extent that the **Post Event Notice** re-registers matters or values that were not specified in an **Interim Post Event Notice** issued in accordance with OC11.10.2.9.

OC11.10.3 **Operating Reserve** capability

OC11.10.3.1 **Monitoring** to determine whether a **Relevant Plant** is able to achieve its **Primary Operating Reserve, Secondary Operating Reserve** and/or **Tertiary Operating Reserve band 1 (**for the purposes of this OC11 Part B, **"Relevant Operating Reserve")** capability will be undertaken by the **TSO** in accordance with the applicable **Agreed Testing and Monitoring Procedure.**

OC11.10.4.2 If a **Relevant Plant** is found by the **TSO** to be non-compliant pursuant to OC11.10.4.1 the **TSO** may re-register the value of the **Generator's** declared **Relevant Operating Reserve** in accordance with the provisions of the applicable **Agreed Testing and Monitoring Procedure**.

OC11.11 **TESTING**

OC11.11.1 Procedure for **Testing**

OC11.11.1.1 In circumstances where the **TSO** reasonably considers that, in relation to a **CDGU, Controllable WFPS, Demand Side Unit** or item of **User's Equipment**, a **User** might be failing to comply or might in the foreseeable future fail to comply with the relevant **Design and Operating Requirements** (or the requirements of the **SSS Agreement**, as the case may be), the **TSO** may, upon giving reasonable notice identifying the **Design and Operating Requirement** concerned, send representatives to the relevant **Power Station** or **User Site** in order to verify by **Testing** or inspection (in the case of **Testing** conducted by the **User**) whether in relation to the **CDGU, Controllable WFPS, Demand Side Unit** or item of **User's Equipment**, as the case may be, the **Design and**

Operating Requirement (or **SSS Agreement** requirement, and the case may be) is being complied with. The **Test** or inspection may involve the giving of specific **Dispatch Instructions** within the provisions of SDC2, including instructions in connection with **Black Starts** and **Dispatched Fuel Notices**. The period of notice which is reasonable will depend upon all the circumstances, including the **Design and Operating Requirement** (or **SSS Agreement** requirement, as the case may be) in question.

OC11.11.1.2 A **Generator, Demand Side Unit Operator** or other **User**, as the case may be, must allow the **TSO** representatives access to all relevant parts of its **Power Station** or **User Site** for the purposes of this OC11.11.

OC11.11.1.3 In the case of a **Test** of **Relevant Operating Reserve** capability or any other **Test** that falls within the scope of an **Agreed Testing and Monitoring Procedure**, the procedure for conducting the **Test** and the criteria for passing the **Test** will be as set out in the applicable **Agreed Testing and Monitoring Procedure.** If a **Test** falls outside the scope of the **Agreed Testing and Monitoring Procedures**, the procedure for the **Test**, and the criteria for passing the **Test** will, if not agreed between the **TSO** and the **Generator, Demand Side Unit Operator** or other **User**, be as determined by the **TSO** acting reasonably and as notified to the **Generator, Demand Side Unit Operator** or other **User**, as the case may be, at the time and the **Generator, Demand Side Unit Operator** or other **User**, as the case may be, will comply with all reasonable instructions of the **TSO** in carrying out the **Test**.

OC11.11.1.4 If the procedure for the **Test**, and the criteria for passing the **Test**, are determined by the **TSO** under OC11.11.1.3 and, within 48 hours after completion of the **Test**, the **User** notifies the **TSO** in writing that it objects to the procedure and/or the criteria which were used for the **Test**, then the question of whether the **Test** procedure and/or the criteria were valid shall:

(a) in the case of a **Design and Operating Requirement** contained in the **Grid Code**, be decided in accordance with the relevant dispute resolution procedure set out in the **User's** relevant **Connection Agreement**, **Transmission Use of System Agreement** or **Grid Code Compliance Agreement**; or

(b) in the case of a **Design and Operating Requirement** contained in the **User's** relevant **Connection Agreement**, **Transmission Use of System Agreement** or **Grid Code Compliance Agreement** be decided in accordance with the relevant dispute resolution procedure set out in the **User's** relevant **Connection Agreement, Transmission Use of System Agreement** or **Grid Code Compliance Agreement**; or

(c) in the case of a requirement contained in the **User's** relevant **SSS Agreement**, be decided in accordance with the relevant dispute resolution procedure set out in the **User's** relevant **SSS Agreement,**

and, in any such case, the effects of the **Test** shall be suspended until such time as it has been determined that the procedure for the **Test** or the criteria for passing the **Test** were valid. If it is determined that the procedure for the **Test** or the criteria for passing the **Test** were not valid, then the **Test** shall not be effective for the purposes of the relevant

Agreement or the **Grid Code**, as the case may be. The **TSO** may, however, conduct a further **Test** in accordance with this OC11.11 (including this OC11.11.1.4).

OC11.11.1.5 (a) In determining whether the **CDGU**, **Controllable WFPS, Demand Side Unit**s or item of **User's Equipment**, as the case may be, has passed a **Test**, due regard will be given by the **TSO** to operating conditions on the **NI System** and (where applicable) the relevant **Tolerance Bands** will be applied to the relevant matters being **Tested** as set out in the Appendix to this OC11 Part B and the **Conversion Factors** and the **Additional Conversion Factors** shall also be applied where appropriate.

(b) If, within 48 hours after completion of the **Test**, the **User** notifies the **TSO** in writing that it disagrees that the results show that the **CDGU**, **Controllable WFPS, Demand Side Unit** or item of **User's Equipment** has failed the **Test**, then the question of whether the **Test** has been passed or failed shall:

(i) in the case of a **Design and Operating Requirement** contained in the **Grid Code**, be decided in accordance with the relevant dispute resolution procedure set out in the **User's** relevant **Connection Agreement**, **Transmission Use of System Agreement** or **Grid Code Compliance Agreement**; or

(ii) in the case of a **Design and Operating Requirement** contained in the **User's** relevant **Connection Agreement**, **Transmission Use of System Agreement** or **Grid Code Compliance Agreement**, be decided in accordance with the relevant dispute resolution procedure set out in the **User's** relevant **Connection Agreement**, **Transmission Use of System Agreement** or **Grid Code Compliance Agreement**; or

(iii) in the case of a requirement contained in the **Users** relevant **SSS Agreement**, be decided in accordance with the relevant dispute resolution procedure set out in the **User's** relevant **SSS Agreement**,

and, in any such event, the effects of the **Test** shall be suspended until such time as it has been determined that the **CDGU, Demand Side Unit** or item of **User's Equipment** has failed the **Test**.

OC11.11.2 Consequences of failing a **Test**

OC11.11.2.1 If in relation to the **CDGU, Demand Side Unit** or item of **User's Equipment**, as the case may be, the **Generator** or **Demand Side Unit** fails the **Test** then:

(a) if the **Design and Operating Requirement** is one under the **Grid Code**, the **TSO** may, in the case of those **Design and Operating Requirements** where a parameter or other data item can be registered (that is, those other than CC parameters), re-register the value of the relevant **Design and Operating Requirement** to reflect the lower level of compliance shown by the **Test**;

(b) the **User** will, if the **Design and Operating Requirement** is one under a **Connection Agreement**, **Transmission Use of System Agreement** or **Grid**

Code Compliance Agreement to which it is a party, be subject to such consequences (if any) as may arise under that agreement; and

(c) the **User** will, if it is a **SSS Agreement** requirement, be subject to such consequences as may arise under that agreement.

OC11.12 **INVESTIGATION**

OC11.12.1 The **TSO** may, if it reasonably considers that there may be an issue of non-compliance by the **User,** carry out an **Investigation** to acquire or verify information relevant to **User's Equipment** design, operation or connection requirements under the **Grid Code, Connection Agreements, Generator Aggregator System Operator Agreement (SOA)** and **System Support Service Agreements** between **Users** and the **TSO**.

OC11.12.2 Investigation by the **TSO** usually applies to information not collected on a regular basis by means of **Monitoring** and **Testing**. The **TSO** may, having given not less than 2 **Business Days**' notice, send a representative or subcontractor to a **User's Site** in order to investigate any equipment or operational procedure on or applicable to the **User Site** insofar as the condition of that equipment or operational procedure is relevant to compliance with the **Grid Code, Connection Agreements**, and/or other agreements between **Users** and the **TSO**. A site visit by the **TSO** or his representative, as part of an **Investigation** will, generally not take place less than 2 days before or after **Testing**.

OC11.12.3 An **Investigation** shall not of itself result in consequences for the **User** under the **Grid Code** or **Connection Agreement**.

OC11.12.4 These provisions shall be without prejudice to the **TSO's** rights of access under any other document or agreement.

OC11.13 TESTING AT THE REQUEST OF A **GENERATOR** OR **USER**

OC11.13.1 A **Generator, Demand Side Unit Operator** or other **User**, as the case may be, shall, subject to OC11.13.2, be entitled, by notice in writing setting out the desired procedure (or, if the **TSO** acting reasonably so agrees, taking into account the nature of the test being requested, by oral request specifying the desired procedure, such oral request to be confirmed in writing as soon as reasonably practicable thereafter), to request the **TSO** to assist it (by **Dispatch**) in carrying out a test on any of its **CDGUs, Demand Side Unit** or **User's Equipment**, as the case may be, as such **Generator, Demand Side Unit Operator** or other **User**, acting reasonably in accordance with **Prudent Operating Practice**, may request. In the case of a test (other than an on-**Load** valve test) on a **CDGU** or **Demand Side Unit Operator** the procedure set out in the notice or specified in the oral request (as the case may be) shall include the level of **Availability** and the values for **Technical Parameters** which will be declared for the **CDGU, Demand Side Unit, Aggregated Generating Unit** or **Interconnector** for the period of the test in accordance with SDC1 and shall also include details of the **Dispatch Instructions** which the **Generator** wishes the **TSO** to issue to it for the purposes of the test which may be outside the **Availability** and **Technical Parameters** to be so declared.

OC11.13.2 The **TSO** shall be entitled to refuse to conduct any test requested under OC11.13.1 (or refuse to conduct it in accordance with the procedure or at the time requested) if, in the

TSO's reasonable opinion, it is unsafe for the **NI System** to conduct such a test or if it is otherwise not practicable to do so (or to do so in accordance with the procedure or at the time requested) for **System** or any other reasons, including if all reasonable costs and expenses of the **TSO** are not, in the **TSO's** reasonable view, adequately covered by the **User**. The **TSO** may only continue to refuse to conduct the test (or to conduct it in accordance with the procedure) for so long as these reasons continue.

OC11.13.3 (a) If the **TSO** refuses to conduct the test, either at all or in accordance with the procedure or at the time requested, the **TSO** and the **Generator, Demand Side Unit Operator** or other **User**, as the case may be, may discuss an alternative form of test or procedure for conducting the test or timing of the test to see whether agreement can be reached.

(b) If the **TSO** agrees to the test taking place, to the procedure for conducting the test and to the time of the test, either in response to the original request or following the discussion referred to in (a) above, it will notify the **Generator, Demand Side Unit Operator** or other **User**, as the case may be, accordingly.

(c) If the **TSO** does not (following the discussion referred to in (a)) agree to the test taking place, then it will not take place, provided that as indicated in OC11.13.2 above, the **TSO** may only continue to refuse to conduct the test for so long as the reasons set out in that paragraph continue to apply.

(d) If the **TSO** does not (following such discussion) agree to the procedure for conducting the test, then if the test is to go ahead, the **TSO's** requirements relating to the procedure will prevail, unless the reasons set out in OC11.13.2 above no longer continue.

(e) If the **TSO** does not (following such discussion) agree to the timing of the test, then if the test is to go ahead, the **TSO's** requirements relating to timing will prevail.

OC11.13.4 (a) The **TSO** may then, in accordance with the agreed (or otherwise settled) procedure and timing and if agreed by the **User**, send representatives to the **Power Station** or **User Site**, as the case may be, in order to witness the test.

(b) The **Generator, Demand Side Unit Operator** or other **User**, as the case may be, must, if agreed under (a) above, allow the **TSO** witnesses access to all relevant parts of its **Power Station** or **User Site** in order to witness such a test.

(c) The **TSO** shall take all reasonable steps to ensure that any representatives that it sends to the **Power Station** or **User Site** pursuant to (a) above comply at all times with all relevant safety requirements of the **Generator, Demand Side Unit Operator** or other **User** (as the case may be) of which they are made aware and with all reasonable directions of the **Generator** or **Demand Side Unit Operator** and (but subject to (b) above) any reasonable restrictions on access whilst at the **Power Station** or **User Site** in question.

OC11.14 **COMMISSIONING/ACCEPTANCE TESTING**

The CC reflects the **Commissioning/Acceptance Testing** which will be required under each **Connection Agreement** for **User's Equipment** prior to being certified as acceptable to be and remain connected (or to be reconnected) to the **Transmission System** and for modifications to existing **User's Equipment.**

OC11 PART B – APPENDIX

TABLE A

TABLE OF **TOLERANCE BANDS** FOR **DISPATCH INSTRUCTIONS**

DISPATCH CHARACTERISTIC	**Wide Tolerance Band**	Maximum period of **Monitoring** at **Wide Tolerance Band**	**Narrow Tolerance Band**	Max. period of **Monitoring** at **Narrow Tolerance Band**
Active Power (**MW**)	±5**MW** or ± 5% of **Dispatched Load** whichever is greater	6 hours	**Maximum Tolerance Band:** + 1**MW** and -5**MW**. **Minimum Tolerance Band**: -1**MW** and +5**MW**.	30 minutes
Reactive Power (Mvar)	±10 **Mvar**	2 hours	±5 **Mvar**	1 hour
Loading Rate (**MW**/min)	±5% or ±2 minutes for period to achieve **Load** whichever is longer	period to achieve **Load**	Not Applicable	Not Applicable
Synchronising Time	±5 minutes	Not Applicable	Not Applicable	Not Applicable
Governor Droop	3.5-5.5%	Not Applicable	Not Applicable	Not Applicable

OC11 PART B – APPENDIX

TABLE B

TABLE OF **TOLERANCE BANDS** FOR **DISPATCH INSTRUCTIONS: GAS TURBINE UNITS**

DISPATCH CHARACTERISTIC	**Wide Tolerance Band**	Maximum period of **Monitoring** at **Wide Tolerance Band**	**Narrow Tolerance Band**	Max. period of **Monitoring** at **Narrow Tolerance Band**
Active Power (MW)	**± 3MW**	**2 hours**	**Maximum Tolerance Band: +1MW and -5MW Minimum Tolerance Band: -1MW and +5MW**	**30 Minutes**
Reactive Power (Mvar)	**± 5Mvar**	**2 hours**	**± 3Mvar**	**30 minutes**
Loading Rate (**MW**/min)	**± 5%**	**period to achieve Load**	**Not applicable**	**Not applicable**
Synchronous Compensation	**± 5Mvar**	**2 hours**	**± 3Mvar**	**30 minutes**
Governor Droop	**4%**	**Not applicable**	**Not applicable**	**Not applicable**

DISPATCH CHARACTERISTIC	**Tolerance Band**
Real Time Validation **Active Power (MW)**	**±5%** of the **Dispatch Instruction**
Post event validation **Demand Side Unit Energy Profile – (**metered **Demand + Demand Side Unit MW Response)**	**< ±5%** of the **Demand Side Unit Energy Profile**

Demand Side Units not **Dispatched** but declared **Available** in an **Availability Notice** **Demand Side Unit Energy Profile** – metered **Demand**	< **± 5%** of the **Demand Side Unit Energy Profile**

SCHEDULING AND DISPATCH CODE NO.1

UNIT SCHEDULING

SDC1.1 INTRODUCTION

SDC1.1.1 **SEM** Provisions

(a) This Scheduling and Dispatch Code No. 1 ("SDC1") forms part of the **Sections under Common Governance** of the **Grid Code**. The **Sections under Common Governance** 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 similar to the SDC1 in the **Other Grid Code.** Differences relate to references to relevant power systems and related terms. Where there is a difference between a provision in this **Grid Code** and an equivalent provision in the **Other Grid Code**, the wording in question is shaded in grey. In addition, those parts of this SDC1 that are not part of the **Other Grid Code** are shaded in grey in this SDC1. Differences between the form of this SDC1 and the SDC1 in the **Other Grid Code** are summarised in Annex 1 to this SDC1.

(c) This SDC1 is intended to work in conjunction with 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 above certain minimum thresholds or their **Intermediary** shall be a party to the **TSC**. The **Market Operator** is a party to the **TSC**, as is the **TSO** and the **Other TSO**.~~

(d) Where stated in this SDC1, ~~T~~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** by a **User** or by an **Intermediary** on behalf of **Users** is then provided to the **TSO** by the **Market Operator** ~~under the provisions of~~in accordance with the **TSC**, as further provided in this SDC1. The **TSO** may require **Users** to verify or provide revisions to data received by it via the **Market Operator**.

(e) Further provisions dealing with the **Sections under Common Governance** are contained in the **General Conditions**.

SDC1.1.2 SDC1 sets out the procedure ~~for~~used by the **TSO** to develop unit commitment **Schedules** in respect of **CDGU's, Controllable WFPSs** and **Demand Side Units** including the requirements for **Users** to submit data to support this procedure:

(a) **Availability**: the ~~daily~~ submission by a **User** to the **TSO** of an **Availability Notice** in respect of ~~any~~ each of its:

(i) **CDGUs** (which for the avoidance of doubt comprise, **Generating Units** subject to **Central Dispatch**, **CCGT Installations**, **Hydro Units**, **Pumped Storage Generation** (but not **Pumped Storage Plant Demand**) and **Dispatchable WFPSs**);

(ii) **Pumped Storage Plant Demand**;

(iii) **Interconnector Availability** (in the case of the **Interconnector Owner**) ~~and **Price** (in the case of an **Interconnector User**)~~;

(iv) **Demand Side Units**;

(v) in the case of **Generator Aggregators**, its **Aggregated Generating Units**; and

(vi) **Controllable WFPSs.**

(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**, notification of **Other Relevant Data** and notification of other technical data including **System Support Services** capability;

(c) **Commercial Offer Data**: the ~~daily~~ notification of **Commercial Offer Data** in accordance with the **TSC**;

(d) **Physical Notifications:** the declaration by a **User** to the **TSO** of **Physical Notifications** data in accordance with the **TSC**;

(d) Revisions/**Re-declarations:** revisions / **Re-declarations** by **Electronic Interface** or by other form as the **TSO** may reasonably notify to each **User** from time to time of any real time changes in the information ~~(other than **Commercial Offer Data** after **Gate Closure**)~~ submitted in an **Availability Notice**, **Additional Grid Code Availability Notice**, **Technical Parameters Notice**, ~~and~~ **Additional Grid Code Characteristics Notice**, **Commercial Offer Data** notification and **Physical Notifications** as provided for this in SDC1

(e) **Indicative Operations Schedules**: the periodic production and issuing by the **TSO** of **Indicative Operations Schedules** as required under SDC1.4.8.9 as a statement of which:~~the production and issuing by the **TSO** of two **Indicative Operations Schedules,** one for the present **Trading Day** and one for the following **Trading Day** as a statement of which:~~

(i) **CDGUs;**

(ii) **Pumped Storage Plant Demand;**

(iii) **Interconnectors;**

(iv) **Demand Side Units;**

(v) **Aggregated Generating Units;** and/or

(vii) **Controllable WFPSs**

may be required.

SDC1.1.3 The **TSO** (in conjunction with the **Other TSO**) shall develop, maintain and publish the process describing the methodology and parameters to be used by the **TSO** (and the **Other TSO**) in discharging their role under this SDC1 and SDC2. ~~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).~~

SDC1.1.4 In respect of **PPA Generation** the provisions of Appendix B prevail and replace, as stated, the other parts of this SDC1 in relation to such **PPA Generation**.

SDC1.1.5 ~~**Intra-day Trading**: There are three **Gate Windows**, denoted EA1 (Ex-Ante 1), EA2 (Ex-Ante 2) and WD1 (1), and three associated **Trading Windows**. The rules for Users to submit new or revised data related to the three associated **Trading Windows** are set out in the **TSC**.~~

~~The timings of the key events for **Intra-Day Trading** are set out in the table below.~~

~~**Gate Window**~~	~~**EA1**~~	~~**EA2**~~	~~**WD1**~~
~~**Gate Window Opening**~~	~~06:00on D-29~~	~~09:30 on D-1~~	~~11:30 on D-1~~
~~**Gate Window Closure**~~	~~09:30 on D-1~~	~~11:30 on D-1~~	~~08:00 on D~~
~~**Trading Windows**~~			
~~**Start of Trading Window**~~	~~Start of **Trading Day** (**Trading Period** starting 06:00)~~	~~Start of **Trading Day** (**Trading Period** starting 06:00)~~	~~**Trading Period** starting 18:00~~
~~**End of Trading Window**~~	~~End of **Trading Day** (**Trading Period** starting 05:30)~~	~~End of **Trading Day** (**Trading Period** starting 05:30)~~	~~End of **Trading Day** (**Trading Period** starting 05:30)~~

SDC1.2 OBJECTIVE

The objectives of SDC1 are:

~~(a) to enable the **TSO**, in conjunction with the **Other TSO**, to prepare two **Indicative Operations Schedules** (utilising, amongst other things, a **Merit Order**) one for the present **Trading Day** and one for the following **Trading Day** to be used in the **Scheduling** and **Dispatch** process for these **Trading Days**;~~

(~~b~~a) to ~~thereby~~ ensure (so far as possible) the integrity of the **Transmission System** and to ensure that the **TSO** acts in conjunction with the **Other TSO** so that the **Other TSO** can ensure the integrity of the **Other Transmission System** (with the **Other TSO** having a similar objective);

(~~c~~b) to ensure the security and quality of supply in relation to the **Transmission System** and to ensure that the **TSO** acts in conjunction with the **Other TSO** so that the **Other TSO** can ensure the security and quality of supply in relation to the **Other Transmission System** (with the **Other TSO** having a similar objective);

(~~d~~c) to ensure that ~~there is~~ sufficient available capacity is **Scheduled** to meet the electrical power **Demand**, and thereby in conjunction with the **Other TSO** to ensure that there is sufficient capacity to meet the **Demand** on the Island of Ireland at all times and in both cases together with an appropriate margin of reserve;

(d) to enable the **TSO**, in conjunction with the **Other TSO**, to prepare **Indicative Operations Schedules** to be used in the **Scheduling** and **Dispatch** process;

(e) to ensure that ~~publish an~~ **Indicative Operations Schedules** are published as provided for in this SDC1;~~.~~

and, subject to delivering the objectives in SDC1.2 (a), SDC1.2(b), and SDC1.2(c) and taking account of the factors set out in [SDC1.4.8.3],

(f) minimise the cost of **Scheduled** deviations from the **Physical Notifications** in accordance with **Merit Order**, subject to SDC1.2(g);

(g) In fulfilling the objective in SDC1.2(c), minimise the requirement to issue **Notices to Synchronise** before **Gate Closure 2**.

SDC1.3 SCOPE

SDC1.3.1 SDC1 applies to the **TSO** and to the following **Users**:

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

(b) **Pumped Storage Generators** with regard to their **Pumped Storage Plant Demand**;

(c) In respect of the submission of **Availability Notices** under SDC1.4.1 and **Technical Parameters Notices** under SDC1.4.4.1, **Interconnector Owners** with regard to their **Interconnectors**;

(d) In respect of the submission of ~~**Commercial Offer Data** under SDC1.4.4.5 only~~ **Physical Notifications** under SDC1.4.4.6, ~~**Interconnector Users**~~ **Shipping Agents** in respect of ~~their~~ **Interconnector** imports and exports~~**Units**~~;

(e) **Demand Side Unit Operators** in relation to their **Demand Side Units**; and

(f) **Generator Aggregators** in respect of their **Aggregated Generating Units**.

Each of which (other than the **TSO**) is a "**User**" under this SDC1.

SDC1.3.2 In this SDC1, the term "**User**" shall include users of the **Distribution System** that fall under one of the above categories and are subject to **Central Dispatch**.

SDC1.3.3 The **TSO** shall inform the **DNO** as soon as reasonably practicable after it becomes aware that a **User** that is connected to the **Distribution System** is required to comply with the **Grid Code**.

SDC1.4 PROCEDURE

SDC1.4.1 **Availability Notice**

SDC1.4.1.1 Requirement

(a) Each **User** shall, by not later than the ~~EA1~~ **Gate** ~~**Window**~~ **Closure**~~**s**~~ **1** 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 changes to the **Availability**, ~~available transfer capacity~~ and/or **Demand Side Unit MW Availability** (as the case may be) of each of its:

(i) **CDGUs**;

(ii) **Controllable WFPSs**;

(iii) **Pumped Storage Plant Demand**;

(iv) **Interconnectors** (to be submitted by the **Interconnector Owner**);

(v) **Demand Side Units**; or

(vi) **Aggregated Generating 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** 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** of its **Aggregated Generating Units** as the case may be.

(d) As a general requirement, the **User** shall ensure that the data in any **Availability Notice** or any revision thereto is consistent with its obligations under SDC1.4.3.2 and SDC1.4.3.4.

