CONFIDENTIAL

MODIFICATION RECOMMENDATION FORM

RECOMMENDATION TO CER BY EIRGRID OF MODIFICATION TO GRID CODE.

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ABSTRACT / TITLE OF MODIFICATION	Interconnector	
MODIFICATION NUMBER	MPID 211	
RECOMMENDED AT GCRP MEETING NUMBER	27	
GRID CODE SECTION(S) AFFECTED BY PROPOSAL: **PLANNING CODE**	• PC.6.4.1 • PC.6.7 • PC.7.3 • PC.A2.2.2 • PC.A2.3 • PC.A2.3.1	• PC.A2.3.2 • PC.A2.3.3 • PC.A5 • PC.A5.1 (New) • PC.A6 (Adjustment from PC.A5, New)
CONNECTION CONDITIONS	• CC.7.5.9.2(New) • CC.7.5.9.3(New) • CC.7.5.9.4(New) • CC.12.2 (w)	
OPERATING CODE 2 – OPERATIONAL PLANNING	• OC2.1 • OC2.2 (a,b) • OC2.3 (b) – & adjustment of letters • OC2.4.1 • OC2.4.2 • OC2.4.3 • OC2.4.4 • OC2.4.5 • OC2.4.6 • OC2.4.7 • OC2.4.8 • OC2.4.9 • OC2.4.10	• OC2.5 • OC2.5.2.1 • OC2.6.1 • OC2.6.2.2 • OC2.6.2.3 • OC2.63 • OC2.6.3.1 • OC2.6.3.2 • OC2.6.3.3 • OC2.6.3.4 • OC2.6.3.5 • OC2.7.1 • OC2.7.2
OPERATING CODE 7 – INFORMATION EXCHANGE	• OC7.1.1.2 • OC7.1.3.1 • OC7.1.11 • OC7.2.3.1 • OC7.2.4.6(New section) • OC7.2.4.6.1(New) • OC7.2.4.6.2(New)	• OC7.2.4.6.3(New) • OC7.2.4.6.4(New) • OC7.2.6 (New title) • OC7.2.6.1.1 (new numbering) • OC7.2.6.1.2 • OC7.2.6.1.3 • OC7.2.6.1.4 • OC7.2.6.2 (New)
OPERATING CODE 8 – OPERATIONAL TESTING	• OC8.2.3 • OC8.3 • OC8.6.2.5	• OC8.6.3 • OC8.7.3
OPERATING CODE 9 – EMERGENCY CONTROL AND POWER SYSTEM RESTORATION	• OC9.3	
OPERATING CODE 10 – MONITORING, TESTING AND INVESTIGATION	• OC10.2.2 • OC10.3 • OC10.7.1 • OC10.7.1.1 • OC10.7.1.2 • OC10.7.1.3 • OC10.7.1.4 • OC10.7.1.5 • OC10.7.1.6 • OC10.7.1.7 • OC10.7.2	• OC10.7.2.1 • OC10.7.2.2 • OC10.7.2.3 • OC10.7.2.4 • OC10.7.3 • OC10.7.3.1 • OC10.7.3.2 • OC10.7.3.3 • OC10.7.3.4

OPERATING CODE 11 – SAFETY COORDINATION	• OC11.3	
GLOSSARY	• Availability (existing) • Black Start Capability (existing) • Black Start Station (existing) • Committed Outage Programme (existing) • Dispatch (existing) • Emergency Instruction (existing) • Forced Outage Probability (existing) • Indicative Outage Programme (existing) • Interconnector Filter (existing)	• Operating Reserve (existing) • Outage (existing) • Provisional Outage Programme (existing) • Registered Operating Characteristics (existing) • Reserve Characteristics (existing) • Simultaneous Tap Change (existing) • User System (existing)
GRID CODE VERSION :	**Version 3.5**	
MODIFICATION PROPOSAL DESCRIPTION ***(MUST CLEARLY STATE THE DESIRED AMENDMENT, ALL TEXT/FORMULA CHANGES TO THE GRID CODE. THE REQUIRED REASON FOR THE MODIFICATION MUST STATED. ATTACH ANY FURTHER INFORMATION IF NECESSARY.)***	For the following changes in the Grid Code • Rationale will be highlighted in italic formatting. • Text in blue is new text that has been reviewed & agreed by the Grid Code Review Panel. • Text in red and strike-through is text recommended for deletion.	
PC.6.4.1 *Inclusion of caveat that Committed Project Planning Data information may be shared by the TSO with the External TSO for the purpose of development of the Interconnector which is required.* *Insert new letter (e) paragraph with text highlighted in blue.*	(d) the **TSO** may disclose it to the **Other TSO** for the purposes of consideration of developments on the **Other Transmission System**~~.~~; and (e) the **TSO** may disclose it to the **External TSO** for the purposes of consideration of **Interconnector** developments with **the External System**.	
PC.6.7 *Inclusion of caveat that System Planning information may be shared by the TSO with the External TSO for the purpose of development of the Interconnector which is required.* *Insert new letter (f) with paragraph highlighted in blue.*	(e) to disclose it to the **Other TSO** so that it can meet its statutory and legal requirements for the **NI System**~~.~~; and (f) to disclose it to the **External TSO** as the case may be, so that it can meet its statutory and legal requirements for the **External System**.	