SDC1.4.1.2 Content

(a) The **Availability Notice** shall state the **Availability** of the relevant **CDGU**, **Controllable WFPS**, **Interconnector**, **Demand Side Unit** or **Pumped Storage Plant Demand** as the case may be, (including, in the case of a **CCGT Installation**, the **Availability** of each of the **CCGT Modules** within it) for each ~~**Trading Period**~~**Imbalance Settlement Period** in the time up to an including the end of the relevant **Trading Day** (subject to revision under SDC1.4.3.6). A new **Availability Notice** will supersede the previous one in relation to **Availability** for ~~**Trading Period**~~**Imbalance Settlement Periods** which are covered by the new one.~~:~~

~~(i) **Availability** of the relevant:~~

~~**CDGU;** or~~

~~**Controllable WFPSs;** or~~

~~(ii) the **Demand Side Unit MW Availability** of the **Demand Side Unit** or **Pumped Storage Plant Demand**; or~~

~~(iii) the available transfer capacity as defined in the **TSC** in respect of an **Interconnector;**~~

~~as the case may be, (including, in the case of a **CCGT Installation**, the **Availability** of each of the **CCGT Modules** within it) for each **Trading Period** in the following **Optimisation Time Horizon** (subject to revision under SDC1.4.5.1(a)). The **Availability Notice** submitted in relation to an **Optimisation Time Horizon** will supersede the previous one in relation to that part of the previous **Optimisation Time Horizon** which is covered by the new one.~~

(b) In respect of **Interconnectors**, the **Availability Notice** shall state the physical capability of the **Interconnector**, and shall take account of any further restrictions placed by any relevant agreement or the provisions of any licence in respect of the **Interconnector**, but shall not otherwise take account of any expected transmission constraints or other aspects of the operation of the Transmission System or an **External System**. A new **Availability Notice** will supersede the previous one in relation to **Availability** for **Imbalance Settlement Periods** which are covered by the new one.

(~~c~~b) In the case of a **Generator Aggregator**, the **Availability Notice** shall state the **Availability** of its **Aggregated Generating Units** as a whole.

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

SDC1.4.1.4 Atmospheric Conditions: In the case of **CDGUs** and **Controllable WFPSs** which are affected by ambient conditions, an **Availability Notice** submitted by a **Generator** shall be stated as being the **User's** best estimate of the prevailing atmospheric conditions for the ~~**Trading Period**~~**Imbalance Settlement 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** by no later than the ~~EA1~~ **Gate ~~Window~~ Closure 1** each day, with the exception of **Aggregators** and **Demand Side Unit Operators**, 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** shall submit an **Availability Notice** setting out the information in SDC1.4.1 above for each fuel for the **CDGU**. The provisions of this SDC1.4.2.1 shall, with respect to **PPA Generation**, be read in conjunction with the provisions of SDC1.B.3.1

SDC1.4.2.2 **CCGT Availability**

(a) The **Availability** of each **CCGT Module** within each **CCGT Installation**;

CCGT Installations

(b) In the case of a **CCGT Installation**, the **CCGT Installation Matrix** submitted by the **Generator** under PCA2.3.4 of the **Planning Code** (as may be revised as therein provided is used and relied upon by the **TSO** as a 'look up table' to determine the number of **CCGT Modules** 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** contained in an **Availability Notice** submitted by a **Generator** pursuant to this SDC1. The individual **Availability** figures submitted under this SDC1.4.2.2 must be consistent with the **Generator's** submission under the **TSC**.

(c) 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**. Each **Generator** shall notify the **TSO** as soon as practicable after the event of any such variance.

(d) In achieving a **Dispatch Instruction** the range or number of **CCGT Modules** envisaged in moving from one **MW Output** level to the other should not be departed from.

(e) There is a provision in SDC1.4.5 for the **Generator** to revise the individual **Availability** of each **CCGT Module** within each **CCGT Installations**, subject always to the provisions of this SDC1.4.2.2;

(f) The **CCGT Installation Matrix** can only be amended such that the **CCGT Installation** comprises different **CCGT Modules** in accordance with PCA2.3.5.

SDC1.4.2.3 Constraints: Fuel constraints, emission constraints or any other technical related constraint which may affect the **Output** or **Demand Reduction** of a **Plant** as the case may be both immediately and in the longer term.

SDC1.4.3 **General Availability Requirements**

The provisions at SDC1.4.3.1, SDC1.4.3.2 and SDC1.4.3.3 do not apply to **PPA Generation** which is dealt with in Appendix B.1.

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 Operating Practice** and any legal requirements applicable to its jurisdiction, with a view to providing the required **System Support Services** as provided for in a **System Support Services Agreement**.

SDC1.4.3.2 Each **Generator**, and where relevant each **Generator Aggregator**, shall, subject to the exceptions in SDC1.4.3.3, 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 **Planned Outage** or **Planned Maintenance 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 Operating Practice** be deferred to a period of **Planned Outage** or **Planned Maintenance 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**.

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

Each **Demand Side Unit Operator** shall, subject to the exceptions in SDC1.4.3.5, 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 **Planned Outage** or **Planned Maintenance 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 Operating Practice**, be deferred to a period of **Planned Outage** or **Planned Maintenance 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**.

SDC1.4.3.6 Changes in **Availability**:

(a)

(i) A **User** must, as soon as reasonably practicable after it becomes aware of a change in its **Availability** in real time, submit, via **Electronic Interface** or in such other form as the **TSO** may reasonably notify each **User** from time to time, a declaration of its actual real time **Availability**.

(ii) A **User** must, as soon as reasonably practicable after it becomes aware of a change to the information in the **Availability Notice** submitted to the **TSO** under SDC1.4.1.1 and as provided in this SDC1, submit a **Re-declaration** to such **Availability Notice** in accordance with its obligations to make the **Unit Available** under SDC1.4.3 and Appendix B to this SDC1, such **Re-declaration** to be submitted via **Electronic Interface** or in such other form as the **TSO** may reasonably notify to each **User** from time to time.

(b) In the event that the **TSO** submits a **Post Event Notice** under OC11 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**.

(c) The revisions to the **Availability Notice** may include revisions of the levels of **Availability** in the **CCGT Installation Matrix** reflecting the revised **Availability**.

(d) Additional **Availability Notice**: A User must, as soon as reasonably practicable after it becomes aware of a change to the information in the Additional Grid Code Availability Notice submitted to the TSO under SDC1.4.2 and as provided in this SDC1, submit a Re-declaration to such Additional Grid Code Availability Notice in accordance with its obligations to make the Unit Available under SDC1.4.3 and Appendix B to this SDC1, such Re-declaration to be submitted via Electronic Interface or in such other form as the TSO may reasonably notify each User from time to time.

(~~c~~a) Increasing Availability: If a **Generator**, a **Generator Aggregator** or a **Demand Side Unit Operator** in respect of a **CDGU**, an **Aggregated Generating Unit,** a **Demand Side Unit** or **Pumped Storage Plant** in relation to **Demand**, issues an **Availability Notice** or a **Re-declaration** increasing (from zero or otherwise) the level of **Availability** or **Demand Side Unit MW Availability** from a specified time, such notice shall be construed as meaning that:

(i) in the case of a **CDGU** and/or **Aggregated Generating Unit**, the **CDGU** and/or **Aggregated Generating Unit** is capable of being synchronised to the **Transmission System** or **Distribution System** at that specified time or increasing its **MW Output** at that specified time as the case may be;

(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**, the **Demand Side Unit** is capable of delivering a greater **Demand Side Unit MW Response** at that specified time.

(~~d~~b) **Controllable WFPS:** If a **Generator** or, where relevant a **Generator Aggregator**, in respect of a **Controllable WFPS**, issues an **Availability Notice** or a **Re-declaration** increasing (from zero or otherwise) or decreasing the level of **Availability** from a specified time, such notice shall be effective from the ~~**Trading Period**~~**Imbalance Settlement Period** following the specified time.

~~SDC1.4.3.7~~ (g) Decreasing **Availability**: When a **CDGU** and/or **Controllable WFPS** is **Synchronised** to the **System** the **Generator** may have occasion to issue an **Availability Notice** or a **Re-declaration** 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. Thereafter, the **CDGU** and/or **Controllable WFPS** 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**. This would have occurred with effect from the specified time, at the maximum **De-Loading Rate** and/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** or a **Re-declaration**. When a **Demand Side Unit** is providing a **Demand Side Unit MW Response** the **Demand Side Unit** may have occasion to issue an **Availability Notice** or a **Re-declaration** decreasing the level of **Demand Side Unit MW Availability** of the **Demand Side Unit** from a specified time. Such notice shall be construed as meaning that the **Demand Side Unit** is capable of maintaining **Demand Side Unit MW Response** at the level of the prevailing **Demand Side Unit MW Availability** until the time specified in the notice. Thereafter, the **Demand Side Unit** shall be capable of maintaining **Demand Side Unit MW Response** to the level which would have been achieved if a **Dispatch Instruction** had been given to reduce the **Demand Side Unit MW Response.** This would have occurred with effect from the specified time, at the **Maximum Ramp Down Rate** declared for the **Demand Side Unit** as a **Technical Parameter** at such time down to the level of **Demand Side Unit MW Availability** specified in the new **Availability Notice** or a **Re-declaration.**

~~SDC1.4.3.8~~ (h) If an **Interconnector Owner** in respect of an **Interconnector** issues an **Availability Notice** or a **Re-declaration** increasing (from zero or otherwise) or decreasing the level of available transfer capacity on the **Interconnector** as a whole from a specified time, such notice shall, subject to SDC1.4.5.1(a), be effective immediately following the specified time.

SDC1.3.7 Default Availability

(a) Insofar as any data submitted or deemed to have been submitted on any particular day in any **Availability Notice** or any revision thereto is inconsistent with any other data in any other such notice, then the most recently submitted data which, if substituted for the inconsistent data, would make the data in such notices consistent, shall apply for the next following **Trading Day**.

(b) Insofar as an **Availability Notice** is not submitted, the **User** shall be deemed to have submitted an **Availability Notice** by **Gate Closure 1** stating that the **Availability** of the relevant **CDGU**, **Controllable WFPS**, **Demand Side Unit** 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 final **Imbalance Settlement Period** of the current **Trading Day**.

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

SDC1.4.4.3(a) shall not apply in respect of **PPA Generation** and the provisions of SDC1.B.4 shall apply instead. The provisions of SDC1.4.4.2 and SDC1.4.4.4(b) shall, with respect to **PPA Generation**, be read in conjunction with the provisions of SDC1.B.3.1.

SDC1.4.4.1 **Technical Parameters**

(a) (i) By not later than the ~~EA1~~ **Gate** ~~**Window**~~ **Closure** **1**, each **User** shall in respect of each:

- **CDGU;**
- **Controllable WFPS**;
- **Aggregated Generating Unit**,
- **Pumped Storage Plant Demand**; and/or
- **Demand Side Unit**,

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~~relevant **Trading Day**.

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

(iii) Subsequent revisions to the **Technical Parameters Notice** may be submitted according to the technical offer data submission provisions as set out in the **TSC**. If there is a change to the data submitted under the **TSC**, the **User** shall notify the **TSO**.

(iv) As a general requirement, the **User** shall ensure that the data in any **Technical Parameters Notice,** or any revision thereto is consistent with its obligations under SDC1.4.3.2 and SDC1.4.3.4.

(b) Flexibility:

(i) In the case of any **Technical Parameters** as to which the **User** should, acting in accordance with **Prudent Operating 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 **User** of the reasons for such flexibility request in such degree of detail as the **TSO** considers reasonable in the circumstances.

(iii) If the **User** agrees to such suggestion (such agreement not to be unreasonably withheld) the **User** 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 **User** shall give the **TSO** such information as soon as reasonably practicable.

A **User** shall notify the **TSO** as soon as it becomes aware, acting in accordance with **Prudent Operating Practice**, that any of the data submitted under SDC1.4.4.1 changes.

(c) Changes to **Technical Parameters**

A **User** must, as soon as reasonably practicable after it becomes aware of a change in its **Technical Parameters** in real time, submit, via **Electronic Interface** or in such other form as the **TSO** may reasonably notify each **User** from time to time, a declaration of its actual real time **Technical Parameters**.

If any of the data submitted to the **TSO** under SDC1.4.4.1, SDC1.4.4.3 and the relevant provisions of Appendix B to this SDC1 and SDC1.4.4.4 changes, a **User** shall, as soon as reasonably practicable after it becomes aware of a change to the information in a **Technical Parameters Notice** and subject to SDC1.4.3, (in the case of data submitted under SDC1.4.4.1 by means of a **Technical Parameters Notice**) submit a **Re-declaration** to that **Technical Parameters Notice** via **Electronic Interface** or in such other form as the **TSO** may reasonably notify to each **User** from time to time.

(d) **Energy Limits** for **Hydro Units**: A **Generator** in respect of its **Hydro Units** shall resubmit **Energy Limits** on the **Trading Day** regardless of whether the **Energy Limits** have changed since **Gate Closure 1**. Revised **Energy Limits** for **Hydro Units** may be submitted at any time up until 11.00 hours on the **Trading Day** in writing per unit basis.

(e) Default **Technical Parameters**:

Insofar as any data submitted or deemed to have been submitted on any particular day in any **Technical Parameters Notice** (such notice not being relevant to an **Interconnector Owner**) or any revision thereto is inconsistent with any other data in any other such notice, then the most recently submitted data which, if substituted for the inconsistent data, would make the data in such notices consistent, shall apply for the next following **Trading Day**.

Insofar as not submitted or revised, the applicable **Standing Technical Offer Data** for **Technical Parameters** shall apply for the next following **Trading Day**.

Energy Limits for **Hydro Units**: In respect of **Hydro Units**, the **Energy Limit** that applied to the previous **Trading Day** will be used.

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

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

(a) Individual **CCGT Module** data equivalent to the data required for a **CCGT Installation**. It shall also show any revisions to the **Technical Parameters** for each of the **CCGT Modules** within it.

(b) Different Fuels: In the case where a **CDGU** is capable of firing on different fuels, then the **Generator** shall submit an **Additional Grid Code Characteristics Notice** in respect of any additional fuel for the **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) [Not used]

(d) In the case of **Interconnector Owners**, **Interconnector** data, including but not limited to the **Availability** of **Interconnector Filters**.

(e) In relation to each **Demand Side Unit**, the **Demand Side Unit Notice Time** and the **Demand Side Unit MW Response Time**.

(f) Where there is a **System Support Services Agreement** in place, the **System Support Services** which are **Available**.

(g) The parameters listed in Appendix A Part 2 of SDC1.

(h) [Not used]

(i) In the case of Kilroot **Power Station**, Ballylumford **Power Station** and Coolkeeragh **Power Station**, which configuration referred to in PC.A3.3.12 the **Power Station** is operating at for each ~~**Trading Period**~~**Imbalance Settlement Period**.

Data submitted under SDC1.4.4.2 shall, in respect of two shifting limitations, **Governor Droop**, reserve capability and MVAr capability, be submitted to the **TSO** 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.

A **User** shall notify the **TSO** as soon as it becomes aware, acting in accordance with **Prudent Operating Practice**, that any of the data submitted under SDC1.4.4.2 is no longer correct~~changes~~.

Any changes to the MVAr capability shall be expressed as the maximum MVAr capability, for both leading and lagging MVAr, at the **Registered Capacity**.

Changes to **Additional Grid Code Characteristics**:

A User must, as soon as reasonably practicable after it becomes aware of a change in its Additional Grid Code Characteristics in real time, submit, via Electronic Interface or in such other form as the **TSO** may reasonably notify each User from time to time, a declaration of its actual real time Additional Grid Code Characteristics.

A User must, as soon as reasonably practicable after it becomes aware of any changes to the information in an Additional Grid Code Characteristics Notice submitted to the TSO under SDC1.4.4.2, submit a Re-declaration to such Additional Grid Code Characteristics Notice via Electronic Interface or in such other form as the TSO may reasonably notify to each User from time to time.

SDC1.4.4.3 Reserve capability:

(a) A **Generator** or **Generator Aggregator** shall notify the **TSO** as soon as it becomes aware, acting in accordance with **Prudent Operating Practice**, if any of its **CDGUs** and/or **Controllable WFPSs** or **Aggregated Generating Units** (or associated **Power Station Equipment**) is unable to meet the reserve capability specified in the relevant **Sustained Load Diagrams**, whether that is due to a defect in the **CDGU** and/or **Controllable WFPS** and/or **Aggregated Generating Units** or in its associated **Power Station Equipment.**

Any changes to the ability to meet the reserve capability specified in the relevant **Sustained Load Diagram(s)** shall be expressed as the maximum reserve capability for each category of reserve, as applicable to the relevant **CDGU**.

Such notification shall be made by submitting an **Additional Grid Code Characteristics Notice** in accordance with the **Generator's** obligations under SDC1.4.3.2 and paragraphs 1.B.1.1 and 1.B.1.2 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** and/or **Aggregated Generating Units** or any associated **Power Station Equipment.**

(b) A change following such notification will only take effect for so long as it takes, acting in accordance with **Prudent Operating Practice**, for the relevant **CDGU** and/or **Controllable WFPS** and/or **Aggregated Generating Units** or associated **Power Station Equipment** to be repaired and such repair shall 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**, agree, taking into account the provisions of SDC1.4.4.4(a), and the **Generator** shall then submit a **Technical Parameters Notice** re-declaring the reserve capability accordingly. The **Generator** shall 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 ~~the EA1~~ **Gate** ~~**Window**~~ **Closure** **1** each day, each **User** in respect of each of its **Plant**, 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 **User** from time to time), details in relation to the ~~following~~relevant **Trading Day** of any newly arisen special factors, including abnormal risk to loss, which in the reasonable opinion of the **User** may have a material effect on the likely **MW Output** or **Demand Side Unit MW Response** of such **Plant** (including, for a **CCGT Installation** in relation to each of the **CCGT Modules** therein). The notice shall be consistent with the **User's** obligations under SDC1.4.3.2. The provisions of this paragraph also apply to **Interconnector Owners** in relation to their **Interconnector Filters**.

(b) Where a **CDGU** is capable of firing on different fuels, then the **Generator** shall submit details in respect of each fuel for the **CDGU**. Each set of details shall contain the information set out in (a) above for each fuel and each shall be marked clearly to indicate to which fuel it applies.

(c) A **User**, acting in accordance with **Prudent Operating Practice**, shall notify the **TSO** as soon as it becomes aware that any of the data submitted under SDC1.4.4.4 has changed.

(d) Changes to **Other Relevant Data**

The **User** must notify the **TSO** via **Electronic Interface** of any new **Other Relevant Data** of which it becomes aware as soon as reasonably practicable after it becomes aware of such data.

(e) Default **Other Relevant Data**

Insofar as any data submitted or deemed to have been submitted on any particular day in any notice of **Other Relevant Data** or any revision thereto is inconsistent with any other data in any other such notice, then the most recently submitted data which, if substituted for the inconsistent data, would make the data in such notices consistent, shall apply for the next following **Trading Day**.

Insofar as not submitted or revised, the last notice relating to **Other Relevant Data** to have been submitted shall apply for the next following **Trading Day**.

(f) As a general requirement, the **User** shall ensure that the data in any 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.

SDC1.4.4.5 **Commercial Offer Data**

(a) Each:

- **Generator**;
- **Pumped Storage Generator**;
- ~~**Interconnector User**;~~
- **Demand Side Unit Operator**; and
- **Generator Aggregator,**

shall in respect of:

- each of its **CDGUs**;
- each of its **Pumped Storage Plant Demand**;
- ~~each of its **Interconnector Units**;~~
- each of its **Demand Side Units**; and
- its **Aggregated Generating Units**,

submit to the **TSO**, either directly or by means of an **Intermediary** on its behalf (if applicable), **Commercial Offer Data** in accordance with the **TSC**. ~~by the **Gate Window Closures** for the corresponding **Trading Windows** in accordance with the **TSC.** If no new **Commercial Offer Data** is submitted, the last accepted data will be used.~~

(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** by **Gate Window Closure** for the corresponding **Trading Window**.~~

~~(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**. If no new data is submitted, the last accepted data will be used.~~

The **TSO** may require, by notice to the relevant **User**, the data referred to at SDC1.4.4.5 (a) ~~to (c)~~ to be submitted to it directly under the **Grid Code.** All data items submitted under this SDC1.4.4.5 are to be at levels of **MW Output** at the **Connection Point**.

(c) Amendments to **Commercial Offer Data** shall be in accordance with the **TSC**.

(d) Default **Commerical Offer Data**:

Insofar as not submitted or revised , **Commercial Offer Data** shall be deemed in accordance with the **TSC**.

SDC1.4.4.6 **Physical Notifications**

(a) Each:

- **Generator**;
- **Pumped Storage Generator**;
- **Shipping Agent**;
- **Demand Side Unit Operator**; and
- **Generator Aggregator,**

shall in respect of:

Each of its **CDGUs**;
Each of its **Pumped Storage Plant Demand**;
Each of its **Interconnectors;**
Each of its **Demand Side Units; and**
Its **Aggregated Generating Units**,

submit to the **TSO,** either directly or by means of an **Intermediary** on its behalf (if applicable), **Physical Notifications** by **Gate Closure 1** for the corresponding **Trading Days** in accordance with the **TSC. Physical Notifications** shall be technically feasible. **Users** shall ensure that the accuracy of **Physical Notifications** is commensurate with **Good Industry Practice**.

(b) Prior to **Gate Closure 2**, **Physical Notifications** submitted in accordance with SDC1.4.4.6(a) shall be amended by the **User** (or **Intermediary** if applicable) to align with changes to their expected **Active Power Generation** or **Active Power Demand**. At **Gate Closure 2**, **Physical Notifications** for the relevant **Imbalance Settlement Period** become **Final Physical Notifications** for that **Imbalance Settlement Period**. **Final Physical Notifications** may not be amended.

(c) Each **Generator** may, in respect of their **Controllable WFPS** submit **Physical Notifications** in accordance with the provisions of SDC1.4.4.6(a) and SDC1.4.4.6(b).

(d) Notwithstanding the obligations in SDC1.4.4.6(a) and SDC1.4.4.6(b), a value of zero will be deemed in all **Imbalance Settlement Periods**, or parts thereof, for which **Physical Notifications** data has not been submitted.

(e) If a **User** has submitted proposals for a test to the **TSO** and subsequently receives approval for the test from the **TSO**, the **User** (or their **Intermediary**, if applicable) shall submit **Physical Notifications** for the unit under test in accordance with the **TSC** to identify the time periods during which their units are under test. The **User** shall ensure that the **Physical Notifications** submitted in respect of a unit under test align with the approved test start time, test **MW Output** profile (or **Demand Unit**

MW Response profile in the case of **Demand Side Units**) and test end time.

SDC1.4.5 Revisions/**Re-declarations** to data

SDC1.4.5.1 **Availability**

(a) **Availability:**

(i) A **User** must, as soon as reasonably practicable after it becomes aware of a change in its **Availability** in real time, submit, via **Electronic Interface** or in such other form as the **TSO** may reasonably notify each **User** from time to time, a declaration of its actual real time **Availability**.

(ii) A **User** must, as soon as reasonably practicable after it becomes aware of a change to the information in the **Availability Notice** submitted to the **TSO** under SDC1.4.1.1 and as provided in this SDC1, submit a **Re-declaration** to such **Availability Notice** in accordance with its obligations to make the **Unit Available** under SDC1.4.3 and Appendix B to this SDC1, such **Re-declaration** to be submitted via **Electronic Interface** or in such other form as the **TSO** may reasonably notify to each **User** from time to time.

(b) In the event that the **TSO** submits a **Post Event Notice** under OC11 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**.

(c) The revisions to the **Availability Notice** may include revisions of the levels of **Availability** in the **CCGT Installation Matrix** reflecting the revised **Availability**.

(d) Additional **Availability Notice**: A User must, as soon as reasonably practicable after it becomes aware of a change to the information in the Additional Grid Code Availability Notice submitted to the TSO under SDC1.4.2 and as provided in this SDC1, submit a Re-declaration to such Additional Grid Code Availability Notice in accordance with its obligations to make the Unit Available under SDC1.4.3 and Appendix B to this SDC1, such Re-declaration to be submitted via Electronic Interface or in such other form as the TSO may reasonably notify each User from time to time.

SDC1.4.5.2 **Technical Parameters** and **Additional Grid Code Characteristics**

(a) **Technical Parameters:**

(a) A **User** must, as soon as reasonably practicable after it becomes aware of a change in its **Technical Parameters** in real time, submit, via **Electronic Interface** or in such other

form as the **TSO** may reasonably notify each **User** from time to time, a declaration of its actual real time **Technical Parameters**.

(b) If any of the data submitted to the **TSO** under SDC1.4.4.1, SDC1.4.4.3 and the relevant provisions of Appendix B to this SDC1 and SDC1.4.4.4 changes, a **User** shall, as soon as reasonably practicable after it becomes aware of a change to the information in a **Technical Parameters Notice** and subject to SDC1.4.3, (in the case of data submitted under SDC1.4.4.1 by means of a **Technical Parameters Notice**) submit a **Re-declaration** to that **Technical Parameters Notice** via **Electronic Interface** or in such other form as the **TSO** may reasonably notify to each **User** from time to time. The **User** must notify the **TSO** via **Electronic Interface** of any new **Other Relevant Data** of which it becomes aware as soon as reasonably practicable after it becomes aware of such data.

(b) **Additional Grid Code Characteristics**:

(j) A User must, as soon as reasonably practicable after it becomes aware of a change in its Additional Grid Code Characteristics in real time, submit, via Electronic Interface or in such other form as the TSO may reasonably notify each User from time to time, a declaration of its actual real time Additional Grid Code Characteristics.

(k) A User must, as soon as reasonably practicable after it becomes aware of any changes to the information in an Additional Grid Code Characteristics Notice submitted to the TSO under SDC1.4.4.2, submit a Re-declaration to such Additional Grid Code Characteristics Notice via Electronic Interface or in such other form as the TSO may reasonably notify to each User from time to time.

(c) **Energy Limits** for **Hydro Units**: A **Generator** in respect of its **Hydro Units** shall resubmit **Energy Limits** on the **Trading Day** regardless of whether the **Energy Limits** have changed since the EA1 **Gate Window Closure**. Revised **Energy Limits** for **Hydro Units** may be submitted at any time up until 18.00 hours on the **Trading Day** in writing per unit basis.

SDC1.4.5.3 The **TSO** shall, insofar as it is reasonably able, take account of such revisions or notifications submitted under SDC1.4.5 for **Scheduling** and **Dispatch** purposes.

SDC1.4.6 (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** (such notice not being relevant to an **Interconnector Owner**), or notice of **Other Relevant Data** or any revision thereto is inconsistent with any other data in any other such notice, then the most recently submitted data which, if substituted for the inconsistent data, would make the data in such notices consistent, shall apply for the next following **Trading Window**.~~

~~(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**, **Demand Side Unit** and/or the **Aggregated Generating Units** for the whole of the following **Trading Window** will be the level of **Availability** and **Operating Mode** declared in respect of the final **Trading Period** of the current **Trading Window**.~~

~~(iii) Insofar as not submitted or revised, the applicable **Standing Technical Offer Data** for **Technical Parameters** shall apply for the next following **Trading Day**.~~

~~(iv) Insofar as not submitted or 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** shall 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.~~

SDC1.4.7 Form of Submission

(a) 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 shall 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 by telephone on behalf of the **User** shall 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 Unit**, **Pumped Storage Plant** and **Demand Side Unit** to which the notice relates.

(c) The notice shall then be confirmed by facsimile transmission or by any 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 shall state the exact time at which the notice was given by telephone.

SDC1.4.8 Compilation of ~~the~~ **Indicative Operations Schedule**~~s~~

The provisions of SDC1.4.8.2 and SDC1.4.8.8 shall, with respect to **PPA Generation**, be read in conjunction with the provisions of SDC1.B.3.2 and SDC1.B.3.3 respectively.

SDC1.4.8.1 ~~At least one~~ **Indicative Operations Schedule**~~s~~ will be compiled ~~daily for each of the present **Trading Day** and the following **Trading Day**~~ by the **TSO** in conjunction with the **Other TSO** as further provided in this SDC1.4.8 as a statement of which **CDGUs** and/or **Controllable WFPS** and/or transfers across any **Interconnector** and/or **Demand Side Units** and/or **Pumped Storage Plant Demand** and/or **Aggregated Generating Units** and equivalent units in the Republic of Ireland may be required to operate and their expected **MW Output**. The **TSO** in conjunction with the **Other TSO** will periodically update the **Indicative Operations Schedules**.

SDC1.4.8.2 **Merit Order**

Subject as provided below, a **Merit Order** will be compiled by the **TSO** (in conjunction with the **Other TSO**) for each ~~**Trading Window**~~**Imbalance Settlement Period** from the **Incremental Price Quantity Pairs**, **Decremental Price Quantity Pairs**, **Start-Up Cost**, **Shutdown Cost** and **No-Load Cost** (which together shall be known as the "**Price Set**") and, subject as provided in this SDC1, used to determine which of the **CDGUs, Controllable WFPSs**, **Pumped Storage Plant Demand**, **Demand Side Units**, **Aggregated Generating Units** or **Interconnector** ~~tranche~~ power transfer to **Schedule** and **Dispatch** in relation to their **Price Sets** at values that differ from those indicated by **Physical Notifications**, as required to deliver the objectives set out in SDC1.2(a), SDC1.2(b) and SDC1.2(c). The **Merit Order** for increasing **MW Output** above the level indicated in **Physical Notifications** will be on the basis of ascending prices so that once committed the **CDGU, Controllable WFPS**, **Pumped Storage Plant Demand**, **Demand Side Unit**~~,~~ or **Aggregated Generating Unit Price Set** ~~or **Interconnector** tranche **Price Set**~~bid-offer data from an **External System Operator** at the head of the **Merit Order** will be that which has the lowest **Incremental Price** per **MWh**, and that at the foot of the **Merit Order** shall be the one with the highest **Incremental Price** per **MWh** ~~and taking into account the average **CDGU, Pumped Storage Plant Demand, Demand Side Unit, Aggregated Generating Unit Price Set** or **Interconnector Output**~~. Each **CDGU, Controllable WFPS**, **Pumped Storage Plant Demand**, **Demand Side Unit**, **Aggregated Generating Units** and/or ~~**Interconnector** tranche~~ bid-offer data from an **External System Operator** shall appear in the **Merit Order** for each **Price Set** submitted.

The **Merit Order** for dispatching **MW Output** to a level below that indicated in **Physical Notifications** will be on the basis of descending prices so that the **CDGU, Controllable WFPS, Pumped Storage Plant Demand, Demand Side Unit, Aggregated Generating Unit Price Set** or bid-offer data from an **External System Operator** at the head of a **Merit Order** will be that which has the highest **Decremental Price** per **MWh**, and that at the foot of a **Merit Order** shall be the

one with the lowest **Decremental Price** per **MWh**. Each **CDGU, Controllable WFPS**, **Pumped Storage Plant Demand**, **Demand Side Unit**, **Aggregated Generating Units** or bid-offer data from an **External System Operator** shall appear in the **Merit Order** for each **Price Set** submitted.

SDC1.4.8.3 In compiling the **Indicative Operations Schedules** 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** will be so treated separately by the **Other TSO**):

(i) **Physical Notifications** or **Final Physical Notifications** (as the case may be) submitted in accordance with SDC1.4.4.6;

(ii) **Transmission System** constraints which may vary from time to time, as determined by the **TSO;**

(iii) Reserve constraints which may vary from time to time, as determined by the **TSO;**

(iv~~ii~~) the need to provide an **Operating Margin** (by using the various categories of reserve as specified in OC3 (as the case may be), as determined by the **TSO** acting in conjunction with the **Other TSO**;

(~~i~~v) **Transmission System** stability considerations;

(vi) 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) the **Target Reservoir Levels** for **Pumped Storage** taken against the initial conditions at 0600 hours the previous day;~~

(vii) the **Energy Limits** for **Hydro Units**;

(viii) in respect of all **Plant**, the values of their **Technical Parameters** registered under this SDC1 and other information submitted under SDC1.4.4.4;

(ix) **Commercial Offer Data**~~the **Start Up Cost** of~~ for each **CDGU** and/or **Controllable WFPS** and the **Shutdown Cost** of each **Demand Side Unit** and equivalent commercial data provided by an **External System Operator** in repect of **Interconnectors;**

(x) the requirements, as determined by the **TSO**, for **Voltage Control** and **Mvar** reserves;

(xi) **CDGU** and/or **Controllable WFPS** stability, as determined by the **TSO**;

(xii) other matters to enable the **TSO** to meet its **Licence Standards** and the **Other TSO** to meet its equivalent;

(xiii) the requirements as determined by the **TSO,** for maintaining **Frequency Control**;

(xiv) **Monitoring** and/or **Testing** and/or **Investigations** to be carried out, or being carried out, under OC11 (as the case may be), testing to be carried out, or being carried out, at the request of a **Generator** in relation to a **PPA CDGU** under OC11.8, testing to be carried out at the request of a **User** in respect of **User's Equipment** other than a **PPA CDGU** under OC11.13 and/or **Commissioning/Acceptance Testing** under the CC;

(xv) **System Tests**;

(xvi) the inability of any **CDGU** and/or **Controllable WFPS** to meet its full reserve capability;

(xvii) **Inter-jurisdictional Tie Line** limits;

(xviii) other facts as may be reasonably considered by the **TSO** to be relevant to the **Indicative Operations Schedule**;

(xix) the inflexible characteristics as declared by the **Generator** and abnormal risks;

(xx) losses on the **Transmission System** and on the **Other Transmission System;**

~~(xxi) **Nomination Profiles** where relevant;~~

(xxi~~i~~) requirements within any **Constrained Group**;

(xxii~~i~~) ~~the fact that the **Interconnector** tranches in the unconstrained **Indicative Market Schedule** cannot be changed in the **Indicative Operations Schedule**~~;

~~(xxiv) 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 **NIE Energy** and notified to the **TSO** and which impact on **NIE Energy** and/or the terms of any other contract to which **NIE Energy** is a party and which may, in its opinion, be relevant and which is notified to the **TSO**;~~

~~(xxv)~~ the requirements to manage gas flow*s;*

(xxvi) fuel and emission constraints of a **Plant** as well as any other technical related factors which may constrain the **Output** or **Demand Reduction** of a **Plant** as the case may be both immediately and in the longer term.

(xxvii) any inter-unit dependencies notified to the **TSO** that restrict the number of **Generating Units** that can start up or shut down simultaneously**.**

(xxviii) factors used by the **TSO** (and the **Other TSO**) in order to comply with Statutory Instruments, Statutory Regulations and/or the **Licence** which may impact **Scheduling** and **Dispatch**;

(xxiv) factors used by the **TSO** (and the **Other TSO**) to comply with the objectives in SDC1.2(g);

SDC1.4.8.4 Taking account of and applying the factors referred to in SDC1.4.8.3, ~~the~~ **Indicative Operations Schedules** 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** and/or such **Interconnector** ~~tranches~~power transfers, and equivalent units or ~~tranches~~ power transfers of equivalent units in the Republic of the Ireland, which have been declared **Available** in an **Availability Notice** (and the equivalents on the **Other Transmission System**):

(i) in accordance with the applicable **Merit Order**~~, starting with the **CDGU, Controllable WFPS, Pumped Storage Plant Demand, Demand Side Units** and/or **Aggregated Generating Unit Price Set,** and the **Price Set** for equivalent units in the Republic of the Ireland, together with **Interconnector** tranches in the unconstrained **Indicative Market Schedule** 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** ~~tranches~~ power transfers and variation in **Demand** from **Pumped Storage Plant Demand** and **Demand Side Units**) be sufficient to match at all times (to the extent possible having regard to the **Availability** or **Demand Side Unit MW Availability** of **CDGUs, Controllable WFPSs, Pumped Storage Plant Demand**, **Demand Side Units**, **Aggregated Generating Units** and **Interconnector** ~~tranches~~power transfers) the forecast aggregated **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 SDC1.4.8.3 will mean that, in general, ~~the~~ strict adherence to **Merit Order** may not necessarily be feasible~~followed~~.

SDC1.4.8.5 The **TSO** will periodically rerun the **Scheduling** process and issue revised **Indicative Operating Schedules** to take account of ~~After the completion of the **Scheduling** process, and the issuing of the **Indicative Operations Schedule**, the **TSO** may consider it necessary to make adjustments to the **MW** output as determined by 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 so dealt with separately by the **Other TSO**):

(a) changes to **Physical Notifications**;

(b) changes to **Interconnector** schedules;

(c) changes to **Commercial Offer Data** [and bid-offer data from **External Transmission System Operators**];

~~(b)~~(d) changes to **Availability** or **Demand Side Unit MW Availability** and/or **Technical Parameters** of **CDGUs** and/or **Controllable WFPS** and/or **Aggregated Generating Units** and/or **Interconnectors** and/or **Demand Side Units** notified to the **TSO** ~~after the commencement of the **Scheduling** process~~;

(~~b~~e) changes to **Demand** forecasts on the Island of Ireland;

(~~c~~f) changes to wind power forecasts on the Island of Ireland;

(~~d~~g) changes to **Transmission System** constraints, emerging from the necessarily iterative process of **Scheduling** and network security assessment;

(~~e~~h) 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~~i) 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~~j) changes to any conditions which in the reasonable opinion of the **TSO**, would impose increased risk to the **Transmission System** and would therefore require an increase in the **Operating Margin**;

(~~h~~k) known (or emerging) limitations and/or deficiencies of the **Scheduling** process.

SDC1.4.8.6 When:

(a) adverse weather is anticipated;

(b) there is a high risk to the whole or part of the **Transmission System** and/or the **Other Transmission System**;

(c) **Demand Control** has been instructed by the **TSO**;

(d) a **Total** or **Partial Shutdown** exists; or

(e) the **Fuel Security Code** is invoked or is anticipated to be invoked;

these factors may mean that a **CDGU**, **Controllable WFPS, Pumped Storage Plant Demand**, **Demand Side Unit**, **Aggregated Generating Unit** and/or **Interconnector** transfers is/are chosen other than in accordance with the profile described in **Physical Notifications** and amended in line with **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 SDC1.4.8.3 in order to seek to maintain the integrity of the **Transmission System**.

SDC1.4.8.7 (a) The **Synchronising** and **De-Synchronising** times (and, in the case of **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 **Users** that the **Dispatch Instructions** could reflect more or different **CDGU**, **Aggregated Generating Unit** and/or **Controllable WFPS, Pumped Storage Plant Demand** and/or **Aggregate Generating Unit** requirements than in the **Indicative Operations Schedule**. The **TSO** may issue **Dispatch Instructions** in respect of any **CDGU** and/or **Aggregated Generating Unit**, **Controllable WFPS, Pumped Storage Plant Demand** or **Aggregated Generating Unit** which has not declared an **Availability** or **Demand Side Unit MW Availability** of 0 **MW** in an **Availability Notice**. **Users** with **CDGUs** and/or **Aggregated Generating Units**, **Controllable WFPS, Pumped Storage Plant Demand** shall ensure that their units are able to be **Synchronised**, or in the case of **Pumped Storage Plant Demand,** used at the times **Scheduled**, but only if so **Dispatched** by the **TSO** by issue of a **Dispatch Instruction**. **Users** 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 **Pumped Storage Plant Demand**, the **Scheduled** relevant effective time.

(b) The provisions of SDC1.4.8.7(a) shall apply to **Demand Side Units** with the exception that reference to relevant effective time shall be read as a reference to **Demand Side Unit Notice Time**.

SDC1.4.8.8 Content of **Indicative Operations Schedules**

The information contained in the **Indicative Operations Schedules** will indicate, where appropriate, on an individual **CDGU**, **Controllable WFPS, Pumped Storage Plant Demand**, **Demand Side Unit**, ~~and/or~~ **Aggregated Generating Units** and /or **Interconnector** basis, the period and **Loading** for which it is **Scheduled** ~~during the relevant **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 relevant **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.

SDC1.4.8.9 Issue of **Indicative Operations Schedule**

(a) The initial **Indicative Operations Schedule** for a **Trading Day** ~~associated with the EA2 **Trading Window**~~ will be published for access by **Users** (or where in relation to a **CDGU** the **User** does not have access to where it would be published, shall, subject to agreement with the **TSO** (such agreement not to be unreasonably withheld or delayed), be sent by the **TSO** to that **User**) by 1600 hours ~~each~~ on the day preceding the relevant **Trading Day** ~~and the **Indicative Operations Schedule** associated with the within-day WD1 **Trading Window** will be published for access by **Users** by 1330 hours each day on the relevant **Trading Day**, provided that all the necessary information from the **Users** was made available by not later than **Gate Window Closure**~~. However, if on any occasion the **TSO** is unable to meet these times, the **TSO** also reserves the right to extend the timescale for the issue of the initial **Indicative Operations Schedules** to the extent

necessary. Following the issue of the intial **Indicative Operations Schedule** preceding the relevant **Trading ~~Window~~Day**, the **TSO** will ~~may~~ issue revised **Indicative Operations Schedules** to reflect updated information from the **Scheduling** process.~~up until one hour before the start of the **Trading Window**.~~

(b) **Indicative Operations Schedules** issued by the **TSO** may comprise several schedules covering short term, medium term or long term timeframes where long term covers the period up to 48 hours immediately following real time.

(c~~b~~) The **TSO** may issue **Dispatch Instructions** to **Users** in respect of **CDGUs, Controllable WFPSs, Pumped Storage Plant Demand** and/or **Demand Side Units** and/or **Aggregated Generating Units** and/or **Interconnector** transfers 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**~~ **Synchronous Start Up Time** for the relevant **CDGUs** and/or **Controllable WFPSs, Pumped Storage Plant Demand** and/or **Demand Side Unit** and/or **Aggregated Generating 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** and/or **Pumped Storage Plant Demand** 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** shall inform the **TSO** without delay.

SDC1.4.8.10 Regulation

It is a requirement for running the **Transmission System** that all **Synchronised CDGUs** and/or **Controllable WFPSs** shall 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 sufficient, and may take any shortfall into account in **Scheduling** and **Dispatch**.

SDC1.4.8.11 Data Requirements

SDC1 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 Generating Units** by not later than **Gate Closure 1** ~~on the day prior to~~for the relevant **Trading Day**.

SDC1 Appendix A Part 2 sets out the additional data items required in respect of an **Additional Grid Code Characteristics Notice**.

SDC1 – APPENDIX A

Part 1. Technical Parameters

Technical Parameter	CDGU				Control WFPS	DSU		Agg. Gen		Pump Storage Demand
	Thermal	Hydr/ En Ltd	Disp. WFPS	Pump S Gen	-	Individual Demand Site	Aggregated Demand Sites			-
Block Load Cold	✓	✓	✓	✓	✓					
Block Load Hot	✓									
Block Load Warm	✓									
Demand Side Unit Energy Profile						✓	✓			
Deload Break Point	✓	✓	✓	✓	✓					
Demand Side Unit MW Availability						✓	✓			
Demand Side Unit MW Response Time						✓	✓			
De-Loading Rate 1	✓	✓	✓	✓	✓					
De-Loading Rate 2	✓	✓	✓	✓	✓					
Dwell Time Up 1	✓	✓	✓	✓	✓					
Dwell Time Up 2	✓	✓	✓	✓	✓					
Dwell Time Up 3	✓	✓	✓	✓	✓					
Dwell Time Down 1	✓	✓	✓	✓	✓					
Dwell Time Down 2	✓	✓	✓	✓	✓					
Dwell Time Down 3	✓	✓	✓	✓	✓					
Dwell Time Up Trigger Point 1	✓	✓	✓	✓	✓					
Dwell Time Up Trigger Point 2	✓	✓	✓	✓	✓					
Dwell Time Up Trigger Point 3	✓	✓	✓	✓	✓					
Dwell Time Down Trigger Point 1	✓	✓	✓	✓	✓					
Dwell Time Down Trigger Point 2	✓	✓	✓	✓	✓					
Dwell Time Down Trigger Point 3	✓	✓	✓	✓	✓					
End Point of Start Up Period	✓	✓	✓	✓	✓					
Energy Limit		✓								
~~Energy Limit Factor~~		~~✓~~								
~~Energy Limit Start~~		~~✓~~								
~~Energy Limit Stop~~		~~✓~~								
Forecast Minimum Output Profile				✓						✓
Forecast Minimum Generation Profile	✓	✓	✓	✓						
Load Up Break Point Cold (1)	✓	✓	✓	✓	✓					
Load Up Break Point Cold (2)	✓	✓	✓	✓	✓					
Load Up Break Point	✓									

Technical Parameter	CDGU				Control WFPS	DSU		Agg. Gen		Pump Storage Demand
	Thermal	Hydr/ En Ltd	Disp. WFPS	Pump S Gen	-	Individual Demand Site	Aggregated Demand Sites			-
Hot (1)										
Load Up Break Point Hot (2)	✓									
Load Up Break Point Warm (1)	✓									
Load Up Break Point Warm (2)	✓									
Loading Rate Cold (1)	✓	✓	✓	✓	✓					
Loading Rate Cold (2)	✓	✓	✓	✓	✓					
Loading Rate Cold (3)	✓	✓	✓	✓	✓					
Loading Rate Hot (1)	✓									
Loading Rate Hot (2)	✓									
Loading Rate Hot (3)	✓									
Loading Rate Warm (1)	✓									
Loading Rate Warm (2)	✓									
Loading Rate Warm (3)	✓									
Max Ramp Down Rate (shall be a number greater than zero)						✓	✓			
Max Ramp Up Rate (shall be a number greater than zero)						✓	✓			
Maximum Down Time						✓	✓			
Maximum Generation / Registered Capacity	✓	✓	✓	✓	✓					
Maximum On Time	✓	✓	✓	✓	✓					
Maximum Storage Capacity				✓						
Minimum Down Time						✓	✓			
Minimum Generation	✓	✓	✓	✓	✓					
Minimum Off Time	✓	✓	✓	✓	✓	✓	✓			
Minimum On Time	✓	✓	✓	✓	✓					
Minimum Storage Capacity				✓						✓✓
(Other relevant technical parameters)	✓	✓	✓	✓	✓			✓		
Pumping capacity				✓						✓
Ramp Down Break Point 1	✓	✓	✓	✓	✓			✓		
Ramp Down Break Point 2	✓	✓	✓	✓	✓			✓		
Ramp Down Break Point 3	✓	✓	✓	✓	✓			✓		
Ramp Down Break Point 4	✓	✓	✓	✓	✓			✓		
Ramp Down Rate 1	✓	✓	✓	✓	✓			✓		
Ramp Down Rate 2	✓	✓	✓	✓	✓			✓		
Ramp Down Rate 3		✓	✓	✓	✓			✓		
Ramp Down Rate 4	✓	✓	✓	✓	✓			✓		
Ramp Down Rate 5	✓	✓	✓	✓	✓			✓		
Ramp Up Break Point 1	✓	✓	✓	✓	✓			✓		
Ramp Up Break Point 2	✓	✓	✓	✓	✓			✓		

Technical Parameter	CDGU				Control WFPS	DSU		Agg. Gen		Pump Storage Demand
	Thermal	Hydr/ En Ltd	Disp. WFPS	Pump S Gen	-	Individual Demand Site	Aggregated Demand Sites			-
Ramp Up Break Point 3	✓	✓	✓	✓	✓			✓		
Ramp Up Break Point 4	✓	✓	✓	✓	✓			✓		
Ramp Up Rate 1	✓	✓	✓	✓	✓			✓		
Ramp Up Rate 2	✓	✓	✓	✓	✓			✓		
Ramp Up Rate 3	✓	✓	✓	✓	✓			✓		
Ramp Up Rate 4	✓	✓	✓	✓	✓			✓		
Ramp Up Rate 5	✓	✓	✓	✓	✓			✓		
Shared Energy Limit		✓								
Short Term Maximisation Capability	✓	✓	✓	✓	✓					
Short Term Maximisation Time	✓	✓	✓	✓	✓					
Soak Time Cold (1)	✓	✓	✓	✓	✓					
Soak Time Cold (2)	✓	✓	✓	✓	✓					
Soak Time Hot (1)	✓									
Soak Time Hot (2)	✓									
Soak Time Trigger Point Cold (1)	✓	✓	✓	✓	✓					
Soak Time Trigger Point Cold (2)	✓	✓	✓	✓	✓					
Soak Time Trigger Point Hot (1)	✓									
Soak Time Trigger Point Hot (2)	✓									
Soak Time Trigger Point Warm (1)	✓									
Soak Time Trigger Point Warm (2)	✓									
Soak Time Warm (1)	✓									
Soak Time Warm (2)	✓									
Synchronous Start-Up Time Cold	✓	✓	✓	✓	✓					
Synchronous Start-Up Time Hot	✓	✓	✓	✓	✓					
Synchronous Start-Up Time Warm	✓									
~~Target Reservoir Level Percentage~~				~~✓~~						~~✓~~
Start of Restricted Range 1	✓	✓	✓	✓	✓					
End of Restricted Range 1	✓	✓	✓	✓	✓					
Start of Restricted Range 2	✓	✓	✓	✓	✓					
End of Restricted Range 2	✓	✓	✓	✓	✓					

Part 2. Additional data items required in an Additional Grid Code Characteristics Notice

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

Variable	Applies to
SONI Grid Code	
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**

SDC1 - APPENDIX B

SDC1.B.1 The following paragraphs apply in relation to **PPA Generation** in place of SDC1.4.3.1 to SDC1.4.3.3.

SDC1.B.1.1 In relation to **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 **PPA CDGU**, maintain, repair, operate and fuel the **CDGU** as required by **Prudent Operating Practice** and any legal requirements with a view to providing the **Contracted Capacity** and the **Contracted Technical Parameters**, provided that in determining when so to maintain or repair the **CDGU**, 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**.

SDC1.B.1.2 In relation to **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 Parameter Notice** which declares the **Availability** or **Technical Parameters** of the **CDGU,** (including, in the case of a **CCGT Installation**, its **Operating Mode**) at levels or values different from those that the **PPA CDGU** 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 **PPA CDGU** or equipment necessary to the operation of the **PPA CDGU** 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 **PPA CDGU**);

(d) if it is not lawful for the **Generator** to operate the **PPA CDGU**; 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 **Contracted Technical Parameters** in respect of a **PPA CDGU.**

SDC1.B.1.3 The **Generator** shall provide the **TSO** with all information necessary to enable the **TSO** to implement and apply the above provisions.

~~SDC1.B.2 The following paragraphs apply in relation to **PPA Generation** at Kilroot power Station in addition to the other provisions of this SDC1.~~

~~SDC1.B.2.1 In relation to any steam turbine **PPA CDGU** at Kilroot Power Station, the **TSO** may, in respect of any **Trading Period** (and/or successive **Trading 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 **Trading 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 **Trading 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 **Trading Periods** specified in the **Overburn Notice**);

(ii) the aggregate number of **Trading 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) The **TSO** will procure that **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 the **TSO** less than 24 hours in advance of the start of the relevant **Trading Period**.

SDC1.B.3 **References to fuel**

The following paragraphs apply in relation to **PPA Generation** and the interpretation of this SDC1.

SDC1.B.3.1 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**".

SDC1.B.3.2 The final two sentences of SDC1.4.8.8 shall be read as follows:.

In the case of a **CDGU** which is capable of firing on two different **Designated Fuels**, it will also indicate the **Designated Fuel** for which it is scheduled during the following **Trading Day**. If no **Declared Fuel** and/or, where relevant **Designated Fuel** is contained in the **Indicative Operations Schedules**, then the most recently specified **Declared Fuel** and/or, where relevant, **Designated Fuel** shall be treated as having been indicated.