PC.7.3 *Inclusion of the size of the interconnector would determine the Voltage location*	The **Transmission System Voltage** level at which a **User's System** will be connected and the busbar configuration which a **User's System** uses will depend upon but shall not be limited to the following: The **Transmission System Voltage** level at which a **User's System** will be connected and the busbar configuration which a **User's System** uses will depend upon but shall not be limited to the following: (a) the size of the **Generation Units** and the number of **Generation Units** comprising the **User's System;** ~~(b) consistency with future development of the **Transmission System** or the **Other Transmission System**;~~ (b) the size and rating of the **Interconnector**; (c) consistency with future development of the **Transmission System** or the **Other Transmission System**; (d) proximity to the existing **Transmission System**; and (e) the cost of the proposed connection.
PC.A2.2.2: *Reference of Converter stations for Interconnectors within this section*	Provide a plan of the site (1:200 or 1:500) of the proposed facility, indicating the proposed location for a transmission station compound, location of the connection point, generators, transformers, converter stations, site buildings etc. The plan is to be submitted in hard copy format. A digitised format may be required and should also be provided if available.
PC.A2.3 *Adapt the title for Interconnectors*	**~~Generation~~ Licensing and Authorisation (For generation ~~applications only~~, Interconnector and other applications requested by the TSO)**
PC.A2.3.1 *Adapt paragraph for the Inclusion of Interconnector Licences*	**~~Generation~~ Licence:** Details of any generation or **Interconnector Licence** held by the applicant, or of any application for a generation or **Interconnector Licence**.
PCA2.3.2 *Adapt paragraph for the Inclusion of Interconnector Authorisation to (re)construct*	**Authorisation:** Details of any authorisation or application for authorisation to construct or reconstruct the generation station, **Interconnector** or other applications requested by the **TSO** for which the connection is being sought.
PCA2.3.3 *Any other supporting National / EU documentation*	**Exemptions and Policy Documents:** Any existing EU exemption applications, pending EU exemption applications, and/or any National or European policy decisions relevant for the application.

PC.A5: *New section inserted before Dispatch demand customers to maintain consistency throughout the Grid Code. This section will deal with the Interconnector Data Requirements.*	**Interconnector** Data Requirements All information for **Interconnector** connection applications shall include details of the **Transmission System Connection Point** and **External Transmission System** connection point. This shall include details listed in PC.A2.1, PC.A2.2 for each connection point. The minimum technical, design and operational criteria to be met by **Interconnectors** are specified in the **Connection Conditions**.

PC.A5.1

New section for Interconnector Operating Characteristics

Interconnector Operating Characteristics and Registered Data

The Minimum technical, design and operational criteria to be met by **Interconnectors** are specified in the **Connection Conditions**.

For an **Interconnector** the following shall be provided for specified temperature conditions:

(i) **Interconnector Registered Capacity**

- (a) **Interconnector Registered Import Capacity** for import to the **Transmission System** (MW) _____;
- (b) **Interconnector Registered Export Capacity** for export from the **Transmission System** (MW) _____.

Interconnector Registered Capacity figures (a) and (b) above shall include transmission power losses for the **Interconnector** and be considered **Registered Data.**

(ii) General Details

- (a) Single Line Diagram for each converter station;
- (b) Proposed **Transmission** connection point;
- (c) **Control Facility** location;
- (d) **Interconnector Operator** details.

(iii) Technology details

- (a) **Interconnector** technology type (i.e. current or voltage source technology);
- (b) DC Network Cable or Overhead line type & characteristics i.e. length, resistance (R), reactance (X), susceptance (B);
- (c) Rated DC Network Voltage/pole (kV);
- (d) Number of poles and pole arrangement;
- (e) Earthing / Return path arrangement;
- (f) Short circuit contribution (three phase to ground, single line to ground, phase to phase);
- (g) **Interconnector** losses (**MW** / **Mvar**);
  - i. Converter station;
  - ii. Line circuits;
  - iii. House load demand;
  - iv. Losses on de-block at minimum transfer;
  - v. Total losses at max import / export.
- (h) Overload capability including details of any limitations i.e. time, temperature;
- (i) House load supply.