SDC1.B.3.3 References to the **Price Set** in SDC1.4.8.2 shall be construed as in relation to each **Designated Fuel** or **Declared Fuel**, as the case may be.

SDC1.B.4 **Technical Parameters**

SDC1.B.4.1 The following paragraph applies in relation to **PPA Generation** in place of the equivalent provisions of SDC 1.4.4.3.(a).

SDC1.B.4.2 A **Generator** must notify the **TSO** as soon as it becomes aware, acting in accordance with **Prudent Operating Practice** if (whether due to a defect in the **CDGU** or in its associated **Power Station Equipment**) any of its **CDGUs** is unable to meet the **Spinning Reserve Capability** set out in the **Sustained Load Diagram** attached to Schedule 8 of the relevant **Generating Unit Agreement** and submitted pursuant to the PC.

Such notification shall be made by submitting an **Additional Grid Code Characteristics Notice** in accordance with the **Generator**'s obligations under SDC1.4.3.2 and paragraphs 1.B.1.1 and 1.B.1.2 of Appendix B to this SDC1, such **Spinning Reserve Capability** may only be amended (without the TSO's consent) in the event of a defect in or failure of a **CDGU** or any associated **Power Station Equipment.**

SDC1.B.4.3 In SDC1.4.4.3(a) and (b) the term "reserve capability" shall be construed as "**Spinning Reserve Capability**".

SDC1.B.4.4 In relation to **PPA Generation** the **User** shall provide in the **Technical Parameters Notice** any revisions to the **Technical Parameters** compared to the **Contracted Technical Parameters**.

ANNEX I

Explanatory Note of differences between SDC1 in the SONI Grid Code and EirGrid Grid Code

This annex is an explanatory note only and does not form part of the Grid Code.

1. General Differences in wording

The table below summarises the general differences in wording between the form of SDC1 in the SONI Grid Code and the form of SDC1 in the EirGrid Grid Code, which appear repeatedly throughout SDC1.

Terms used in SONI Grid Code	**Equivalent terms used in EirGrid Grid Code (where different)**	**Reason**
System Support Services	Ancillary Service(s)	The existing arrangements for Ancillary Services and System Support Services are continuing until further notice.
System Support Services Agreement	Ancillary Service(s) Agreement	These agreements will continue to stay in place with their existing names
CCGT Module	CCGT Unit	This is the phrase currently used to describe the individual parts of a Combined Cycle Plant CCGT Module is an important concept in Northern Ireland and is reflected in many other agreements. EirGrid is keeping the phrase CCGT Unit, as it more closely describes the concept of an individual unit and EirGrid has formerly used CCGT Module to describe the whole CCGT Installation.
Prudent Operating Practice	Prudent Utility Practice	Each Code uses a different phrase for this concept.
Planned Outage	Schedule Outage	Each Code uses a different phrase for this concept.
Planned Maintenance Outage	Short Term Scheduled Outage	Each Code uses a different phrase for this concept.

2. Specific differences in wording between equivalent provisions in both Grid Codes

The table below provides a list of the other specific differences in wording between equivalent provisions of SDC1 in both Grid Codes.

Provision	SONI Grid Code	EirGrid Grid Code	Reason
SDC1.4.2.1	An additional sentence states at the end of SDC1.4.2.1 that these provisions have to be read in conjunction with SDC1.B.3.1 in respect of PPA Generation.	No such reference is made.	The provisions of Appendix B are specific to PPA Generation in Northern Ireland.
SDC1.4.2.2(b)	Reference is made to "PCA2.3.4"	Reference is made to "PCA.4.3 of the Planning Code Appendix"	These are the respective requirements for the provision of the CCGT Installation data.
~~SDC1.4.3.4~~	~~Reference is made to "NI System"~~	~~Reference is made to "Network"~~	~~NI System refers to both the NI Transmission System and NI Distribution System and Network refers to the Ireland Transmission System and Distribution System~~
SDC1.4.4.2	The following paragraphs are contained at the end of SDC 1.4.4.2: "Data submitted under SDC1.4.4.2 shall, in respect of two shifting limitations, Governor Droop, reserve capability and MVAr capability, be submitted to the TSO 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." "Any changes to the MVAr capability shall be expressed as the maximum MVAr capability, for both leading and lagging MVAr, at the Registered Capacity."	No such reference is made.	These provisions are specific to the way Users are required to declare reserve characteristics in Northern Ireland.
~~SDC1.4.5.1(b)~~ SDC1.4.3.6(b)	Reference is made to "OC11"	Reference is made to "OC10"	These are the respective requirements for Testing Monitoring and

			Investigation
~~SDC1.4.5.1(d)~~ SDC1.4.3.6(d)	Reference is made to a User acting in accordance with its obligations under "SDC1.4.3 and Appendix B to this SDC1"	Reference is made to a User acting in accordance with its obligations under "SDC1.4.3" only	SONI has separate requirements for Availability and Technical Parameter related issues in respect of PPA Generation.
~~SDC1.4.6(a)(ii)~~ SDC1.4.3.7		The EirGrid Grid Code contains the following additional words at the end of the paragraph: "*or any other values that the **TSO** may reasonably deem appropriate"*	Difference is due to different requirements in both jurisdictions.
SDC1.4.8.1	Reference is made to "the Republic of Ireland".	Reference is made to "Northern Ireland".	Reference is being made in each Grid Code to the other jurisdiction.
SDC1.4.8.3(i)	Reference is made to the "Transmission System and Distribution System constraints"	Reference is made to the "Transmission System constraints" only.	EirGrid will not be in a position to take Distribution Constraints into account in determining the IOS.
~~SDC1.4.8.3(iii)~~ SDC1.4.8.3(iv)	Reference is made to "OC3"	Reference is made to "OC4.6 and CC7.3.1.1"	These are the respective references to Operating Margin.
SDC1.4.8.3(xiv)	Reference is made to "OC11" and then to "OC11.8 and OC11.13". Reference is also made to (i) "Generator in relation to a PPA CDGU" and "User in respect of User's Equipment other than a PPA CDGU".	Reference is made to "OC10" and then to "OC8". Reference is made to "Users" only.	These are the respective references to Testing Monitoring and Investigation and Operational Testing.
SDC1.4.8.3(xiv)	Reference is made to "Commissioning/Acceptance Testing"	Reference is made to "Commissioning/Testing"	These are the respective terms used in each Grid Code
SDC1.4.8.3(xv)	Reference is made to "System Tests" only	Reference is made to "System Tests, Operational Tests and Commissioning Tests"	The EirGrid Grid Code definition of System Tests excludes Operational and

			Commissioning Tests whereas the SONI definition includes them.
SDC1.4.8.4	Reference is made to "the Republic of Ireland".	Reference is made to "Northern Ireland".	Reference is being made in each Grid Code to the other jurisdiction.
~~SDC1.4.8.4(i)~~	~~Reference is made to "the Republic of Ireland".~~	~~Reference is made to "Northern Ireland".~~	~~Reference is being made in each Grid Code to the other jurisdiction.~~
~~SDC1.4.8.5(d)~~	~~Reference is made to the "Transmission System and Distribution System constraints"~~	~~Reference is made to the "Transmission System constraints" only.~~	~~EirGrid will not be in a position to take Distribution Constraints into account in determining the IOS.~~
SDC1.4.8.9(a)	Reference is made after the word User to "(or where in relation to a **CDGU** the **User** does not have access to where it would be published, shall, subject to agreement with the TSO, be sent by the **TSO** to that **User**)"	No such reference is made.	This additional wording in the SONI Code is to reflect the fact that Generators with Intermediaries will not have access to the published IOS.
~~SDC1 Appendix A Part 1 – CDGUs < 10 MW~~	~~No technical parameters are required from Autonomous Generating units.~~	~~Various factors are applicable to Autonomous Generating Units.~~	~~This is to reflect different requirements in both codes.~~
SDC1 Appendix A Part 2	Part 2 refers to factors applicable to the SONI Grid Code only	Part 2 refers to factors applicable to the EirGrid Grid Code only	The two System Operators require some data items specific to that system and they are detailed here.

3. Provisions applicable to one Grid Code only

The table below provides a list of the provisions of SDC1 which exist in one Grid Code only.

Provisions used in SONI Grid Code only	**Reason**
SDC1.1.4	SONI has extra requirements due to the presence of PPA Generation in Northern Ireland.
SDC1.4.3: Introductory sentence	
SDC1.4.4: Introductory sentence	
SDC1.4.8: Introductory Sentence	

SDC1.4.8.3(xxiv) SDC1 Appendix B	
SDC1.4.2.2(f)	The CCGT Matrix can be amended in the SONI Grid Code as per a specific requirement in the Planning Code Appendix, whereas the EirGrid Code can be amended as per any Planning Code data.
SDC1.4.2.3/SDC1.4.8.3(xvi)	For reasons associated with the management of the Transmission System in Northern Ireland - especially relating to emission and fuel constraints on certain CDGUs - it is important that the TSO is given fuel and emission constraint related information by a Generator so that it can take these into account when preparing the IOS.
SDC1.4.4.2(i)	This provision is necessary to deal with conversion factors applicable to PPA Generators in Northern Ireland.
SDC1.4.4.3	There are differences in how Reserve capabilities are notified to both SONI and EirGrid.

Provisions used in EirGrid Grid Code only	
SDC1.4.4.2 (h)	There are differences in how Operating Reserve capabilities are notified to both SONI and EirGrid.
SDC1.4.4.2(c)	The SONI Grid Code addresses the issue of conversion factors in a different way by cross-referring to the Planning Code.

SCHEDULING AND DISPATCH CODE NO. 2

CONTROL SCHEDULING AND DISPATCH

SDC2.1 INTRODUCTION

SDC2.1.1 **SEM** Provisions

(a) This Scheduling and Dispatch Code No. 2 ("SDC2") forms part of the **Sections under Common Governance** of the **Grid Code**. The **Sections under Common Governance** 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 SDC2 is similar to the SDC2 in the **Other Grid Code.** Differences relate to references to relevant power systems and related terms. Where there is a difference between a provision in this **Grid Code** and an equivalent provision in the **Other Grid Code**, the wording in question is shaded in grey. In addition, those parts of this SDC2 that are not part of the **Other Grid Code** are shaded in grey in this SDC2. Differences between the form of this SDC2 and the SDC2 in the **Other Grid Code** are summarised in Annex 1 to this SDC2.

(c) This SDC2 is intended to work in conjunction with 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 above certain minimum thresholds is required to be a party to the **TSC**. The **Market Operator** is a party to the **TSC**, as is the **TSO** and the **Other TSO**.~~

(d) Where stated in this SDC2, ~~T~~the obligation to submit data in relation to some of the information required to be provided to the **TSO** ~~by this SDC2~~ may be fulfilled by **Users** where such information submitted under the **TSC** by a **User** or by an **Intermediary** on behalf of **Users** is then provided to the **TSO** by the **Market Operator** ~~under the provisions of~~ in accordance with the **TSC**, as further provided in this SDC2. The **TSO** may require **Users** to verify or update data received by it via the **Market Operator**.

(e) Further provisions dealing with the **Sections under Common Governance** are contained in the **General Conditions**.

SDC2.1.2 SDC2 sets out the procedure for the **TSO** to issue **Dispatch Instructions** to:

(a) **Generators** in respect of their **CDGUs** (which for the avoidance of doubt comprise, **Generating Units** subject to **Central Dispatch**, **CCGT Installations**, **Hydro Units**, **Pumped Storage Generation** (but not **Pumped Storage Demand**) and **Dispatchable WFPSs**);

(b) **Pumped Storage Generators** in respect of their **Pumped Storage Plant Demand**;

(c) **Interconnector Owners** in respect of their **Interconnectors**;

(d) **Demand Side Unit Operators** in respect of their **Demand Side Units**; and

(e) **Generator Aggregators** in respect of their **Aggregated Generating Units**.

Controllable WFPSs are not currently subject to **Dispatch Instructions.**

SDC2.1.3 Certain provisions relating to **PPA Generation** are included in Appendix C and Appendix D and prevail, supplement and/or replace as the case may be the provisions of SDC2 in relation to such **PPA Generation**.

SDC2.2 OBJECTIVE

The procedure for the issue of **Dispatch Instructions** by the **TSO**, is intended to enable (as far as possible) the **TSO** to match continuously **CDGU**, **Demand Side Unit**, **Aggregated Generating Units** output (or reduction as the case may be) and/or **Interconnector** transfers to **Demand**, and thereby in conjunction with the **Other TSO**, the **Demand** on the Island of Ireland, by utilising the **Physical Notifications** and **Merit Order** derived pursuant to SDC1 and the factors to be taken into account listed there and by taking into account any **NCDGU MW Output** in both cases together with an appropriate margin of reserve, whilst maintaining (so far as possible) the integrity of the **Transmission System** together with the security and quality of supply (with the **Other TSO** having a similar objective with regard to its **Transmission System**).

SDC2.3 SCOPE

SDC2.3.1 SDC2 applies to the **TSO**, and:

(a) **Generators** with regard to their **CDGUs**;

(b) **Pumped Storage Generators** with regard to their **Pumped Storage Plant Demand**;

(c) **Interconnector Owners** with regard to their **Interconnectors**;

(d) **Demand Side Unit Operators** in relation to their **Demand Side Units**; and

(e) **Generator Aggregators** in respect of their **Aggregated Generating Units**.

Each of which (other than the **TSO**) is a "**User**" under this SDC2.

SDC2.3.2 In this SDC2, the term "**User**" shall include users of the **Distribution System** that fall under one of the above categories and are subject to **Central Dispatch**.

SDC2.4 PROCEDURE

SDC2.4.1 Information Used

SDC2.4.1.1 The information which the **TSO** shall use in assessing which **CDGU**, **Demand Side Unit**, **Interconnector** transfers, **Pumped Storage Plant Demand** and/or **Aggregated Generating Units** to **Dispatch**, will be:

(a) **Final Physical Notifications** (or **Physical Notifications** in circumstances where **Dispatch Instructions** must be issued before **Gate Closure 2**);

(f) the **Availability Notices**;

(~~b~~c) the **Merit Order** as derived under SDC1;

(~~c~~d) the other factors to be taken into account under SDC1 and which were used by the **TSO** to compile the **Indicative Operations Schedule**; and

(~~d~~e) the:

(i) **Technical Parameters**;

(ii) **Additional Grid Code Characteristics Notices**;

(iii) **Reserve Characteristics**; and

(iv) **Other Relevant Data**,

in respect of that **CDGU**, **Demand Side Unit**, **Interconnector** transfers**, Pumped Storage Plant Demand** and/or **Aggregated Generating Units** subject to any subsequent revisions to the data under SDC1 and SDC2.

SDC2.4.1.2 Additional factors which the **TSO** will also take into account are:

(a) those **Generators** or **Demand Side Unit Operators** who have not complied with **Dispatch Instructions** or **Special Actions**;

(b) real time variation requests; and

(c) the need to **Dispatch CDGUs**, **Aggregated Generating Units, Demand Side Units**, **Interconnector** transfers, and **Pumped Storage Plant Demand** for **Monitoring, Testing** or **Investigation** purposes (and/or for other trading purposes whether at the request of a **User**, for **Commissioning** or **Acceptance**, **System Tests** or otherwise).

SDC2.4.1.3 In the event of two or more **CDGUs**, **Demand Side Units**, **Pumped Storage Plant Demand** and/or **Aggregated Generating Units** having the same **Price Set** and the **TSO** not being able to differentiate on the basis of the factors identified in

SDC1.4.8.2, SDC1.4.8.3 and SDC1.4.8.4, then the **TSO** will select first for **Dispatch** the one which in the **TSO**'s reasonable judgement is most appropriate in all the circumstances.

SDC2.4.1.4 Following **Gate Closure 2**, **Users** may no longer amend **Physical Notifications** or **Commercial Offer Data** in respect of ~~**Trading Period**~~**Imbalance Settlement Periods** for which the **Gate Closure 2** has occurred. Notwithstanding SDC1.4.8, the **TSO** will continue to rerun the **Scheduling** process and issue **Indicative Operations Schedules**.

SDC2.4.1.~~5~~4 In this SDC2, where the provisions relating to **CCGTs** differ from the explicit requirements contained in a **Generating Unit Agreement**, a **Power Station Agreement** and/or a **System Support Services Agreement** in Northern Ireland, the provisions of that agreement will prevail.

SDC2.4.2 **Dispatch Instructions**

SDC2.4.2.1 Introduction

As far as is reasonably practicable, **Dispatch Instructions** ~~relating to the **Trading Day**~~ will normally be issued at any time following **Gate Closure 2** in respect of the relevant ~~**Trading Period**~~**Imbalance Settlement Periods**~~during the period beginning immediately after the issue of the first **Indicative Operations Schedule** in respect of that **Trading Day**~~. The **TSO** may, however, at its discretion, issue **Dispatch Instructions** in relation to a **CDGU**, **Demand Side Unit**, **Interconnector** transfers, **Pumped Storage Plant Demand** and/or **Aggregated Generating Units** prior to **Gate Closure 2**~~the issue of an **Indicative Operations Schedule** which includes that **CDGU**, **Demand Side Unit**, **Interconnector**, **Pumped Storage Plant Demand** and/or **Aggregated Generating Units**~~.

SDC2.4.2.2 Issue of **Dispatch Instructions**

The **TSO** will issue **Dispatch Instructions** direct to:

(a) the **Generator** for the **Dispatch** of each of its **CDGUs**.

(b) the **Generator Aggregator** for the **Dispatch** of its **Aggregated Generating Units**.

(c) the **Demand Side Unit Operator** and the **Pumped Storage Demand User** in respect of each of their **Demand Side Units** and **Pumped Storage Plant Demand** respectively.

(d) the **Interconnector Owner** for the **Dispatch** of the **Interconnector** transfers.

(e) The **TSO** may issue **Dispatch Instructions** for any **CDGU**, **Demand Side Unit**, **Interconnector** transfers, **Pumped Storage Plant Demand** and/or **Aggregated Generating Units** which has been declared **Available** in an **Availability Notice** even if that **CDGU**, **Demand Side Unit**, **Interconnector** transfers, **Pumped Storage Plant Demand** and/or **Aggregated Generating Units** was not included in an **Indicative Operations Schedule**.

SDC2.4.2.3 Scope of **Dispatch Instructions**

In addition to instructions relating to the **Dispatch** of **Active Power**, **Dispatch Instructions** (unless otherwise specified by the **TSO** at the time of giving the **Dispatch Instructions**) shall be deemed to include an automatic instruction of **Spinning Reserve**, the level of which is to be provided in accordance with the **Sustained Load Diagram** set out in Schedule 8 of the relevant **Generating Unit Agreement** (or in the **System Support Services Agreement**, as the case may be), and submitted pursuant to the PC.

SDC2.4.2.4 In addition to instructions relating to the **Dispatch** of **Active Power**, **Dispatch Instructions** in relation to **CDGUs** and, **Demand Side Units** and/or **Pumped Storage Plant Demand** may include:

(a) a **Dispatch Instruction** to provide a **System Support Service**;

(b) (i) **Mvars**: the individual **Reactive Power** output from **CDGUs** at the **Generator Terminals** or voltage levels (at instructed **MW** level) at the **Connection Point** which will be maintained by the **CDGU**.

(ii) The issue of **Dispatch Instructions** for **Active Power** will be as at the **Connection Point** and will be made with due regard to any resulting change in **Reactive Power** capability and may include instruction for reduction in **Active Power** generation to increase **Reactive Power** capability.

(iii) In the event of a sudden change in **System** voltage a **Generator** must not take any action in respect of any of its **CDGUs** to override automatic **Mvar** response unless instructed otherwise by the **TSO** or unless immediate action is necessary to comply with stability limits. A **Generator** may take such action as is in its reasonable opinion necessary to avoid an imminent risk of injury to persons or material damage to property (including the **CDGU**).

(iv) [not used]

(c) Fuels: **Fuels** to be used by the **Generator** in operating the **CDGU**. The **Generator** shall only be permitted to change **Fuels** with the **TSO's** prior consent. Appendix C provides further detail on **Dispatch Instructions** for different fuels.

(d) **Special Protection Scheme**: an instruction to switch into or out of service a **Special Protection Scheme** or other **Intertripping Scheme**;

(e) Time to **Synchronise**/react: a time to **Synchronise** or **De-Synchronise CDGUs** and, where appropriate **Demand Side Units** and/or **Pumped Storage Plants** in relation to **Pumped Storage Plant Demand** and time to react for **Demand Side Units**;

(f) **Synchronous Compensation**: an instruction, (where contracted, where that is necessary), for a **CDGU** to operate in **Synchronous Compensation** mode;

(g) **Testing** etc: an instruction in relation to the carrying out of **Testing, Monitoring** or **Investigations** as required under OC11, or testing at the request of a **Generator** in relation to a **PPA CDGU** under OC11.8, testing at the request of a **User** in relation to **User's Equipment** other than a **PPA CDGU** under OC11.13 or **Commissioning/Acceptance Testing** under the CC;

(h) **System Tests**: an instruction in relation to the carrying out of a **System Test** as required under OC10;

(i) **Maximisation**: in the case of a **CDGU** which is subject to an agreement with the **TSO** for the provision of **Maximisation** (or where it is otherwise agreed) an instruction requiring it to generate at a level in excess of its **Availability** but not exceeding its **Short Term Maximisation Capability** which may only be given if, at the time of issue of the instruction, the **CDGU** is **Dispatched** to a **MW Output** equal to its **Availability** and provided that the limit on the number of hours for which such instructions may be given in any year, as set out in any arrangement relating to the relevant agreement is not thereby exceeded. Such an instruction shall be identified as a "**Maximisation Instruction**". When the **TSO** gives a **Dispatch Instruction** which is in excess of the **Availability** of the **CDGU** which is not designated a "**Maximisation Instruction**", the **Generator** must inform the **TSO** immediately that the **Dispatch Instruction** is so in excess in order that the **TSO** can so designate the **Dispatch Instruction** as a **Maximisation Instruction** or withdraw the instruction. The **Generator** shall not then be obliged to comply with the **Dispatch Instruction** unless and until the **TSO** notifies it that the instruction is designated a "**Maximisation Instruction**";

(j) **Cycle Operating Mode**: in the case of a **CCGT Installation**, an instruction specifying the **Cycle Operating Mode** and/or an instruction to **Dispatch** a **CCGT Installation** in **Open Cycle Mode**. The **Generator** must then ensure that the **CCGT Installation** achieves the new **Dispatched Operating Mode**, without undue delay, in accordance with the **CCGT Installation's** declared **Availability** and declared **Technical Parameters. Dispatch Instructions** in relation to **Cycle Operating Modes** issued by the **TSO** shall reflect the applicable **Availability Notice** and **Technical Parameters**;

(k) **Pumped Storage**: mode changes for **Pumped Storage Plants**, where contracted, in relation to **Pumped Storage Plant Demand**;

(l) ~~**Under**~~**Dispatch Instruction Test Flags**: ~~**Dispatch Instructions** will, where appropriate, contain a flag to indicate that a unit is under **Within Day Test** and the part of the **Dispatch Instruction** subject to the flag will not be deemed to be a **Dispatch Instruction** for settlement purposes;~~**Dispatch Instruction Test Flags** shall be applied to **Dispatch Instructions** in respect of new or amended test proposals submitted by a **Generator** after **Gate Closure 2** has already occurred for the relevant ~~**Trading Period**~~**Imbalance Settlement Periods** (since **Final Physical Notifications** cannot be amended) and the **Generator** could not have reasonably foreseen the need for the new or amended test request before **Gate Closure 2** for the relevant ~~**Trading Period**~~**Imbalance Settlement Period**. The **Dispatch Instruction**

Test Flag shall be applied to the portion of the **Dispatch Instruction** which deviates from **Physical Notifications** submitted by a **Generator** in respect of a test proposal which has been approved by the **TSO**. The part of a **Dispatch Instruction** subject to the flag will not be deemed to be a **Dispatch Instruction** for settlement purposes;

(m) Gas supply emergency: instructions relating to gas supply emergencies, where the ordinary **Dispatch** process may not be followed;

(n) Tap Positions: an instruction for a change in **Generator Transformer** tap positions;

(o) **Fuel Security Code**: in relation to **CDGUs**, an instruction given by the **TSO** pursuant to the **Fuel Security Code,** with which document all **Generators** are required under the Grid Code to comply.

SDC2.4.2.5 Form of Instruction

(a) Instructions may normally be given via **Electronic Interface** but can be given by telephone, by facsimile transmission *or* by radio telephone. In the case of a **Special Protection Scheme**, a **Low Frequency Relay** initiated response from a **CDGU**, **Demand Side Unit**, and/or **Pumped Storage Plant** in relation to **Pumped Storage Plant Demand,** the instruction will be given for the effective time which is consistent with the time at which the **Low Frequency Relay** operation occurred. This **Dispatch Instruction** will be issued retrospectively.

(b) The reduction by a **Generator** of the **MW Output** of one of its **CDGUs** under SDC3.6.1 shall be deemed to have followed a **Dispatch Instruction** issued by the **TSO**.

(c) (i) In the event of a temporary loss of the ***TSO Control Centre*** as described under OC7, each **Generator** shall, subject to the provisions of SDC2.4.2.5(c)(ii), continue to operate its **CDGUs** in accordance with the last **Dispatch Instructions** to have been issued by the **TSO** but shall use all reasonable endeavours to maintain **System Frequency** at the indicated **Target Frequency** by monitoring **Frequency** and increasing/decreasing the **MW Output** of its **CDGUs** as necessary until such time as new **Dispatch Instructions** are received from the **TSO**.

(ii) When operating its **CDGUs** in the circumstances described under SDC2.4.2.5(c)(i), a **Generator** shall never be required to **Dispatch** these units in a manner in which the **TSO** would not be entitled to require such units to be **Dispatched** by means of a **Dispatch Instruction** issued in accordance with this SDC2.

(d) The **De-Synchronisation** of a **CDGU** following the operation of a **Special Protection Scheme** selected by the **TSO** shall be deemed to have happened as a result of a **Dispatch Instruction** issued by the **TSO**.

SDC2.4.2.6 **Target Frequency**

(a) **Dispatch Instructions** to **Generators** will generally indicate the target **MW** (at **Target Frequency**) to be provided at the **Connection Point** to be achieved in accordance with the respective **CDGU's Technical Parameters** and/or parameters as provided in the **Additional Grid Code Characteristics Notices** provided under SDC1 or this SDC2, or such rate within those parameters as is specified by the **TSO** in the **Dispatch Instructions**.

(b) **Dispatch Instructions** deemed to be given upon the operation of an agreed **Low Frequency Relay** will be deemed to indicate the target **MW** (at **Target Frequency**), which may either be at maximum **MW Output** or at some lower **MW Output** (as previously specified by the **TSO**), to be provided at the **Connection Point** which reflects and is in accordance with the **CDGU's Technical Parameters** and/or parameters as provided in the **Additional Grid Code Characteristics Notice** data given under (or as revised in accordance with) SDC1 or this SDC2.

SDC2.4.2.7 To aid clarity, the form of and terms to be used by the **TSO** in issuing instructions together with their meanings are set out in the Appendices to this SDC2.

SDC2.4.2.8 (a) Subject only to SDC2.4.2.9 and as provided below in this SDC2.4.2.8**,** **Dispatch Instructions** will not be inconsistent with the **Availability** and/or **Technical Parameters** and/or **Additional Grid Code Characteristics Notice** data and **Other Relevant Data** notified to the **TSO** under SDC1 (and any revisions under SDC1 or this SDC2 to that data).

(b) A new **Dispatch Instruction** may be subsequently given (including an instruction for a **Cancelled Start**) at any time.

(c) **Dispatch Instructions** may however be inconsistent with the **Availability** and/or **Technical Parameters** and/or **Additional Grid Code Characteristics Notice** data and/or **Other Relevant Data** so notified to the **TSO** for the purposes of carrying out a test at the request of the relevant **Generator** under OC11.8, a test at the request of a **User** under OC11.13 or a **System Test** at the request of the relevant **Generator** under OC10.4, to the extent that such **Dispatch Instructions** are consistent with the procedure agreed (or otherwise determined) for conducting the test or **System Test** (as the case may be). **Dispatch Instructions** may also be inconsistent with the **Availability** and/or **Technical Parameters** and/or **Additional Grid Code Characteristics Notice** data and/or **Other Relevant Data** so notified to the **TSO** in circumstances where the **TSO** issues a **Dispatch Instruction** to a **Generator** in relation to its **CDGUs** pursuant to the **Fuel Security Code.**

(d) For the avoidance of doubt, any **Dispatch Instructions** issued by the **TSO** for the purposes of carrying out a test at the request of the relevant **Generator** under OC11.8, a test at the request of a **User** under OC11.13 or a **System Test** at the request of the relevant **Generator** under OC10.4 shall not be deemed to be **Dispatch Instructions** given pursuant to SDC2.4.2.9.

SDC2.4.2.9 (a) To preserve **System** integrity under emergency circumstances where, for example, **Licence Standards** cannot be met the **TSO** may, however, issue **Dispatch Instructions** to change **CDGU**, **Aggregated Generating Units**, **Demand Side Unit, Interconnector** transfers and/or **Pumped Storage Plant Demand MW Output** or **Demand Side Unit MW Response** even when this is outside parameters so registered or so amended. This may, for example, be an instruction to trip or partially load a **CDGU**. The instruction will be stated by the **TSO** to be one in relation to emergency circumstances under SDC2.4.2.9.

(b) A **User** may refuse to comply or continue to comply with instructions referred to in this SDC2.4.2.9 but only in order to avoid, in the **Generator's** reasonable opinion, an imminent risk of injury to persons or material damage to property (including in the case of a **Generator**, the **CDGU**).

SDC2.4.2.10 Communication with **Users**

(a) **Dispatch Instructions** whether given via **Electronic Interface**, by telephone, by facsimile transmission or by radio telephone must be formally acknowledged immediately by the **User** at the **Control Facility** by **Electronic Interface** or, with the **TSO's** prior consent, by telephone, by return facsimile transmission or by radio telephone, in the manner agreed between the **User** and the **TSO** or a reason must be given as soon as possible for non-acceptance, which may (subject to SDC2.4.2.9) only be to avoid, in the **User's** reasonable opinion, an imminent risk of injury to persons or material damage to property (including the **CDGU**) or because they are not in accordance with the applicable **Availability Notice,** or **Technical Parameters**, or **Additional Grid Code Characteristics Notices** or do not reflect **Other Relevant Data** submitted by the **User** pursuant to SDC1.

(b) In the event that in carrying out the **Dispatch Instructions**, an unforeseen problem arises, giving rise, in the **User's** reasonable opinion, to an imminent risk of injury to persons or material damage to property (including the **CDGU**) the **TSO** must be notified as soon as possible by telephone.

SDC2.4.2.11 Action Required from **Users**

(a) Each **User** will comply in accordance with SDC2.4.2.12 with all **Dispatch Instructions** given by the **TSO** unless the **User** has given notice to the **TSO** under the provisions of SDC2.4.2.10 regarding non-acceptance of **Dispatch Instructions**.

(b) When complying with **Dispatch Instructions** for a **CCGT Installation** a **Generator** will operate its **CCGT Modules** in accordance with the applicable **CCGT Installation Matrix**.

(c) Where the **TSO** issues a **Synchronising** time to a **Generator** for a specific **CDGU** (other than an **Open Cycle Gas Turbine**) and the **Generator** identifies that such **CDGU** will not be **Synchronised** within +15/-5 minutes of the instructed time, the **Generator** must immediately (at the time the

discrepancy is identified) inform the **TSO** of the situation and estimate the new **Synchronising** time.

(d) If the **Synchronising** time of the **CDGU** (other than an **Open Cycle Gas Turbine**) is different from the instructed time by more than 15 minutes but less than 1 hour, this will constitute a **Short Notice Re-declaration** by the **CDGU** for that **Generator.**

(e) If the **Synchronising** time of the **CDGU** (other than an **Open Cycle Gas Turbine**) is different from the instructed time by more than 1 hour, this will constitute a **Re-declaration** for the **CDGU** by the **Generator.**

SDC2.4.2.12 Implementation of Instructions by **Users**

When a **User** has received a **Dispatch Instruction** given by the **TSO**, it will react by responding to that **Dispatch Instruction** given by the **TSO** without undue delay, and, in any event, within one minute in accordance with the instruction, including those **Dispatch Instructions** issued pursuant to SDC2.4.2.9. Instructions indicating a target **MW Output** at the **Target Frequency** will be complied with by **Users** notwithstanding any tolerance bands set out in any **Testing** requirement or elsewhere in the **Grid Code**.

SDC2.4.2.13 (a) Subject to the exception set out below in this SDC2.4.2.13, **Generators** will only **Synchronise** or **de-Synchronise CDGUs** ~~to the~~when they have received these **Dispatch Instructions** ~~of~~from the **TSO** or unless it occurs automatically as a result of **Special Protection Schemes** or **Low Frequency Relay** operations. Subject to the exception set out below in this SDC2.4.2.13, **Demand Side Unit Operators** will only reduce or increase their **Demand Side Unit MW Response** to the **Dispatch Instructions** of the **TSO** or unless it occurs automatically as a result of **Special Protection Schemes** or **Low Frequency Relay** operations.

(b) **De-Synchronisation** may otherwise only take place without the **TSO's** prior agreement if it is to avoid, in the **Generator's** reasonable opinion, an imminent risk of injury to persons or material damage to property (including the **CDGU**). **Demand Side Units**, who can not maintain the provision of any **Demand Side Unit MW Response,** may otherwise only take place without the **TSO's** prior agreement if it is to avoid, in the **Demand Side Unit Operator**'s reasonable opinion, an imminent risk of injury to persons or material damage to property (including the **Demand Side Unit**).

(c) If one of these exceptions occur, then the **TSO** must be informed that it has taken place as soon as possible.

SDC2.4.2.14 The **TSO** may suspend the issue of **Dispatch Instructions** to **User's Plant** in accordance with the **Merit Order** (having taken account of and applied the factors referred to in SDC1.4.8.3) to the extent that the conditions in SDC1.4.8.6 or SDC2.4.2.4(m) arise. When necessary the **TSO** will issue **Dispatch Instructions** for a **Black Start**.

SDC2.4.2.15 **User Plant** Changes

Each **User** at its **Control Facility** will, without delay, notify the **TSO** by **Electronic Interface**, telephone or by facsimile transmission of any change or loss (temporary or otherwise) to the operational capability of its **Plant** including any changes to the **Technical Parameters** and/or **Additional Grid Code Characteristics Notice** data of each of the **User's Plant** (in the case of **Technical Parameters**, by the submission of a **Technical Parameters Revision Notice**) indicating (where possible) the magnitude and the duration of the change. In the case of **CDGUs** already **Synchronised** to the **System**, each **Generator**, in respect of its **Generating Units**, must also state whether or not the loss was instantaneous.

SDC2.4.2.16 Each **Generator**, in respect of its **Generating Units**, will operate its **Synchronised CDGUs** with **AVRs** and **Var** limiters in service at all times (where required pursuant to CC.S1.5) unless released from this obligation in respect of a particular **CDGU** by the **TSO**.

SDC2.4.2.17 Each **Generator**, in respect of its **Generating Units**, shall request the **TSO's** agreement for one of its **CDGUs** at that **Generating Plant** to be operated without the **AVR** or **Var** limiter in service. The agreement of the **TSO** will be dependent on the risk that would be imposed on the **System**. However, a **Generator** may, in any event, take such action in relation to that **CDGU** as is reasonably necessary to avoid, in the **Generator's** reasonable opinion, an imminent risk of injury to persons or material damage to property (including the **CDGU**). When a **Generator** operates one of its **CDGU**s without the AVR or Var limiter in service, whether or not the **TSO** has agreed to such action, the **Generator** shall notify the **TSO** 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.

SDC2.4.2.18 **Minimum Demand Regulation ("MDR")**

Synchronised CDGUs 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 the forecast **Demand** to see whether the level of **MDR** for any period is insufficient, and may take any shortfall into account in **Dispatch**.

SDC2.4.3 **Special Actions**

The **TSO** may also issue **Dispatch Instructions** for **Special Actions** (either pre- or post-fault) to a **User** in respect of any of its **Plant** in the event that the **TSO** in its reasonable opinion believes that such instructions are necessary in order to ensure that the **Licence Standards** are met. **Special Actions** will generally involve a **Load** change, a **Load** reduction change or a change in required **Notice to Synchronise** (or, in the case of a **Demand Side Unit** or **Pumped Storage Plant Demand**, a change in the relevant effective time) in a specific timescale on individual or groups of **CDGUs**. They may also include selection of **Special Protection Scheme** for stability or thermal reasons. Instructions for **Special Actions** will always be within **Technical Parameters**.

SDC2 - APPENDIX A

DISPATCH INSTRUCTIONS FOR CDGUS AND DEMAND SIDE UNITS

SDC2.A.1 General

This Appendix A to SDC2 provides further information on the form of a **Dispatch Instruction** as well as an example of a **Dispatch Instruction** for **CDGUs** and **Demand Side Units**.

In this **SDC2**, where the provisions relating to **CCGT Modules** and **CCGT Installations** differ from the explicit requirements contained in a **Generating Unit Agreement**, a **Power Station Agreement** and/or a **System Support Services Agreement**, the provisions of that agreement will prevail.

SDC2.A.2 Form of **Dispatch Instruction**

SDC2.A.2.1 All **Loading/De-Loading Rates** will be assumed to be in accordance with **Technical Parameters** and **Additional Grid Code Characteristics Notice** data. Each **Dispatch Instruction** will, wherever possible, be kept simple, drawing as necessary from the following forms and SDC2.4.2**.**

SDC2.A.2.2 The **Dispatch Instruction** given by **Electronic Interface**, telephone, or facsimile transmission will normally follow the form:

(a) where appropriate, the specific **CDGU** or **User's Plant** to which the instruction applies;

(b)

(i) the **MW Output** (or **Demand Side Unit MW Response**) to which it is instructed or;

(ii) the **MW Output** (or **Demand Side Unit MW Response**) to which it is instructed until, a specified time, in which case the instructed **MW Output** shall be followed until a further **Dispatch Instruction** is issued;

(c) if the start time is different from the time the instruction is issued, the start time will be included;

(d) where specific **Loading/De-Loading Rates** are concerned, a specific target time;

(e) the issue time of the instruction;

(f) the **Designated Fuel**, **Declared Fuel** or fuel as the case may be;

(g) in the case of **CDGUs** , if the instruction is designated as a "**Maximisation Instruction**", this will be stated; and

(h) in the case of a **CCGT Installation**, the **Operating Mode** to which it is instructed.

SDC2.A.2.3 Where the **MW Output** (or **Demand Side Unit MW Response**) is instructed until a specified time, that time shall normally be within the **Trading Days** for which **Gate Closure 1** has passed. The **TSO** may, however, at its discretion, specify a time beyond the end of the **Trading Days** for which **Gate Closure 1** has passed.

SDC2.A.3 **Dispatching** a **Synchronised CDGU** to increase or decrease **MW Output**

SDC2.A.3.1 If the time of the **Dispatch Instruction** is 1400 hours, the Unit is Unit 1 and the **MW Output** to be achieved is 205 **MW**, the relevant part of the instruction would be, for example:

"Time 1400 hours. Unit 1 to 205 **MW** until further notice"

Or

"Time 1400 hours. Unit 1 to 205 **MW** effective until 1500 hours"

SDC2.A.3.2 If the start time is 1415 hours, it would be, for example:

"Time 1400 hours. Unit 1 to 205 **MW** until further notice, start at 1415 hours"

Or

"Time 1400 hours. Unit 1 to 205 **MW** effective until 1500 hours, start at 1415 hours"

SDC2.A.3.3 **Loading** and **De-Loading Rates** are assumed to be in accordance with **Technical Parameters** and **Additional Grid Code Characteristics Notice** data unless otherwise stated. If different **Loading** or **De-Loading Rates** are required, the time to be achieved will be stated, for example:

"Time 1400 hours. Unit 1 to 205 **MW** by 1420 hours until further notice"

Or

"Time 1400 hours. Unit 1 to 205 **MW** by 1420 hours, effective until 1500 hours"

SDC2.A.4 **Dispatching** a **CDGU** to **Synchronise/de-Synchronise**

SDC2.A.4.1 **CDGU Synchronising**

SDC2.A.4.1.1 In this instance, for **CDGUs**, the **Dispatch Instruction** issue time will always have due regard for the **Synchronising** time declared to the **TSO** by the **Generator** as a **Technical Parameters** or as part of **Additional Grid Code Characteristics Notice** data.

The instruction will follow the form, for example:

"Time 1300 hours. Unit 1, **Synchronise** at 1600 hours"

In relation to an instruction to **Synchronise**, the start time referred to in SDC2.A.2.2 will be deemed to be the time at which **Synchronisation** is to take place.

SDC2.A.4.1.2 Unless a **Loading** programme is also given at the same time it will be assumed that the **CDGU(s)** are to be brought to **Minimum Generation** and on the **Generator** reporting that the unit has **Synchronised** a further **Dispatch Instruction** will be issued.

SDC2.A.4.1.3 When a **Dispatch Instruction** for a **CDGU** to **Synchronise** is cancelled (i.e. a **Cancelled Start**) before the unit is **Synchronised**, the instruction will follow the form, for example:

"Time 1400 hours. Unit 1, cancel **Synchronising** instruction"

SDC2.A.4.1.4 If a **CDGU** fails to **Synchronise** more than 5 minutes after the time specified in a **Notice to Synchronise**, the **TSO** may issue a **Failure to Follow Notice to Synchronise Instruction**. If a **Generator** requests to **Synchronise** a **CDGU** more than 15 minutes before the time set out in the **Notice to Synchronise**, the **TSO** may agree to the **CDGU** being **Synchronised** at that time or request that the **CDGU** be **Synchronised** at the original **Notice to Synchronise** time. If the **TSO** accepts the request to **Synchronise** more than 15 minutes before the original **Notice to Synchronise** time, the **TSO** will not amend the original **Notice to Synchronise** time but the **Generator** shall be entitled to **Synchronise** the **CDGU**, and the **CDGU** shall be deemed to have met the original **Notice to Synchronise** time.

SDC2.A.4.1.5 When in respect of a **CDGU** a **Generator** receives a **Failure to Follow Notice to Synchronise Instruction** the original **Notice to Synchronise** is deemed never to have been issued and the **CDGU** is not entitled to **Synchronise**. The **TSO** will then decide whether or not to instruct again the **Generator** to **Synchronise** the **CDGU**, and will notify the **Generator** in relation to the **CDGU** accordingly.

SDC2.A.4.1.6 When a **CDGU** trips before reaching **Minimum Generation** a **Failure to Reach Minimum Generation Instruction** will be issued. The **Failure to Reach Minimum Generation Instruction** will negate the **Notice to Synchronise** received by the **CDGU**. The **TSO** will then decide whether or not to instruct the **CDGU** to **Synchronise** again, and will notify the **Generator** in relation to that **CDGU** accordingly.

SDC2.A.4.2 **CDGUs De-Synchronising**

SDC2.A.4.2.1 The **Dispatch Instruction** will normally follow the form, for example:

"Time 1300 hours. Unit 1, **Shutdown**"

If the instruction start time is for 1400 hours the form will be, for example:

"Time 1300 hours. Unit 1, **Shutdown**, start at 1400 hours"

Both the above assume **De-Loading Rate** at declared **Technical Parameters**. Otherwise the message will conclude with, for example:

"... and **De-Synchronise** at 1500 hours"

SDC2.A.5 **Frequency Control**

SDC2.A.5.1 All the above **Dispatch Instructions** will be deemed to be at the instructed **Target Frequency**, i.e. where a **CDGU** is in the **Frequency Sensitive Mode** instructions refer to target **MW Output** at **Target Frequency**. **Target Frequency** changes will always be given to the **Generator** by telephone or **Electronic Interface** and will normally only be 49.95, 50.00, 50.05Hz.

SDC2.A.5.2 **CDGUs** required to be **Frequency** insensitive will be specifically instructed as such. The **Dispatch Instruction** will be of the form for example:

"Time 2100 hours. Unit 1, to **Frequency** insensitive mode"

SDC2.A.5.3 **Frequency Control** instructions may be issued in conjunction with, or separate from, a **Dispatch Instruction** relating to **MW Output**.

SDC2.A.6 Emergency **Load** Drop

The **Dispatch Instruction** will be in a pre-arranged format and normally follow the form, for example:

"Time 2000 hours. Emergency **Load** drop of "X"**MW** in "Y" minutes"

SDC2.A.7 **Voltage Control** Instruction

In order that adequate **System** voltage profiles are maintained under normal and fault conditions a range of **Voltage Control** instructions will be utilised from time to time, for example:

(a) Operate to target voltage of 117 kV;

(b) Maximum production or absorption of **Reactive Power** (at current instructed **MW Output)**;

(c) Increase reactive output by 10 **Mvar** (at current instructed **MW Output**).

SDC2.A.8 Instruction to change fuel

When the **TSO** wishes to instruct a **Generator** to change the fuel being burned in the operation of one of its **CDGUs** from one **Dispatched Fuel** (or fuel) to another (for example from 1% sulphur oil to 3% sulphur oil), the **Dispatch Instruction** will follow the form, for example:

"Time 1500 hours. Unit 2 change to 3% fuel at 1700 hours".

SDC2.A.9 Instruction to change fuel for a dual firing **CDGU**

When the **TSO** wishes to instruct a **Generator** to change the fuel being burned in the operation of one of its **CDGUs** which is capable of firing on two different fuels (for example, coal or oil), from one **Designated Fuel** (or fuel) to another (for example, from coal to oil), the instruction will follow the form, for example:

"Time 1500 hours. Unit 1 generate using oil at 1800 hours".

SDC2.A.10 **Maximisation Instruction** to **CDGUs**

When the **TSO** wishes to instruct a **Generator** to operate a **CDGU** at a level in excess of its **Availability** in accordance with SDC2.4.2.4(i), the instruction will follow the form, for example:

"**Maximisation Instruction**. Time 1800 hours. Unit GT2 to 58 **MW**."

SDC2.A.11 [not used]

SDC2.A.12 **Dispatching** a **Demand Side Unit** to a **Demand Side Unit MW Response**

SDC2.A.12.1 For **Demand Side Units**, the **Dispatch Instruction** issue time will always have due regard for the **Demand Side Unit MW Response Time** declared to the **TSO** by the **Demand Side Unit Operator** as a **Technical Parameter** or as part of **Additional Grid Code Characteristics Notice** data.

The instruction will follow the form, for example:

"Time 1300 hours. Unit 1, **Demand Side Unit MW Response** at 1400 hours until further notice"

Or

"Time 1300 hours. Unit 1, **Demand Side Unit MW Response** at 1400 hours until 1500 hours"

SDC2.A.12.2 If the time of the **Dispatch Instruction** is 1400 hours, the **Demand Side Unit** is XX1, the **Demand Side Unit Notice Time** is 10 minutes and the **Demand Side Unit MW Response** to be achieved is 20 **MW**, the relevant part of the instruction would be for example :

"Time 1400 hours. Unit XX1 to 20 **MW** until further notice**,** start at 1410 hours"

Or

"Time 1400 hours. Unit XX1 to 20 **MW** until 1500 hours**,** start at 1410 hours"

SDC2 - APPENDIX B

[Not Used]

SDC2 - APPENDIX C

DISPATCH INSTRUCTIONS FOR DIFFERENT FUELS

SDC2.C.1 In addition to instructions relating to the **Dispatch** of **Active Power, Dispatch Instructions** in relation to **CDGUs** may include:

(a) the **Declared Fuel** (or fuel) to be used by the **Generator** in operating the **CDGU**. In the case of a **CDGU** capable of firing on different fuels, the **Dispatch Instruction** may also specify the **Designated fuel** (or fuel) to be used by the **Generator**. If no **Declared Fuel** (or fuel) and/or, where relevant, fuel is contained in the **Dispatch Instruction**, then the most recently instructed fuel will apply. The part of a **Dispatch Instruction** which specifies a change in the fuel to be burned by the **Generator** shall be known as a "**Dispatched** fuel **Notice**". The **TSO** may, however, use a separate **Dispatched** fuel **Notice** and which may be issued separately from any **Dispatch Instruction**, containing the above information. These provisions apply to a **PPA CDGU**. If a fuel has been notified for a **CDGU** other than a **PPA CDGU**, the fuel may be specified;

(b) in the case of a **PPA CDGU** only, the **Generator** may (subject to the following provisions of this paragraph (b)), in complying with a **Dispatch Instruction** burn a fuel other than the fuel specified in the **Dispatch Instruction**.

SDC2 - APPENDIX D

PPA GENERATION PROVISION

SDC2.A.D.1 In relation to SDC2.4.2.9(b), in the case of **PPA Generation**, the provision of GC13.5 shall be imported into (and for the purposes of the **TSO Licence** and the **NIE Licence**, requested as forming part of SDC2.4.2.9(b)).

SDC2.A.D.2 In the case of **PPA Generation**, references to "**Maximisation**" in the Grid Code shall be read as being references to "Peak" or "Peaking" in the **Power Station Agreements** and the **Generating Unit Agreements**.

ANNEX I

Explanatory Note of differences between SDC2 in the SONI Grid Code and EirGrid Grid Code

This annex is an explanatory note only and does not form part of the Grid Code.

1. General Differences in wording

The table below summarises the general differences in wording between the form of SDC2 in the SONI Grid Code and the form of SDC2 in the EirGrid Grid Code, which appear repeatedly throughout SDC2.

Terms used in SONI Grid Code	**Equivalent terms used in EirGrid Grid Code (where different)**	**Reason**
System Support Services	Ancillary Service(s)	The existing arrangements for Ancillary Services and System Support Services are continuing until further notice.
CCGT Module	CCGT Unit	This is the phrase currently used to describe the individual parts of a Combined Cycle Plant CCGT Module is an important concept in Northern Ireland and is reflected in many other agreements. EirGrid is keeping the phrase CCGT Unit, as it more closely describes the concept of an individual unit and EirGrid has formerly used CCGT Module to describe the whole CCGT Installation.
voltage	Voltage	"Voltage" is a defined term in the EirGrid Grid Code but not in the SONI Grid Code.
emergency	Emergency	"Emergency" is a defined term in the EirGrid Grid Code but not in the SONI Grid Code.

2. Specific differences in wording between equivalent provisions in both Grid Codes

The table below provides a list of the other specific differences in wording between equivalent provisions of SDC1 in both Grid Codes.

Provision	**SONI Grid Code**	**EirGrid Grid Code**	**Reason**
SDC2.1.2(a)	Reference is made to "but not Pumped Storage Demand" after the words "Pumped Storage Generation".		Reference to these words in the SONI Grid Code is made for clarity reasons.

SDC2.4.2.4(g)	Reference is made to "OC11" and "OC11.8 and "OC11.13". Reference is also made to (i) "Generator in relation to a PPA CDGU" and "in relation to User's Equipment other than a PPA CDGU". The word "Acceptance" appears before "Commissioning".	Reference is made to "OC10" and "OC8.5".	These are the respective requirements in relation to testing, monitoring and investigations
SDC2.4.2.4(h)	Reference is made to "OC10"	Reference is made to "OC8.4"	These are the respective System Tests requirements
SDC2.4.2.5	Reference is made to "radio telephones" in the list of means of communications of a Dispatch Instruction	No reference is made to "radio telephones" and in addition, after the words "Frequency Relay" the EirGrid Grid Code also refers to "or any other automatic Primary Frequency Control Scheme (excluding governor response)".	These are respective requirements regarding the form of a Dispatch Instruction
SDC2.4.2.5(b)	Reference is made to "SDC3.6.1"	Reference is made to "OC4.3"	These are the respective requirements in relation to actions required in response to high frequency
SDC2.4.2.5(c)(i)	Reference is made to "OC7"	Reference is made to "OC9"	These are the respective references in respective of temporary losses at the TSOs' Control Centres
SDC2.4.2.8(c)	Reference is made to "OC11.8", "OC11.13" and "OC10.4". Reference is also made to "a test at the request of a User under OC11.13".	Reference is made to "OC8.5" and "OC8.6"	These are the respective requirements in respect of testing and System Tests
SDC2.4.2.8(d)	Reference is made to "OC11.8", "OC11.13" and "OC10.4". Reference is also made to "a test at the request of a User under OC11.13".	Reference is made to "OC8.5" and "OC8.6"	These are the respective requirements in respect of testing and System Tests
SDC2.4.2.10(a)	Reference is made to "radio telephones" in the list of means of communication	No reference is made to "Radio telephones"	The reference to "radio telephones" is specific to the means of

			communication under the SONI Grid Code.
SDC2.4.2.11(c)	Reference is made to "+15/-5 minutes"	Reference is made to "+/-10 minutes"	These are the respective delays in synchronising times which trigger an obligation on a Generator to notify the TSO of the delay in synchronising times.
SDC2.4.2.12	No reference is made to Dispatch Instructions for Mvars	Reference is made to "or in the case of a Dispatch Instruction for Mvars within two minutes of the instruction" after the words "in accordance with the instruction"	The EirGrid Grid Code has several specific requirements for the dispatch of Generator Reactive Power.
SDC2.4.2.16	Reference is made to "CC.S1.5"	Reference is made to "CC7.3 and SDC2.B.7"	These are the respective requirements for Generating Unit Control arrangements
SDC2.4.2.17	There is a requirement for a Generator to notify the TSO where one of its CDGUs operates without the AVR of Var limiter in service.	No such reference is made.	This is a Northern Ireland specific declaration.
SDC2.A.2.2	Reference is made to "Designated Fuel" and "Declared Fuel"	Reference is only made to "fuel"	This is due to the PPA specific fuel terminology in the SONI Grid Code

3. Provisions applicable to one Grid Code only

The table below provides a list of the provisions of SDC1 which exist in one Grid Code only.

Provisions used in SONI Grid Code only	**Reason**
SDC2.1.3	This paragraph cross-refers to Appendices C and D which both deal with specific issues applicable to PPA Generation only.
SDC2.4.1.4	This provision is necessary in the SONI Grid Code to specify that specific CCGT requirements contained in the Generating Unit Agreements, Power Station Agreements and System Support Services Agreements prevail over the

	requirements of the Grid Code in case of inconsistency.
SDC2.4.2.3	This paragraph is necessary to deal with issues specific to PPA Generation, and in particular the fact that for PPA Generation, a Dispatch Instruction may include an automatic instruction of Spinning Reserve.
SDC2.4.2.4(c) – final sentence	This final sentence is specific to the SONI Grid Code as it cross-refers to Appendix C that sets out the different terminology and requirements relating to fuel for PPA Generation.
SDC2.4.2.4(n)	This is a SONI Grid Code only requirement in respect of instructions to change Generator Transformer tap positions
SDC2.A.1 – second paragraph	This is a SONI Grid Code only provision which provides that for PPA CCGT Modules and Units, provisions in the Power Purchase Arrangements and SSSAs prevail over Grid Code requirements where there is an inconsistency.
SDC2 Appendix C	This appendix deals with fuel provisions which apply to PPA Generation only.
SDC2 Appendix D	This appendix deals with additional provisions which apply to PPA Generation only.

Provisions used in EirGrid Grid Code only	
SDC2.4.2.3	This paragraph is necessary in order to deal with the EirGrid specific requirement that a Dispatch Instruction may include an automatic instruction of Operating Reserve.
SDC2.4.2.4(b)(iv)	This paragraph is EirGrid specific as it cross-refers to Appendix B which sets out EirGrid specific requirements for Generator Reactive Power Dispatch.
SDC2.A.5.1 – second paragraph	This provision deals with EirGrid specific requirements in respect of **MW** Output adjustment of a CDGU for System Frequency.
SDC2.A.7 (d) to (h) and final 2 paragraphs	These additional paragraphs deal with EirGrid specific Generator Reactive Power dispatch requirements
SDC2.A.11	This additional paragraph deals with EirGrid specific Dispatch Instructions in relation to emergencies.
SDC2 Appendix B	This appendix deals with the EirGrid specific requirements for the Dispatch of Generator Reactive Power

SCHEDULING AND DESPATCH CODE NO. 3

FREQUENCY CONTROL

SDC3.1 INTRODUCTION

SDC3.1.1 SDC3 sets out the procedure which the **TSO** will use to direct **Frequency Control. NI System Frequency** will be controlled by:

(a) automatic response from **CDGUs** and **Controllable WFPSs** operating in **Frequency Sensitive Mode**, including **Unit Load Controller** operation;

(b) the **Dispatch** of **CDGUs** and **Controllable WFPSs**;

(c) response from an **Interconnector**; and

(d) **Demand Control**.

SDC3.1.2 The requirements for **Frequency Control** are determined by the consequences and effectiveness of **Scheduling** and **Dispatch** and by the effect of transfers across any **Interconnector** and therefore SDC3 is complementary to SDC1 and SDC2**.**

SDC3.2 OBJECTIVE

The procedure for the **TSO** to direct **Frequency Control** is intended to enable (as far as possible) the **TSO** to meet the statutory requirements of **Frequency Control**.

SDC3.3 SCOPE

SDC3 applies to the **TSO, Suppliers**, **Generators** (in respect of all **Generating Units** connected to the **Transmission System** and in respect of **CDGUs** and **Controllable WFPSs** connected to the **Distribution System**) and **Interconnector Owners**.

SDC3.4 PROCEDURE

SDC3.4.1 Automatic Response from **Generating Plant**

SDC3.4.1.1 (a) All **CDGUs** and **Controllable WFPSs** must be capable of operating at all times in **Frequency Sensitive Mode** (including, where applicable, with the **Unit Load Controller** in operation) which term means an automatic incremental or decremental generation response (**Primary Operating Reserve**) to contain the initial **NI System Frequency** change together with a sustained generation response (**Secondary Operating Reserve**) which can contribute to containing and correcting the **NI System Frequency** within the statutory requirements for **Frequency Control**.

(b) All **Synchronised CDGUs** and **Controllable WFPSs** must, unless relieved of the requirement by the **TSO**, operate at all times in **Frequency Sensitive Mode** (including, where applicable, with the **Unit Load Controller** in operation) except where, in the **Generator's** reasonable opinion, it is necessary to cease

operation in **Frequency Sensitive Mode** in order to avoid an imminent risk of injury to persons or material damage to property (including the **CDGU**).

SDC3.4.1.2 A **System Frequency** induced change in the **Active Power** output of **CDGUs** and **Controllable WFPSs** which assists the recovery to target **NI System Frequency** must not be manually overridden by a **Generator** except where it is necessary, in the **Generator's** reasonable opinion, to avoid an imminent risk of injury to persons or material damage to property (including the **CDGU**).

SDC3.4.2 **TSO Dispatch Instructions**

SDC3.4.2.1 When the **TSO** determines it is necessary by having monitored the **NI System Frequency** it will, as part of the procedure set out in SDC2, issue **Dispatch Instructions** in order to seek to regulate **NI System Frequency** to meet the statutory requirements for **Frequency Control**. **CDGUs** and **Controllable WFPSs** will be instructed by the **TSO** to operate at target **NI System Frequency** which will normally be 50.00 Hz plus or minus 0.05 Hz, except in exceptional circumstances as determined by the **TSO.**

SDC3.4.2.2 Any **Dispatch Instruction** to **CDGUs** and **Controllable WFPSs** will refer to the required **CDGU** output at the target **NI System Frequency.**

SDC3.4.3 **Low Frequency Relay** Initiated Response from **Open Cycle Gas Turbine CDGUs**

SDC3.4.3.1 The **TSO** may allocate part of its requirements for **Operating Reserve** to **CDGUs** which are **Open Cycle Gas Turbines** with the capability of **Low Frequency Relay** initiated response for **Start-Up** to a pre-determined output level which have not been **Scheduled** for **Dispatch** in accordance with SDC1, although the **TSO** may, in the event, decide to issue a **Dispatch Instruction** in respect of any such **CDGU** in accordance with SDC2. Alternatively, **CDGUs** which are **Open Cycle Gas Turbines** of this type may be **Scheduled** for **Dispatch** by the **TSO** in accordance with SDC1.

SDC3.4.3.2 The **TSO** will periodically specify, within the range established pursuant to the **Connection Agreement, Low Frequency Relay** settings to be applied to the **CDGUs** pursuant to SDC3.4.3.1 and will instruct the **Low Frequency Relay** initiated response to be placed in and out of service.

SDC3.4.3.3 **Generators** will comply with the **TSO's** instructions issued under SDC3.4.3.2 for **Low Frequency Relay** settings and low **Frequency** initiated response to be placed in or out of service. **Generators** may not alter such **Low Frequency Relay** settings or take low **Frequency** initiated response out of service without the **TSO's** agreement, except where necessary, in the **Generator's** reasonable opinion, to avoid an imminent risk of injury to persons or material damage to property (including the **CDGU**).

SDC3.4.4 **Low Frequency Relay** Initiated Response from **Demand**

Suppliers should note that in allocating its requirements for **Operating Reserve** the **TSO** may take into account **Low Frequency Relay** initiated **Demand Reduction**.

SDC3.5 ACTION REQUIRED BY **GENERATORS** IN RESPONSE TO LOW **FREQUENCY**

SDC3.5.1 (a) If the **NI System Frequency** falls to or below 49.8 Hz, each **Generator** at its **Generating Plant** will be required to check that each of its **CDGUs** and **Controllable WFPSs** is achieving the required levels of response including that required from the **Unit Load Controller**, where applicable, in order to contribute to containing and correcting the low **System Frequency.**

(b) Where the required levels of response are not being achieved appropriate action should be taken by the **Generator** without delay and without receipt of instructions from the **TSO** to achieve the required levels of response, provided local security and safety conditions permit namely, in relation to safety conditions, where this will not, in the **Generator's** reasonable opinion, cause an imminent risk of injury to persons or material damage to property (including the **CDGU**).

(c) In the case of **Gas Turbine Units** instructed for **Low Frequency Relay** initiated response, manual **Start-Up** and/or **Synchronisation** shall be attempted if automatic **Start-Up** and/or **Synchronisation** has failed.

SDC3.5.2 In order that the **TSO** can deal with emergency conditions effectively, it needs as much up to date information as possible and accordingly, the **TSO** will be informed of the action taken as soon as possible after the fall in **NI System Frequency** directly by telephone from the **Generating Plant.**

SDC3.6 ACTION REQUIRED BY **GENERATORS** IN RESPONSE TO HIGH **FREQUENCY**

SDC3.6.1 If **NI System Frequency** rises to or above 50.2 Hz, each **Generator** at its **Generating Plant** will be required to ensure that each of its **CDGUs** and **Controllable WFPSs** has responded in order to contribute to containing and correcting the high **System Frequency** by automatically or manually reducing output by a minimum amount of 2% and by a maximum amount of 5% of **Generating Plant** output per 0.1 Hz deviation of **NI System Frequency** from target **NI System Frequency.**

SDC3.6.2 This reduction will have to be made without reference to the **TSO** and must be maintained until the **NI System Frequency** has returned to **Target Frequency** or receipt of revised **Dispatch Instructions** from the **TSO** under SDC2. In order that the **TSO** can deal with the emergency conditions effectively, it needs as much up to date information as possible and accordingly, the **TSO** must be informed of the action taken as soon as possible after the rise in **System Frequency** directly by telephone from the **Generating Plant.**

SDC3.7 ACTION REQUIRED BY **INTERCONNECTOR OWNERS** IN RESPONSE TO HIGH OR LOW **FREQUENCY**

SDC3.7.1 The **TSO** will make separate arrangements with **Interconnector Owners** to specify the response to be provided by **Interconnector Owners** in the event of high or low **Frequency** in order for the **Interconnector Owners** to contribute to containing and correcting the high or low **System Frequency** as the case may be.

SDC3.8 ELECTRIC TIME

SDC3.8.1 The **TSO** will endeavour (in so far as it is able) to control electric clock time to within plus or minus 10 seconds of **Standard Time** by specifying changes to target **NI System Frequency** and by **Dispatch** taking into account **Merit Order** and forecast **Generating Plant/Demand** margins. Errors greater than plus or minus 10 seconds may be temporarily accepted at the **TSO's** reasonable discretion. The **TSO** will give 15 minutes' notice to each **Generator** of variation in target **NI System Frequency.**

DATA REGISTRATION CODE

Comment [A1]: One table in Schedule 2 of this DRC is identical to the table at the end of SDC1. This needs to be aligned with any changes made to the SDC1 table.

DRC1 INTRODUCTION

DRC1.1 The Data Registration Code ("DRC") presents a unified listing of all data required by the **TSO** from **Users** and by **Users** from the **TSO**, from time to time under the **Grid Code**. The data which is specified in each section of the **Grid Code** is collated here in the DRC**.** Where there is any inconsistency in the data requirements under any particular section of the **Grid Code** and the Data Registration Code, the provisions of the particular section of the **Grid Code** shall prevail.

DRC1.2 The DRC identifies the section of the **Grid Code** under which each item of data is required.

DRC1.3 The Code under which any item of data is required specifies procedures and timings for the supply of that data, for routine updating and for recording temporary or permanent changes to that data. All timetables for the provision of data are repeated in the DRC

DRC1.4 Various sections of the **Grid Code** also specify information which the **Users** will receive from the **TSO**. This information is summarised in a single schedule in the DRC (Schedule 8).

DRC2 OBJECTIVE

The objective of the DRC is to:

(a) list and collate all the data to be provided by each category of **User** to the **TSO** under the **Grid Code**; and

(b) list all the data to be provided by the **TSO** to each category of **User** under the **Grid Code**.

DRC3 SCOPE

The **Users** to which the DRC applies are:

(a) **Generators**;

(b) **Pumped Storage Generators** in respect of **Pumped Storage Plant Demand**;

(c) **Interconnector Users**;

(d) **Interconnector Owners**;

(e) **Demand Side Unit Operators**;

(f) **Generator Aggregators;**

(g) **Suppliers**; and

(h) **Large Demand Customers**.

DRC4 DATA CATEGORIES AND STAGES IN REGISTRATION

DRC4.1 Within the DRC each data item is allocated to one of the following three categories:

(a) **Standard Planning Data (SPD)**

(b) **Detailed Planning Data (DPD)**

(c) **Operational Data**

DRC4.2 **Standard Planning Data (SPD)**

DRC4.2.1 **The Standard Planning Data listed and collated in this DRC** is that data listed in Part 1 of the Appendix to the PC.

DRC4.2.2 **Standard Planning Data** will be provided to the **TSO** in accordance with PC6.3.

DRC4.3 **Detailed Planning Data (DPD)**

DRC4.3.1 The **Detailed Planning Data** listed and collated in this DRC is that data listed in Part 2 of the Appendix to the PC.

DRC4.3.2 **Detailed Planning Data** will be provided to the **TSO** in accordance with PC6.3.

DRC4.4 **Operational Data**

DRC4.4.1 **Operational Data** is data which is required by the Operating Codes and the **Scheduling** and **Dispatch** Codes. Within the DRC, **Operational Data** is sub-categorised according to the **Code** under which it is required.

DRC4.4.2 **Operational Data** is to be supplied in accordance with timetables set down in the relevant **Operating Codes** and **Scheduling** and **Dispatch** Codes and repeated in tabular form in the schedules to the DRC.

DRC5 **PROCEDURES AND RESPONSIBILITIES**

DRC5.1 Responsibility for Submission and Updating of Data

In accordance with the provisions of the various sections of the **Grid Code**, each **User** must submit data as summarised in DRC6 and listed and collated in the attached schedules.

DRC5.2 Methods of Submitting Data

DRC5.2.1 Wherever possible the data schedules to the DRC are structured to serve as standard formats for data submission and such format must be used for the written submission of data to the **TSO**.

DCR5.2.2 All data to be submitted under Schedule(s) in the **DRC** must be submitted to the **TSO** System Operations Manager at Castlereagh House or to such other department and/or address as the **TSO** may from time to time notify to **Users**. The name of the person at the **User** who is submitting each schedule of data must be included.

DRC5.2.3 Where both the **TSO** and a **User** agree that a computer data link should be used, the method of use of the link shall be agreed at the time, including what data can be submitted by the link.

DRC5.2.4 Other modes of data transfer, such as magnetic tape, may be utilised if the **TSO** gives its prior written consent.

DRC5.3 Changes to **Users' Data**

Whenever a **User** becomes aware of a change to an item of data which is registered with the **TSO**, the **User** must notify the **TSO** in accordance with the relevant section of the **Grid Code**. The method and timing of the notification to the **TSO** is set out in the relevant section of the **Grid Code**.

DRC5.4 Data not Supplied

DRC5.4.1 **Users** are obliged to supply data as set out in the individual sections of the **Grid Code** and repeated in the DRC. If a **User** fails to supply data when required by any section of the **Grid Code**, the **TSO** will (unless the default position is dealt with specifically in the relevant part of the **Grid Code**) estimate such data, acting reasonably, if and when, in the **TSO's** view, it is necessary to do so. Such estimates will, in each case, be based upon data supplied previously for the same **Plant** or **Apparatus** or upon corresponding data for similar **Plant** or **Apparatus** or upon such other information as the **TSO** considers to be appropriate.

DRC5.4.2 The **TSO** will advise a **User** in writing of any estimated data it intends to use pursuant to DRC5.4.1 relating directly to that **User's Plant** or **Apparatus** in the event of data not being supplied.

DRC6 DATA TO BE REGISTERED

DRC6.1 Schedules 1 to 8 attached cover the following data areas:

DRC6.1.1 SCHEDULE 1 - **GENERATING UNIT** AND **POWER STATION** TECHNICAL DATA.
Comprising **Generating Unit** and **Power Station** fixed electrical parameters.

DRC6.1.2 SCHEDULE 2 - **GENERATION PLANNING PARAMETERS,** RESPONSE CAPABILITY DATA, AND SDC1 DATA. Comprising the **Generating Plant**,

Controllable WFPS and **Dispatchable WFPS** parameters required for **Operational Planning** studies, response capability data in connection with **Operating Reserve** and certain data required under SDC1 in respect of **CDGUs**, **Pumped Storage Plant Demand**, **Interconnectors**, **Interconnector Units**, **Demand Side Units**, **Aggregated Generating Units** and **Controllable WFPS**.

DRC6.1.3 SCHEDULE 3 - **GENERATING UNIT/POWER STATION EQUIPMENT/INTERCONNECTOR OUTAGES**.
Comprising **Generating Unit**, **Power Station Equipment** and **Interconnector Outage** planning.

DRC6.1.4 SCHEDULE 4 - **GENERATOR OUTPUT/LOADING DATA AND ENERGY SALES DATA**.
Output data and estimated loading profiles for **Power Stations** not subject to **Central Dispatch** and **Energy** sales data from **Suppliers**.

DRC6.1.5 SCHEDULE 5 - **USER'S SYSTEM** DATA.
Comprising electrical parameters relating to **Plant** and **Apparatus** connected to the **NI System**.

DRC6.1.6 SCHEDULE 6 - **LOAD** CHARACTERISTICS.
Comprising the estimated parameters of **Load** groups in respect of, for example, harmonic content and response to **Frequency**.

DRC6.1.7 SCHEDULE 7 - **DEMAND CONTROL** AND GENERAL DATA.
Comprising information relating to **Demand Control** on the **NI System** and requirements for additional data for **System** operations purposes.

DR6.1.8 SCHEDULE 8 - DATA SUPPLIED BY THE **TSO** TO **USERS**.

DRC6.2 The **Schedules** applicable to the following categories of **User** are as follows:

Generators with **Generating Plant**:	Sched 1,2,3,5,7 & 8
Generators with **Independent Generating Plant**:	Sched 1,3,4,5,7 & 8
Generators with **Controllable WFPSs** or **Dispatchable WFPSs**:	Sched 1, 2, 3, 5, 7 & 8
All **Users** connected directly to the **NI System**:	Sched 5,7 & 8
All **Users** connected directly to the **NI System** with **Demand** (including **Generators** with respect to **Demand** at directly connected **Power Stations** and **Demand Side Unit Operators** in respect of **Demand Side Units**):	Sched 2,5,6,7 & 8

Suppliers:	Sched 4 & 7
Interconnector Owners:	Sched 2 & 3
Interconnector Users:	Sched 2 (Para 6 only)

DRC6.3 As stated in DRC1, the data listed in the Schedules to this DRC are required to be submitted by **Users** to the **TSO** in other parts of the **Grid Code** and consequently the schedules should reflect accurately the requirements of other parts of the Code relating to the submission of data. If at any time the **TSO** considers that the Schedules do not so reflect the operative provisions relating to the submission of data, the **TSO** may, by notice in writing to all affected **Users** amend the Schedules to this DRC. The **TSO** may also vary the format of the Schedules in this way. No changes may be made in accordance with this DRC6.3 which would affect the substantive obligations of **Users**. Changes of this latter nature can only be achieved by means of the usual procedure for **Grid Code** changes and will require the approval of the **Authority**.

SCHEDULE 1

DATA REGISTRATION CODE

GENERATING UNIT AND POWER STATION TECHNICAL DATA

POWER STATION NAME: DATE:

DATA DESCRIPTION	UNITS	DATA CAT.	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G4	G5	G6	G7	STN
GENERAL **POWER STATION** DATA Point of connection to the **NI System** in terms of geographical and electrical location and **System** voltage	-	**SPD**	-	-	-	-	-	-	-	
Capacity of **Power Station** in **MW** sent out for **R.C., Min. Gen.** (assumed to be zero in the case of **WFPSs** unless a different value is notified by the User) and, where relevant **Max. Gen.**	**MW**	**SPD**	-	-	-	-	-	-	-	
In the case of **Controllable WFPSs** or **Dispatchable WFPSs**, a diagram that shows for the **Controllable WFPS** or **Dispatchable WFPS** wind speed and direction against electrical output in **MW**, in "rose" format.		**SPD**								
Maximum auxiliary **Demand (Active Power** and **Reactive Power)**	**MW** **Mvar**	**SPD** **SPD**	- -	- -	- -	- -	- -	- -	- -	
Where **Generating Units** form part of a **User's System**, the number of such **Units** together with their total capacity. If required by the **TSO**, details of the **Generating Units** together with their energy output profile.		**SPD**								
Operating regime of **Generating Units** not subject to **Central Dispatch** (e.g. continuous, intermittent, peak lopping).		**SPD**								
GENERAL **GENERATING UNIT** DATA Prime mover type		**SPD**								-
Generating Unit type	MVA	**SPD**								
Generating Unit rating and terminal voltage	KV									-
Generating Unit rated power factor		**SPD**								-
Registered Capacity sent out	**MW**	**SPD**								-
Max.Gen. and **Min.Gen.** capability sent out	**MW**	**SPD**								-
Reactive Power capability (both leading and lagging) at the lower voltage terminals of the **Generator Transformer** for **Max.Gen.,** normal **Full Load** and normal minimum **Load**.	**Mvar**	**SPD**								-
Maximum Auxiliary **Demand**	**MW** **Mvar**	**SPD**								
Inertia constant	**MW** sec MVA	**SPD**								

ABBREVIATIONS:

SPD = **Standard Planning Data** **DPD** = **Detailed Planning Data**
Min Gen = **Minimum Generation** **Max Gen** = **Maximum Generation**
% on MVA = & on Rated MVA **RC** = **Registered Capacity**
% on 100 = % on 100 MVA **OC1,SDC1,**etc= **Grid Code** for which data is required

DATA DESCRIPTION	UNITS	DATA CAT	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G4	G5	G6	G7	STN
Short circuit ratio		**SPD**								-
Direct axis transient reactance	% on MVA	**SPD**								-
Direct axis sub-transient time constant	S	**SPD**								-
Generator Transformer rated MVA, positive sequence reactance and tap change range	MVA % on MVA +%/-%	**SPD**								-
Sustained Load Diagram	Diagram	**SPD**								-
In relation to the wind turbines comprised within a **WFPS**, such General **Generating Unit** Data equivalent to that listed above as the **TSO** shall reasonably require.		**SPD**								
A list of the **CCGT Modules** in the **CCGT Installation** identifying each **CCGT Module**, and the **CCGT Installation** of which it forms part unambiguously, together with other relevant information.	List	**SPD**								
Auxiliary Demand The normal **Generating Unit**-supplied auxiliary **Load** for each **Generating Unit** at rated **MW** output	**MW**	**DPD**								-
The **Power Station** auxiliary **Load**, if any, additional to the **Generating Unit** supplied auxiliary **Load** where the **Power Station** auxiliary **Load** is supplied from the **NI System**	**MW**	**DPD**	-	-	-	-	-	-	-	
Generating Unit parameters Rated terminal voltage	kV	**DPD**								-
Rated MVA	MVA	**DPD**								-
Rated **MW**	**MW**	**DPD**								-
Min.Gen.	**MW**	**DPD**								-
Short circuit ratio		**DPD**								-
Direct axis synchronous reactance	% on MVA	**DPD**								-
Direct axis transient reactance	% on MVA	**DPD**								-
Direct axis sub-transient reactance	% on MVA	**DPD**								-
Direct axis transient time constant	S	**DPD**								-
Direct axis sub-transient time constant	S	**DPD**								-

DATA DESCRIPTION	UNITS	DATA CAT	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G4	G5	G6	G7	STN
Quadrature axis synchronous reactance	% on MVA	**DPD**								-
Quadrature axis transient reactance	% on MVA	**DPD**								-
Quadrature axis sub-transient reactance	% on MVA	**DPD**								-
Quadrature axis transient time constant	S	**DPD**								-
Quadrature axis sub-transient time constant	S	**DPD**								-
Stator time constant	S	**DPD**								-
Stator resistance		**DPD**								-
Stator leakage reactance	% on MVA	**DPD**								-
Turbogenerator inertia constant, or, for wind turbines comprised within a **WFPS**, Plant inertia constant	**MW**sec/ MVA	**DPD**								-
Other than for wind turbines comprised within a **WFPS**, rated field current	A	**DPD**								-
Other than for wind turbines comprised within a **WFPS**, field current (amps) open circuit saturation curve for **Generating Unit** terminal voltages ranged from 50% to 120% of rated value in 10% steps as derived from appropriate manufacturers' certificates	A	**DPD**								-
Parameters for **Generating Unit** Step-Up Transformers										
Rated MVA	MVA	**DPD**								-
Voltage ratio		**DPD**								-
Positive sequence reactance (at max., min. & nominal tap)	% on MVA	**DPD**								-
Positive sequence resistance (at max., min. & nominal tap)	% on MVA	**DPD**								-
Zero phase sequence reactance	% on MVA	**DPD**								-
Tap changer range	+%/ -%	**DPD**								-
Tap changer step size	%	**DPD**								-
Tap changer type: on **Load** or off circuit	on/off	**DPD**								-
Power Station Transformer Parameters										
Rated MVA	MVA	**DPD**								-
Voltage ratio		**DPD**								-
Zero sequence reactance as seen from the higher voltage side	% on MVA	**DPD**								-
Excitation control system parameters (not for **WFPSs**)										
DC gain of excitation loop		**DPD**								-

Rated field voltage		**DPD**								-
Maximum field voltage		**DPD**								-

DATA DESCRIPTION	UNITS	DATA CAT.	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G 4	G5	G 6	G7	STN
Minimum Field Voltage		**DPD**								
Max. rate of change of field voltage (rising)	V/sec	**DPD**								-
Max. rate of change of field voltage (falling)	V/sec	**DPD**								-
Details of excitation loop described in block diagram form showing transfer functions of individual elements	Diagram	**DPD**								-
Dynamic characteristics of over-excitation limiter		**DPD**								-
Dynamic characteristics of under-excitation limiter		**DPD**								-
Governor Parameters (for Reheat Steam Turbine Units)										
H.P. governor average gain	**MW**/Hz	**DPD**								-
Speeder motor setting range	Hz	**DPD**								-
H.P. governor valve time constant	S	**DPD**								-
H.P. governor valve opening limits		**DPD**								-
H.P. governor valve rate limits		**DPD**								-
Reheater time constant (active energy stored in reheater)	S	**DPD**								-
IP governor average gain	**MW**/Hz	**DPD**								-
IP governor setting range	Hz	**DPD**								-
IP governor valve time constant	S	**DPD**								-
IP governor valve opening limits		**DPD**								-
IP governor valve rate limits		**DPD**								-
Details of acceleration sensitive elements in HP and IP governor loop		**DPD**								-
Governor block diagram showing transfer functions of individual elements	Diagram	**DPD**								-
Governor Parameters (for Non-Reheat Steam Turbine Units and Gas Turbine Units										
Governor average gain	**MW**/Hz	**DPD**								-
Speeder motor setting range		**DPD**								-
Time constant of steam or fuel governor valve		**DPD**								-

DATA DESCRIPTION	UNITS	DATA CAT.	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G4	G5	G6	G7	STN
Governor value opening limits		**DPD**								
Governor valve rate limits		**DPD**								-
Time constant of turbine	S	**DPD**								-
Governor block diagram	Diagram	**DPD**								-
Governor parameters (for **WFPSs**)										
Wind turbine torque/speed controller(s) (if any)		**DPD**								
Wind turbine blade angle controller(s) (if any)		**DPD**								
Wind turbine power limitation function(s) (if any)		**DPD**								
Plant Flexibility Performance										
Rate of **Loading** following weekend shutdown (**Generating Unit** and **Power Station**)	**MW**/m	**DPD**								
Rate of **Loading** following overnight shutdown (**Generating Unit** and **Power Station**)	**MW**/m	**DPD**								
Block **Load** following **Synchronising**, or, in the case of **WFPSs**, generating whilst connected to the **NI System**	**MW**	**DPD**								
Rate of **Deloading** from normal rated **MW**	**MW**/m	**DPD**								
Regulating range	**MW**	**DPD**								
Load rejection capability while still **Synchronised**, or, in the case of **WFPSs**, generating whilst still connected to the **NI System** and generating, and able to supply **Load**	**MW**	**DPD**								

NOTE:
Users are referred to Schedule 5 which sets down data required for all **Users** directly connected to the **NI System**, including **Power Stations.**

SCHEDULE 2

DATA REGISTRATION CODE

GENERATION PLANNING PARAMETERS, RESPONSE CAPABILITY DATA AND SDC1 DATA

Part 1 of this schedule contains the **CDGU and Controllable WFPS** or **Dispatchable WFPSs Generation Planning Parameters** required by the **TSO** to facilitate studies in **Operational Planning** timescales. It also contains the response capability data for **CDGUs.**

Part 2 of this schedule contains the data required with respect to **CDGUs**, **Pumped Storage Plant Demand, Interconnectors**, **Interconnector Units**, **Demand Side Units**, **Aggregated Generating Units** and/or **Controllable WFPS** to be supplied by **Users** by **Gate Closure** pursuant to SDC1. Many of these parameters are the same as those required in Part 1, but the data supplied under Part 1 will not be used for real time operation.

Power Station: _____

Part 1 - **Generation Planning Parameters**

DATA DESCRIPTION	UNITS	DATA CAT.	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G4	G5	G6	G7	STN
Generation Planning Parameters for **CDGUs**										
The minimum notice required to **Synchronise** a **Generating Unit** from **De-synchronisation**	Mins	OC2								-
The minimum time between **Synchronising** different **Generating Units** in a **Power Station**	Mins	OC2								
The minimum block **Load** requirements on **Synchronising**		OC2								
Maximum **Generating Unit Loading** rates from **Synchronising** for the following conditions:										
hot	**MW**/ min	OC2								-
Warm	**MW**/ min	OC2								-
cold	**MW**/ min	OC2								-
Minimum time off **Load**		OC2								
Maximum **Generating Unit Deloading** rates for the following conditions:										
Hot	**MW**/ min	OC2								-
warm	**MW**/ min	OC2								-
cold	**MW**/ min	OC2								-
Maximum allowable starts per year:										
hot		OC2								-

DATA DESCRIPTION	UNITS	DATA CAT.	**GENERATING UNIT** OR **POWER STATION** DATA							
			G1	G2	G3	G4	G5	G6	G7	STN
warm		OC2								-
cold		OC2								
Generation Planning Parameters for **Controllable WFPSs** or **Dispatchable WFPSs**										
The minimum time to connect/reconnect the **Controllable WFPS** or **Dispatchable WFPS** (or part thereof) to the **NI System** following a **Dispatch** instruction		OC2								
The minimum time to connect/reconnect the **Controllable WFPS** or **Dispatchable WFPS** (or part thereof) to the **NI System** automatically following a trip of the **Controllable WFPS** or **Dispatchable WFPS** (or part thereof) that does not cause damage to the **Controllable WFPS** or **Dispatchable WFPS** (or part thereof)		OC2								
The maximum rate at which Load can be increased following connection of the **Controllable WFPS** or **Dispatchable WFPS** (or part thereof) to the **NI System**		OC2								
The minimum fault level or voltage at the **Connection Point** below which the **Controllable WFPS** or **Dispatchable WFPS** cannot be connected		OC2								
Operating Reserve to Frequency change										-
Operating Reserve to **Frequency** change to be given in a tabular form, describing **Primary Operating Reserve, Secondary Operating Reserve, Tertiary Operating Reserve band 1**, **Tertiary Operating Reserve band 2** at different levels of **Load**, ranging from **Minimum Generation** to **Registered Capacity**	Table	OC3								
Governor Droop Characteristics										
Governor Droop										
Unit Control Options	%	OC3								
Maximum Droop										
Normal Droop	%	OC3								
Minimum Droop	%	OC3								
	%	OC3								

Part 2: **Availability**, **Technical Parameters** Data and other data required under SDC1

The following information is required daily by not later than **Gate Closure** to cover the next following **Trading Day** in relation to each **CDGU**, **Pumped Storage Plant Demand, Interconnector**, **Interconnector Units** (only in relation to paragraph 6 below), **Demand Side Unit**, **Aggregated Generating Unit** and/or **Controllable WFPS**. In so far as the **Availability** data is not so submitted, the data to have been submitted in respect of the last ~~**Trading Period**~~**Imbalance Settlement Period** of the current **Trading Day** will be deemed to have been resubmitted. Any further revisions to this data are required to be notified to the **TSO** when they become known.

1 **Availability**

Each **User** must notify the **TSO** by means of an **Availability Notice** of the **Availability** of each of its **CDGUs** (and in the case of a **CCGT Installation**, the **CCGT Modules** within it), **Pumped Storage Plant Demand, Interconnectors**, **Demand Side Units**, **Aggregated Generating Units** and/or **Controllable WFPS**.

The **Availability Notice** shall state the **Availability** of the relevant **CDGU** for each ~~**Trading Period**~~**Imbalance Settlement Period** in the following **Trading Day** (subject to revision under SDC1.4.5.1 (a)).

In addition, **Users** other than **Aggregators** and **Demand Side Unit Operators** must submit an **Additional Grid Code Availability Notice** under SDC1.4.2 by no later than **Gate Closure** each day. The information contained in an **Additional Grid Code Availability Notice** broadly relates to a **CDGU**'s different **Availabilities** depending on which fuel a **CDGU** is firing on (for a **CDGU** that is capable of firing on different fuels), the **Availability** of each **CCGT Module** within a **CCGT Installation** and to the various long-term constraints (such as fuel and emissions constraints) which can affect the **Availability** of a **CDGU**.

2. **Technical Parameters**

For each **CDGU**, **Controllable WFPS**, **Dispatchable WFPS**, **Demand Side Unit**, **Aggregated Generating Unit** and **Pumped Storage Plant Demand**, the **Technical Parameters** listed in the table set out in Appendix A to SDC1 and copied below. The factors applicable to a particular **Plant** are indicated with a tick.

Comment [A2]: This table is identical to the table at the end of SDC1. These have to be aligned. This is the only change required in this DRC.

Technical Parameter	**CDGU**				**Control WFPS**	**DSU**		**Agg. Gen**	**Pump Storage Demand**
	Thermal	**Hydr/ En Ltd**	**Disp. WFPS**	**Pump S Gen**	**-**	**Individual Demand Site**	**Aggregated Demand Sites**		**-**
Block Load Cold	✓	✓	✓	✓	✓				
Block Load Hot	✓								
Block Load Warm	✓								
Demand Side Unit Energy Profile						✓	✓		
Deload Break Point	✓	✓	✓	✓	✓				
De-Loading Rate 1	✓	✓	✓	✓	✓				
De-Loading Rate 2	✓	✓	✓	✓	✓				
Dwell Time 1	✓	✓	✓	✓	✓				
Dwell Time 2	✓	✓	✓	✓	✓				
Dwell Time 3	✓	✓	✓	✓	✓				
Dwell Time Trigger Point 1	✓	✓	✓	✓	✓				
Dwell Time Trigger Point 2	✓	✓	✓	✓	✓				
Dwell Time Trigger Point 3	✓	✓	✓	✓	✓				
End Point of Start Up Period	✓	✓	✓	✓	✓				
Energy Limit		✓							
Energy Limit Factor		✓							
Energy Limit Start		✓							
Energy Limit Stop		✓							
Forecast Minimum Output Profile				✓					✓
Forecast Minimum	✓	✓	✓	✓		✓	✓		

Technical Parameter	CDGU				Control WFPS	DSU		Agg. Gen	Pump Storage Demand
	Thermal	Hydr/ En Ltd	Disp. WFPS	Pump S Gen	-	Individual Demand Site	Aggregated Demand Sites		-
Generation Profile									
Initial Demand Side Unit Response Time						✓	✓		
Load Up Break Point Cold (1)	✓	✓	✓	✓	✓				
Load Up Break Point Cold (2)	✓	✓	✓	✓	✓				
Load Up Break Point Hot (1)	✓								
Load Up Break Point Hot (2)	✓								
Load Up Break Point Warm (1)	✓								
Load Up Break Point Warm (2)	✓								
Loading Rate Cold (1)	✓	✓	✓	✓	✓				
Loading Rate Cold (2)	✓	✓	✓	✓	✓				
Loading Rate Cold (3)	✓	✓	✓	✓	✓				
Loading Rate Hot (1)	✓								
Loading Rate Hot (2)	✓								
Loading Rate Hot (3)	✓								
Loading Rate Warm (1)	✓								
Loading Rate Warm (2)	✓								
Loading Rate Warm (3)	✓								
Max Ramp Down Rate (shall be a number greater than zero)						✓	✓		
Max Ramp Up Rate (shall be a number greater than zero)						✓	✓		
Maximum Down Time						✓	✓		
Maximum Generation / Registered Capacity	✓	✓	✓	✓	✓				
Maximum On Time	✓	✓	✓	✓	✓				
Maximum Storage Capacity				✓					
Minimum Down Time						✓	✓		
Minimum Generation	✓	✓	✓	✓	✓				
Minimum Off Time	✓	✓	✓	✓	✓				
Minimum On Time	✓	✓	✓	✓	✓				
Minimum Storage Capacity				✓					✓✓
(Other relevant technical parameters)	✓	✓	✓	✓	✓			✓	
Pumping capacity				✓					✓
Ramp Down Break Point 1	✓	✓	✓	✓	✓			✓	
Ramp Down Break Point 2	✓	✓	✓	✓	✓			✓	
Ramp Down Break Point 3	✓	✓	✓	✓	✓			✓	
Ramp Down Break Point 4	✓	✓	✓	✓	✓			✓	

Technical Parameter	CDGU				Control WFPS	DSU		Agg. Gen	Pump Storage Demand
	Thermal	Hydr/ En Ltd	Disp. WFPS	Pump S Gen	-	Individual Demand Site	Aggregated Demand Sites		-
Ramp Down Rate 1	✓	✓	✓	✓	✓			✓	
Ramp Down Rate 2	✓	✓	✓	✓	✓			✓	
Ramp Down Rate 3		✓	✓	✓	✓			✓	
Ramp Down Rate 4	✓	✓	✓	✓	✓			✓	
Ramp Down Rate 5	✓	✓	✓	✓	✓			✓	
Ramp Up Break Point 1	✓	✓	✓	✓	✓			✓	
Ramp Up Break Point 2	✓	✓	✓	✓	✓			✓	
Ramp Up Break Point 3	✓	✓	✓	✓	✓			✓	
Ramp Up Break Point 4	✓	✓	✓	✓	✓			✓	
Ramp Up Rate 1	✓	✓	✓	✓	✓			✓	
Ramp Up Rate 2	✓	✓	✓	✓	✓			✓	
Ramp Up Rate 3	✓	✓	✓	✓	✓			✓	
Ramp Up Rate 4	✓	✓	✓	✓	✓			✓	
Ramp Up Rate 5	✓	✓	✓	✓	✓			✓	
Short Term Maximisation Capability	✓	✓	✓	✓	✓				
Soak Time Cold (1)	✓	✓	✓	✓	✓				
Soak Time Cold (2)	✓	✓	✓	✓	✓				
Soak Time Hot (1)	✓								
Soak Time Hot (2)	✓								
Soak Time Trigger Point Cold (1)	✓	✓	✓	✓	✓				
Soak Time Trigger Point Cold (2)	✓	✓	✓	✓	✓				
Soak Time Trigger Point Hot (1)	✓								
Soak Time Trigger Point Hot (2)	✓								
Soak Time Trigger Point Warm (1)	✓								
Soak Time Trigger Point Warm (2)	✓								
Soak Time Warm (1)	✓								
Soak Time Warm (2)	✓								
Synchronous Start-Up Time Cold	✓	✓	✓	✓	✓				
Synchronous Start-Up Time Hot	✓	✓	✓	✓	✓				
Synchronous Start-Up Time Warm	✓								
Target Reservoir Level Percentage				✓					✓
Start of Restricted Range 1	✓	✓	✓	✓	✓				
End of Restricted Range 1	✓	✓	✓	✓	✓				
Start of Restricted Range 2	✓	✓	✓	✓	✓				
End of Restricted Range 2	✓	✓	✓	✓	✓				

Users should also refer to SDC1.4.5.2 for the submission of revised **Technical Parameters** data.

3. **Additional Grid Code Characteristics**

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

1. Individual **CCGT Module** data equivalent to the data required for a **CCGT Installation**. It shall also show any revisions to the **Technical Parameters** for each of the **CCGT Modules** within it.

2. In the case of a **CDGU** capable of firing on different fuels, an **Additional Grid Code Characteristics Notice** in respect of any additional fuel for the **CDGU**, each containing the information set out in the **Technical Parameters** for each fuel and each marked clearly to indicate to which fuel it applies.

3. In the case of **Interconnector Owners**, **Interconnector** data, including but not limited to the **Availability** of **Interconnector Filters**.

4. In relation to each **Demand Side Unit**, the **Demand Profile** and the **Initial Demand Reduction Time**.

5. Where there is a **System Support Services Agreement** in place, the **System Support Services** which are **Available**.

6. The parameters listed in the table in Part 2 of Appendix A to SDC 1 and copied below, where relevant to a **User**.

7. In the case of Kilroot **Power Station** and Ballylumford **Power Station**, which configuration referred to in PC.A3.3.12 the **Power Station** is operating at for each ~~**Trading Period**~~**Imbalance Settlement Period**.

The table contained in Part 2 of Appendix A to SDC1 and referred to at paragraph 6 above is copied below:

Variable	**Applies to**
Time from initiation of a start to achieving **Dispatched Load**	**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**
Two shifting limitation (limitation on the number of **Start-ups** per **Trading Day**)	All **CDGUs**, except **Aggregated Generating Units**
The **MW** and **Mvar** capability limits within which the **CDGU** is able to operate as shown in the relevant **Generator Performance Chart**	All **CDGUs**, except **Aggregated Generating Units**
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**	All **CDGUs**, except **Aggregated Generating**

Variable	Applies to
Fuel per 24 hour period	**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**

Users should also refer to SDC1.4.5.2 for the submission of revised **Additional Grid Code Characteristics** data.

4. Reserve capability

Each **Generator** and **Generator Aggregator** shall submit reserve capability data in accordance with SDC1.4.4.3 and, in the case of **PPA Generation**, Appendix B to SDC1.

5. **Other Relevant Data**

For each **Plant** which has been declared **Available** in an **Availability Notice** (and, in the case of a **CCGT Installation**, **CCGT Modules** within):

(i) any newly arisen special factors which in the reasonable opinion of the **User** may have a material effect on the likely **Output** or **Demand Reduction** of such **Plant** (and, in the case of a **CCGT Installation**, **CCGT Modules** therein) or, in the case of an **Interconnector**, the **Availability** of the **Interconnector Filters**; and

(ii) any temporary changes, and their likely duration, to the Registered Data of such **Plant** (and, in the case of a **CCGT Installation**, **CCGT Modules** therein) (other than those already notified under the foregoing provisions of this Part II of Schedule 2).

6. **Commercial Offer Data**

Each **Generator**, **Pumped Storage Generator** (in respect of **Pumped Storage Plant Demand**), **Interconnector User** (in respect of an **Interconnector Unit**), **Demand Side Unit Operator** and **Generator Aggregator** shall submit **Commercial Offer Data** to the **TSO** (either directly or by means of an **Intermediary**) by **Gate Closure** for the following **Trading Day** in accordance with the **TSC**. Specific requirements for **Energy Limited Generating Units** and **Pumped Storage Plants** are listed in SDC1.4.4.5.

SCHEDULE 3

DATA REGISTRATION CODE

GENERATING UNIT/POWER STATION EQUIPMENT/INTERCONNECTOR OUTAGES

Power Station/Interconnector name .....
Generating Unit number .....
Registered Capacity .....

PART 1 - GENERATING PLANT/POWER STATION EQUIPMENT/INTERCONNECTOR OUTAGE PROGRAMMES

CDGU (AND/OR CCGT MODULE, AS PROVIDED IN OC2)/ CONTROLLABLE WFPS/ DISPATCHABLE WFPS/ POWER STATION EQUIPMENT/ INTERCONNECTOR OUTAGE PROGRAMMES	UNITS	TIME COVERED	UPDATE TIME	DATA CAT.
(**Note:** References to **CCGT Installations** include **CCGT Modules** as provided in OC2) Indicative Term Operational Planning: Planning for years 4 to 7 ahead				
Suggested **Indicative Outage Programme** containing:		Year 7	By end March	OC2
(i) identity of the **CDGUs** (or, in the case of a **CCGT Installation**, **CCGT Module(s)** therein), **Controllable WFPSs, Dispatchable WFPS** (or **Generating Unit(s)** therein) **Power Station Equipment** and/or **Interconnector** concerned;				
(ii) **MW** concerned (i.e. which will not be **Available** as a result of the **Outage** and that which will still be **Available**);	**MW**			
(iii) duration of **Outage**;	weeks			
(iv) preferred **Start Date** and **Start Time**;	date/ time			
(v) whether **Flexible** or **Inflexible**;				
(vi) if **Flexible**:				
(a) period by which **Outage** may be deferred;	days			
(b) period by which **Outage** may be advanced; (vii) if the **Outage** is required to enable the **Generator** or **Interconnector Owner** to comply with statutory obligations and, in such case, the latest date by which the **Outage** must be taken.	days			
(**Note:** References to **CCGT Installations** include **CCGT Modules** as provided in OC2) Long Term Operational Planning: Planning for years 2 & 3 ahead Suggested **Provisional Outage Programme** containing: (i) identity of the **CDGUs** (or, in the case of a **CCGT Installation**, **CCGT Module(s)** therein), **Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) **Power Station Equipment** and/or **Interconnector** concerned; (ii) **MW** concerned (i.e. which will not be **Available** as a result of the **Outage** and that which will still be **Available**); (iii) duration of **Outage**; (iv) preferred **Start Date** and **Start Time**;	 **MW** weeks date/ time	 Year 3	 By end March	 OC2

CDGU (AND/OR CCGT MODULE, AS PROVIDED IN OC2)/ CONTROLLABLE WFPS/ DISPATCHABLE WFPS/ POWER STATION EQUIPMENT/ INTERCONNECTOR OUTAGE PROGRAMMES	UNITS	TIME COVERED	UPDATE TIME	DATA CAT.
(v) whether **Flexible** or **Inflexible**;				
(vi) if **Flexible**:				
(a) period by which **Outage** may be deferred;	days			
(b) period by which **Outage** may be advanced;	days			
(vii) if the **Outage** is required to enable the **Generator** or **Interconnector Owner** to comply with statutory obligations and, in such case, the latest date by which the **Outage** must be taken.				
(The **TSO's** response as detailed in OC2		Year 3	By end Sept.	OC2)
(**Generators'** responses to changes suggested by the **TSO** and resolution of any disputes as set out in OC2		Year 3	By end Oct.	OC2)
Up-dated suggested **Provisional Outage Programme** containing:		Year 2	By end March	OC2
(i) identity of the **CDGUs** (or, in the case of a **CCGT Installation**, **CCGT Module(s)** therein),**Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) **Power Station Equipment** and/or **Interconnector** concerned;				
(ii) **MW** concerned (i.e. which will not be **Available** as a result of the **Outage** and that which will still be **Available**);	**MW**			
(iii) duration of **Outage**;	weeks			
(iv) preferred **Start Date** and **Start Time**;	date/ time			
(v) whether **Flexible** or **Inflexible**;				
(vi) if **Flexible**:				
(a) period by which **Outage** may be deferred;	days			
(b) period by which **Outage** may be advanced.	days			
(vii) if the **Outage** is required to enable the **Generator** or **Interconnector Owner** to comply with statutory obligations and, in such case, the latest date by which the **Outage** must be taken.				
(the **TSO's** response as detailed in OC2		Year 2	By end Sept.	OC2)
(**Generators'** and **Interconnector Owner's** responses to the **TSO's** changes and resolution of any disputes as set out in OC2		Year 2	By end Oct	OC2)
Medium Term Operational Planning: Planning for Year 1 ahead				
Suggested **Final Outage Programme** containing:		Year 1	By end March	OC2
(i) identity of the **CDGUs** (or, in the case of a **CCGT Installation**, **CCGT Module(s)** therein), **Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) **Power Station Equipment** and/or **Interconnector** concerned;	**MW**			
(ii) **MW** concerned (i.e. which will not be **Available** as a result of the **Outage** and that which will still be **Available**);				
(iii) duration of **Outage**;	weeks			
(iv) preferred **Start Date** and **Start Time**;	date/ time			

CDGU (AND/OR CCGT MODULE, AS PROVIDED IN OC2)/ CONTROLLABLE WFPS/ DISPATCHABLE WFPS/ POWER STATION EQUIPMENT/ INTERCONNECTOR OUTAGE PROGRAMMES	UNITS	TIME COVERED	UPDATE TIME	DATA CAT.
(v) whether **Flexible** or **Inflexible**;				
(vi) if **Flexible**:				
(a) period by which **Outage** may be deferred;	days			
(b) period by which **Outage** may be advanced.	days			
(vii) if the **Outage** is required to enable the **Generator** or **Interconnector Owner** to comply with statutory obligations and, in such case, the latest date by which the **Outage** must be taken.				
(the **TSO's** response as detailed in OC2			By end June	OC2)
(**Generators'** or **Interconnector Owners'** responses to the **TSO's** changes and resolution of any disputes as set out in OC2			By end July	OC2)
(The **TSO** to notify **Generators** of any further changes required as detailed in OC2			By end Sept.	OC2)
Short Term Operational Planning : Planning for Year 0				
During Year 0, OC2 requires notices to be given in respect of the following (the details of which can be found in OC2):	-	Year 0	-	OC2
(i) movements of **Flexible Planned Outages** - on not less than 7 days' notice by the **TSO**;				
(ii) amendments to **Planned Outages** - request to be made by the **TSO** by notice in writing;				
(iii) substitution of a different **CDGU** and/or **Generating Unit(s)** within a **Controllable WFPS**, **Dispatchable WFPS** for an **Outage** - request to be made by the **Generator** by notice in writing;				
(iv) **Short Term Planned Maintenance Outages** - to be requested by **Generators** or **Interconnector Owners** by not less than 7 days' notice in writing, containing the following information:				
(a) identity of the **CDGU(s),** (or, in the case of a **CCGT Installation**, **CCGT Module(s)** therein), **Controllable WFPS(s)** or **Dispatchable WFPS(s)** (or **Generating Unit(s)** therein) **Power Station Equipment** and/or **Interconnector** concerned;				
(b) **MW** concerned (i.e. **MW** which would not be **Available** as a result of the **Outage** and that which would still be **Available**);	**MW**			
(c) duration of **Outage** (not exceeding 72 hours);	hours			
(d) preferred **Start Date** & **Start Time**;	date/time			
(e) if the **Outage** is required for maintaining the brush gear of a **CDGU** (or, in the case of a **CCGT Installation**, **CCGT Module(s)** therein) and/or a **Controllable WFPS** or **Dispatchable WFPS** (or **Generating Unit(s)** therein)				
(The **TSO** will respond to a request for a **STPMO** in accordance with OC2)				
(v) **Notified Unplanned Outages** - to be notified by a **Generator** as early as possible;				OC2
(vi) **24 Hour Recall** (in relation to a **Notified Unplanned Outage**) to be requested by the **TSO** and, if agreed to by the				OC2

CDGU (AND/OR CCGT MODULE, AS PROVIDED IN OC2)/ CONTROLLABLE WFPS/ DISPATCHABLE WFPS/ POWER STATION EQUIPMENT/ INTERCONNECTOR OUTAGE PROGRAMMES	UNITS	TIME COVERED	UPDATE TIME	DATA CAT.
Generator or **Interconnector Owner**, acknowledged by the **Generator** or **Interconnector Owner** by notice in writing;	date & time			OC2
(vii) **Forced Outages -** to be notified by the **Generator** or **Interconnector Owner** in writing, not later than 48 hours after the event, such notice to include the **Generator's** best estimate of the date and time by which the **CDGU/Controllable WFPS/Dispatchable WFPS/Power Station Equipment/Interconnector** is likely to have been repaired and restored to its full level of **Availability**;				
(viii) Release of **CDGUs/Controllable WFPS/Dispatchable WFPS/Power Station Equipment/Interconnector** for **Outage** – the **TSO**'s express formal consent required (see Schedule 8);				OC2
(ix) Return to service from **Outage** to be notified by the **Generator** or **Interconnector Owner** to the **TSO**;				OC2
(x) Overruns of **Outages** to be notified by the **Generator** or **Interconnector Owner** to the **TSO** immediately the **Generator** or **Interconnector Owner** becomes aware of the situation in writing, such notice to include:				OC2
(a) the reason for the delay; and				
(b) the **Generator's** or **Interconnector Owner's** best estimate of the date and time of return to service.	date & time			

Part 2: **Independent Generating Plant Outages**

Each **Generator** with **Independent Generating Plant** shall be obliged to submit such information in relation to that **Independent Generating Plant** for the purposes of **Operation Planning** as the **TSO** may reasonably require pursuant to OC2.4.1**.**

SCHEDULE 4

DATA REGISTRATION CODE

GENERATOR OUTPUT/LOADING DATA AND ENERGY SALES DATA

DATA DESCRIPTION	UNITS	TIMESCALE COVERED	UPDATE TIME	DATA CATEGORY
GENERATION OUTPUT				
Where requested by the **TSO**, the **Generator** at each **Power Station** with a **Registered Capacity** of 2**MW**, but not exceeding 5**MW** must provide to the **TSO** a half-hourly printout of metered output in respect of such **Power Station** for: (i) **Active Power**; and (ii) **Reactive Power**	**MW** **MVAr**	The preceding **Schedule Day**	Daily at 10.00	OC1
LOADING PROFILES				
Where requested by the **TSO**, each **Generator** with **Independent Generating Plant** with a **Registered Capacity** of 2**MW** and above and in respect of each of its **CDGUs** other than **PPA CDGUs** in relation to **Predicted Output** shall provide the **TSO** with estimated **Loading** profiles for such Units for a period of 3 years ahead, beginning in week 1 of the following year.	**MW**	Years 1-3 ahead	By end of week 45	OC1
Where requested by the **TSO,** each **Generator** with **Independent Generating Plant** other than **WFPSs** with a **Registered Capacity** of 2**MW** and above shall submit an estimate of **Loading** profiles including the half hourly output.	**MW**	Following **Schedule Day** (Following 3/2 **Schedule Days** where given as Friday/Saturday and for longer periods at holiday times)	Daily at 10.00	OC1
Where requested by the **TSO**, each **Generator** with **Independent Generating Plant** that is a **WFPS** with a **Registered Capacity** of **2MW** and above shall submit to the **TSO** an estimate of **Loading** profiles	**MW**	Following **Schedule Week**	By 06.00 on Friday	OC1
ENERGY SALES				
Each **Supplier** must provide to the **TSO** in writing details of its anticipated aggregate annual sales of **Energy** in respect of each of the three following years in accordance with OC1.4.1.1.	**GW/h**	Years 1 - 3 ahead	By end of week 48	OC1

SCHEDULE 5

DATA REGISTRATION CODE

USERS SYSTEM DATA

The data listed in this Schedule 5 is required to be provided by:
(i) a **User** (and by proposed **Users** applying for a **Connection Agreement**) in connection with applications for new or modified arrangements for connections to or use of the **NI System**;
(ii) a **User** who has requested a **Statement of System Capacity** as referred to in PC5.2;
(iii) a **User** at the time it notifies the **TSO** of any significant changes to its **System** or operating regime; and
(iv) the categories of **User** specified in PC6.3.3 on a routine annual basis by the end of calendar week 52 of each year.

DATA DESCRIPTION	UNITS	DATA CATEGORY
User System layout		
Single line diagrams of existing and proposed arrangements of main **Plant** and **Apparatus** including:		**SPD/DPD**
(i) busbar layouts (ii) electrical circuitry (i.e. lines, cables, transformers, switchgear etc) (iii) phasing arrangements (iv) earthing arrangements (v) switching facilities (vi) operating voltages (vii) numbering and nomenclature		
Reactive Compensation Equipment		
For all independently switched reactive compensation equipment on the **User's System** at 11kV and above, other than power factor correction equipment associated directly with the **User's Plant** and **Apparatus**, the following information is required:		
(i) type of equipment		**DPD**
(ii) capacitive and/or inductive rating or its operating range in **MVAr**	**Mvar**	**DPD**
(iii) details of any automatic control logic to enable operating characteristics to be determined		**DPD**
(iv) the point of connection to the **User's System** in terms of electrical location and voltage		**DPD**
Short Circuit Infeed to the **NI System**		
The total short circuit infeeds calculated in accordance with good industry practice into the **NI System** from the **User System** at the **Connection Point** as follows:		
(i) maximum 3-phase short circuit infeed including infeeds from any **Generating Plant** forming part of the **User's System**	MVA	**SPD/DPD**
(ii) additional maximum 3-phase short circuit infeed from induction motors via the **User's System**	MVA	**DPD**
(iii) minimum zero sequence impedance of the **User's System** at the **Connection Point**	% on 100	**SPD/DPD**
Lumped System Susceptance		
Details of equivalent lumped network susceptance of the **User's System** at nominal **Frequency** back to the connection with the **NI System**. This should include any shunt reactors which are an integrated part of a cable system and which are not normally in or out of service independently of the cable (i.e. they are regarded as part of the cable). It should not include:	% on 100	**DPD**
(i) independent reactive compensation plant connected to the **User's System**; or		
(ii) any susceptance of the **User's System** inherent in the **Active** and **Reactive Power Demand** data given under PC.A.3.2		

Interconnection Impedance		
For **User** interconnections which operate in parallel with the **NI System** and equivalent single impedance (resistance, reactance and shunt susceptance) of the parallel **User System**. If the impedance is, in the reasonable opinion of the **TSO**, low, the more detailed information in the equivalent or active part of the parallel **User System** may be requested.	% on 100	**DPD**
Demand Transfer Capacity		
Where the same **Demand** may be supplied from alternative **NI System** points of supply, the proportion of **Demand** normally fed from each **NI System** supply point and the arrangements (manual or automatic) for transfer under planned /fault **Outage** conditions shall be provided. Where the same **Demand** is supplied from different **User** supply points, then this information should be provided to all parties.		**DPD**
System Data		
Each **User** with an existing or proposed **User System** connected at **High Voltage** shall provide the following details relating to that **High Voltage System:**		
(i) circuit parameters for all circuits:		
rated voltage	kV	**DPD**
operating voltage	kV	**DPD**
positive phase sequence reactance	% on 100	**DPD**
positive phase sequence resistance	% on 100	**DPD**
positive phase sequence susceptance	% on 100	**DPD**
zero phase sequence reactance	% on 100	**DPD**
zero phase sequence resistance	% on 100	**DPD**
zero phase sequence susceptance	% on 100	**DPD**
(ii) Interconnecting transformers between the **User's** higher voltage system and the **User's** primary voltage system:		
rated MVA	MVA	**DPD**
voltage ratio		**DPD**
winding arrangement		**DPD**
positive sequence reactance (max, min, and nominal tap)	% on MVA	**DPD**
positive sequence resistance (max, min, and nominal tap)	% on MVA	**DPD**
zero sequence reactance	% on MVA	**DPD**
tap changer range	+% to -%	**DPD**
tap changer step size	%	**DPD**
tap changer type: on **Load** or off circuit		**DPD**
(iii) Switchgear, including circuit breakers, switch disconnectors and isolators on all circuits connected to the **Connection Point** including those at **Power Stations**:		
rated voltage	kV	**DPD**
operating voltage	kV	**DPD**
rated short circuit breaking current, 3-phase	kA	**DPD**
rated short-circuit breaking current, 1-phase	kV	**DPD**
rated load-breaking current, 3-phase	kA	**DPD**
DATA DESCRIPTION	UNITS	DATA CATEGORY

rated load-breaking current, 1-phase	kA	**DPD**
rated short-circuit marking current, 3-phase	kA	**DPD**
rated short-circuit making current, 1-phase	kA	**DPD**
Protection Data		
The following information relates only to **Protection** which can trip or intertrip or close any **Connection Point** circuit breaker or any the **TSO** circuit breaker:		
(i) a full description, including estimated settings, for all relays and **Protection** systems installed or to be installed on the **User's System**;		**DPD**
(ii) a full description of any auto-reclose facilities installed or to be installed on the **User's System**, including type and time delays;		**DPD**
(iii) a full description, including estimated settings, for all relays and **Protection** systems installed or to be installed on the **Generating Unit Generator Transformer,** station transformer and their associated connections:		**DPD**
(iv) for **Generating Units** having (or intended to have) a circuit breaker on the circuit leading to the **Generator Terminals,** at the same voltage, clearance times for electrical faults within the **Generating Unit** zone; and		**DPD**
(v) the most probable fault clearance time for electrical faults on the **User's System**	m/Sec	**DPD**
Earthing Arrangements		
Full details of the means of permanently connecting the **User System** to each, including impedance values.		**DPD**
Transient Overvoltage Assessment Data		
When requested by the **TSO**, each **User** is required to submit estimates of the surge impedance parameters present and forecast of its **User System** with respect to the **Connection Point** and to give details of the calculations carried out. The **TSO** may further request information on physical dimensions of electrical equipment and details of the specification of **Apparatus** directly connected to the **Connection Point** and its means of **Protection**.		**DPD**
User's System Demand (Active and **Reactive Power)**		
Forecast daily **Demand** profiles net of the output profile of all **Generating Plant** directly connected to the **User's System** in time marked half hours throughout the day as follows:		
(a) peak day on the **User's System**	**MW/Mvar**	**SPD/DPD**
(b) day of peak **Demand (Active Power)**	**MW**	**DPD**
(c) day of minimum **Demand (Active Power)**	**MW**	**DPD**
User Customer Demand Management Data		
The potential reduction in **Demand** available from the **User** in **MW** and **MVAr**, the notice required to put such reduction into effect, the maximum acceptable duration of the reduction in hours and the permissible number of reductions per annum.	**MW/Mvar** + text	**DPD**
Conversion Factor Data		
The figures described as "fixed unit load" and "unit load scalar" under the **TSC**, which are the figures submitted by a **Generator** or an **Intermediary** on its behalf pursuant to the "net output function" provisions of the **TSC**.		
Additional Conversion Factor Data		
For Kilroot and Ballylumford **Power Stations**, the different configurations at which the **Power Stations** may operate and which can affect the **Conversion Factors**, such configurations being submitted in the form set out at PC.A3.3.12.		

SCHEDULE 6

DATA REGISTRATION CODE
LOAD CHARACTERISTICS AT GRID SUPPLY POINTS

All data in this Schedule 6 is categorised as **Standard Planning Data (SPD)** and is required for existing and agreed future connections. This data is to be updated annually by the end of week 52 for each of the next 7 financial years.

DATA DESCRIPTION	UNITS	DATA FOR FUTURE YEARS						
		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
For all types of **Demand**								
(i) Type and electrical loading of equipment to be connected: number and size of motors; types of drive and control arrangements.								
(ii) The sensitivity of the **Demand** to variations in voltage and **Frequency** on the **NI System**.	**MW**/kV **Mvar**/kV **MW**/Hz **Mvar**/Hz							
(iii) The maximum harmonic content which the **User** would expect its **Demand** to impose on the **NI System**	%							
(iv) The average and maximum phase unbalance which the **User** would expect it's **Demand** to impose on the **NI System**.	%							
For Fluctuating **Loads** > 5 MVA								
(i) Details of the cyclic variation of **Demand** (**Active** and **Reactive Power**)								
(ii) The rates of change of **Demand** (**Active** and **Reactive Power**) both increasing and decreasing.								
(iii) The shortest repetitive time interval between fluctuations in **Demand** (**Active** and **Reactive Power**)								
(iv) The magnitude of the largest step changes in **Demand** (**Active** and **Reactive Power**) both increasing and decreasing.								
(v) Maximum energy demanded per half hour by the fluctuating **Load** cycle								
(vi) Steady state residual **Demand** (**Active Power**) occurring between **Demand** fluctuations								
For **User's** Abnormal **Loads**								
Details should be provided on any individual **Loads** which have characteristics differing from the normal typical range of **Loads** in the domestic, commercial or industrial fields. In particular, details on arc furnaces, rolling mills, traction installations etc. which are liable to cause flicker problems								

SCHEDULE 7

DATA REGISTRATION CODE

DEMAND CONTROL AND GENERAL DATA

PART 1 - DEMAND CONTROL DATA

DATA DESCRIPTION	UNITS	TIME COVERED	UPDATE TIME	DATA CAT.
Customer Demand Management Initiated by a **Supplier**				
A **Supplier** which enters into (or amends) an agreement or other arrangement with a **Customer** allowing **Customer Demand Management** must notify the **TSO** in writing in accordance with OC4.4.2.2 of its best estimate of the following (on an aggregated basis) when the aggregate of its possible **Customer Demand Management** pursuant to all such agreements or arrangements it has effected can equal or exceed 2**MW** at any point in time:		End of current year to 30th April and/or for following year commencing 1st May	By end of March	OC4
(i) the level of expected and possible **Demand Control**	**MW**			OC4
(ii) the circumstances in which the **Customer Demand Management** is expected to be and may be utilised				OC4
(iii) the expected duration of **Demand Control** and the maximum permitted				OC4
(iv) the expected and possible frequency of initiation				OC4
(v) the locations at which it is expected that **Demand Control** will be exercised				OC4
A **Supplier** must notify the **TSO** in writing on each occasion that any **Customer Demand Management** of which it has notified the **TSO** under OC4.4.2.1 and OC4.4.2.2**,** is planned to be instructed (or has been instructed) by that **Supplier** and which will in aggregate equal or exceed (or has equalled or exceeded) 2**MW** at any point in time other than following an instruction by the **TSO**. Such notification must be given in accordance with the timing requirements of OC4.4.2.4 and will contain:		The following **Schedule Day** (where the **Customer Demand Management** is planned sufficiently far in advance).		OC4
(a) the amount of **Customer Demand Management** planned to be instructed, or which had been instructed;	**MW**			OC4
(b) the length of time which the **Customer Demand Management** is anticipated to be in force and the time at which it is to commence, or commenced; and	hours/minutes			OC4
(c) the location on the **Total System** at which the **Customer Demand Management** is to be, or has been, implemented.	location			OC4
The **Supplier** must, in addition, notify the **Customer Demand Management** actually achieved (to the extent it differs from the data already supplied) within 2 weeks of initiation, including **MW** profiles on a half hourly basis and the amount of **Demand** reduction achieved.	**MW**			OC4

DATA DESCRIPTION		UNITS	TIME COVERED	UPDATE TIME	DATA CAT.
Where a **Supplier** wishes to utilise voltage reduction as **Customer Demand Management** on the **User System** of any of its **Customers,** the **Supplier** must notify the **TSO** of such details as the **TSO** reasonably requires as far in advance as reasonably practicable.					OC4
Customer Demand Management Initiated by the **TSO**					
Where a **Supplier** wishes to make arrangements with the **TSO** whereby the **TSO** would be given the ability to use **Customer Demand Management** for the purposes of **Demand Control**, it must notify the **TSO** in writing of the following:			Year commencing 1st May	By end of March each year	OC4
(i)	the amount of the **Demand Control** reduction available;	**MW**			OC4
(ii)	how often it can be used;				OC4
(iii)	the length of time that **Demand Control** can be used;	hours/mins			OC4
(iv)	the notice required to be given to the **Supplier** by the **TSO;**	hours/mins			OC4
(v)	any situations under which the available **Customer Demand Management** may be varied or cannot be instructed by the **TSO**;				OC4
(vi)	the duration of the arrangement with the **Customer**; and				OC4
(vii)	any other information which the **Supplier** reasonably considers would be relevant to the **TSO.**				OC4

1. All forecast maximum **Demand** levels submitted to the **TSO** by **Users** shall be on the basis of **ACS Conditions**.

2. All **Users** with **Demand** are obliged to provide such additional forecast **Demand** data as the **TSO** may reasonably request to enable the **TSO** to estimate the diversified total **Demand** at various times throughout the year.

Part 2 - General Data

The **TSO** may, by notice in writing, require **Users,** pursuant to OC8.4.2 to supply to it information of a technical (but not commercial) nature to enable the **TSO** to fulfil its obligations relating to the operation of the **NI System** (examples of the type of information which may be required are set out in Appendix 2 to OC8 but that is not an exhaustive list).

SCHEDULE 8

DATA REGISTRATION CODE

DATA SUPPLIED BY THE TSO TO USERS

GRID CODE PROVISION	DATA DESCRIPTION
	Site Responsibility Schedules/Ownership Diagrams
CC9.1.3/CC9.1.4	The **TSO** shall, in respect of each connection to the **NI System** for which a **Connection Agreement** is required and those covered by Regulation 26 and Parts 1 and 2 of Schedule 3 of the Electricity Supply Regulations (NI) 1991, prepare: (i) a **Site Responsibility Schedule**; and (ii) an **Ownership Diagram**.
	Operational Planning
OC2.6.2(c)(i)	The **TSO** shall, by the end of September in each calendar year, provide each **Generator** in writing with a **Provisional Outage Programme** showing the **CDGUs**, **Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) and/or **Power Station Equipment** it may potentially withdraw from service during each week of **Years 2** and **3** for a **Planned Outage.**
OC2.6.3(c)(i)/ OC2.6.3(f)(i)	The **TSO** shall, by the end of June in **Year 1,** provide each **Generator** in writing with a draft **Final Outage Programme** showing the **CDGUs**, **Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) and/or **Power Station Equipment** it may potentially withdraw from service during each week of Year 1 for a **Planned Outage** and shall, by the end of September, notify any further changes by the issue of a **Final Outage Programme.**
OC2.6.7.3	The **TSO's** express formal permission must be obtained by a **Generator** prior to withdrawing a **CDGU**, **Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) or item of **Power Station Equipment** for a **Planned Outage,** which permission shall specify: (i) the identity of the **CDGU**, **Controllable WFPSs** or **Dispatchable WFPSs** (or **Generating Unit(s)** therein) and/or **Power Station Equipment** and **MW** concerned; (ii) the duration of the **Outage**; and (iii) the **Start Date** and **Start Time.**
0C2.7.1	If there is a deficit indicated in any week, the **TSO** and the **Other TSO** shall jointly issue a System Capacity Shortfall Warning.
OC2.7.2	If there is a deficit indicated in any day, the **TSO** and the **Other TSO** shall jointly issue a System Capacity Shortfall Warning.
OC2.8.2	The **TSO** will, by the end of September in each calendar year, notify each **Generator** in writing of those aspects of the draft **NI System Outage** plan which may affect such **Generator** operationally, including proposed start dates and end dates of relevant **NI System Outages**. The **TSO** will also inform each **Large Demand Customer** with a **Demand** greater than 10 **MW** of the aspects of the plan which may affect it.
OC2.8.5(a)(ii)	The **TSO** will, by 11.00 hours each Thursday during the **Programming Phase,** notify each **Generator** in writing of those aspects of the **NI System Outage** plan which may affect it operationally, including proposed start dates and end dates of relevant **NI System Outages**. The **TSO** will also inform each **Large Demand Customer** with a **Demand** greater than 10 **MW** of the aspects of the plan which may affect it.
	Indicative Operations Schedule
SDC1.4.8.9	The **TSO** will issue the **Indicative Operation Schedule** each day to each **Generator** with **CDGUs, Controllable WFPSs** or **Dispatchable WFPSs**, each **Pumped Storage Generator** with respect to their **Pumped Storage Plant Demand**, each **Interconnector Owner** with regard to their **Interconnectors**, each **Demand Side Unit Operator** in relation to their **Demand Side Units**, provided that all the necessary information from these **Users** was made available by not later than **Gate Closure.**
	Initial Planning Data

GRID CODE PROVISION	DATA DESCRIPTION
PC6.4.1	Initial planning data to be submitted on the TSO website including the following information: (i) **User's** name (legal and project name); (ii) **User's** contact details; (iii) **User's** date of completed application; (iv) Status of application, for example in progress or issued; (v) Specific location, including grid co-ordinates; and (vi) The capacity applied for the project; and (vii) Interacting group where applicable.

DATA TO BE SUPPLIED BY THE **TSO** IN CONNECTION WITH APPLICATIONS FOR CONNECTION TO THE **NI SYSTEM** OR USE OF THE **DISTRIBUTION SYSTEM** AND **ALL ISLAND TRANSMISSION NETWORKS**.

1. The **TSO Licence** requires the **TSO** to produce a **Transmission System Statement** (save where the **TSO** is relieved of such obligations by the **Authority)** which provides a means by which **Users** and intending **Users** of the **Transmission System** are able to assess opportunities for connecting to and using the **Transmission System**. The **TSO's** obligations in this respect are described more fully in PC5.

2. The **TO Licence** requires the **DNO** to produce a **Distribution System Statement** (save where the **DNO** is relieved of such obligations by the **Authority)** which provides a means by which **Users** and intending **Users** of the **Distribution System** are able to assess opportunities for connecting to and using the **Distribution System**. The **DNO's** obligations in this respect are described more fully in PC5.

3. The **TSO Licence** also imposes upon the **TSO** certain obligations to offer to enter into an agreement for a new or modified connection to the **NI System** or for use of the **Distribution System** and **All Island Transmission Networks**. In the case of a new or modified connection, the intending **User's Plant** and **Apparatus** must comply with the requirements of the CC. Where a **User** or intending **User** requires more detailed information concerning the requirements for a particular connection, that **User** may obtain such information pursuant to CC6.1, CC.S1.1 and CC.S2.1**.**