	(iv) AC filter reactive compensation equipment parameters (a) Total number of AC filter banks; (b) Type of equipment (e.g. fixed or variable); (c) Single line diagram of filter arrangement and connections; (d) **Reactive Power** rating for each AC filter bank, capacitor bank, or operating range of each item or reactive compensation equipment, at rated voltage; (e) Performance chart (PQ), showing **Reactive Power** capability of the **Interconnector**, as a function of **Interconnector Registered Capacity** transfer. (v) **Interconnector** control model (a) The **TSO** requires suitable and accurate dynamic models for **Interconnectors** connected to, or applying for a connection to, the **Transmission System** in order to assess reliably the impact of the installation on the dynamic performance and security and stability of the **Power System**. Modelling requirements are processed on the identification by the applicant of the relevant PSS/E library model and the provision of the applicable data parameters in the appropriate application form; (b) Transfer function block diagram including parameters representation of the control systems of each **Interconnector** converter and **Interconnector** converter station, for both the rectifier and inverter modes. A suitable model would feature the electrical characteristics of the **Interconnector**, the output of these would include but is not limited by the following; converter firing angle, Valve winding voltage, DC Voltage, DC Current as the output variables; (c) Transfer function block diagram representation including parameters of the **Interconnector** transformer tap changer control systems, including time delays;

(d) Transfer function block diagram representation including parameters of AC filter and reactive compensation equipment control systems, including any time delays;

(e) Transfer function block diagram representation including parameters of any **Frequency** and/or load control systems;

(f) Transfer function block diagram representation including parameters of any small signal modulation controls such as power oscillation damping controls or sub-synchronous oscillation damping controls, which have not been submitted as part of the above control system data;

(g) Transfer block diagram representation of the **AC Voltage** control, **Reactive Power** control at converter ends for a voltage source converter.

(vi) **Interconnector** Transformer;

	Symbol	Units
Number of windings		
Vector Group		
Rated current of each winding		Amps
Transformer Rating		MVA_{Trans}
Transformer nominal LV voltage		kV
Transformer nominal HV voltage		kV
Tapped winding		
Transformer Ratio at all transformer taps		
Transformer Impedance at all taps[1]		% on rating MVA_{Trans}
Transformer zero sequence impedance at nominal tap	Z_0	Ohm
Earthing Arrangement including neutral earthing resistance & reactance		
Core construction (number of limbs, shell or core type)		
Open circuit characteristic		Graph

PC.A~~5~~6: Dispatchable Demand Customers

Connection Conditions

[1] For Three Winding Transformers the HV/LV1, HV/LV2 and LV1/LV2 impedances together with associated bases shall be provided.

CC.7.5.9.2 *New requirement, Addition of Voltage Regulation Set-Point control for Interconnectors.*	The **Voltage Regulation System** shall be capable of receiving a **Voltage Regulation Set-point** for the **Voltage** at the **Connection Point**. The **Voltage Regulation System** shall act to regulate the **Voltage** at this point by continuous modulation of the **Interconnector's Reactive Power** output, within its **Reactive Power** range. A change to the **Voltage Regulation Set-point** shall be implemented by the **Interconnector** within 20 seconds of receipt of the appropriate signal from the **TSO**.
CC.7.5.9.3 *Slope Setting requirements and timelines for provision.*	The **Voltage Regulation System Slope Setting** shall be capable of being set to any value between 1% and 10%. The setting shall be specified by the **TSO** at least 120 **Business Days** prior to the **Interconnector's** scheduled **Operational Date.** The **Interconnector** shall be responsible for implementing the appropriate settings during **Commissioning**. The slope setting may be varied from time to time depending on **Transmission System** needs. The **TSO** shall give the **Interconnector** a minimum of 1 **Business Days** notice if a change is required. The **Interconnector** shall formally confirm that any requested changes have been implemented within 1 **Business Days** of receiving the **TSO's** formal request.
CC.7.5.9.4 *Speed of response of the Regulation System.*	The speed of response of the **Voltage Regulation System** shall be such that, following a step change in **Voltage** at the **Connection Point** the **Interconnector** shall achieve 90 % of its steady-state **Reactive Power** response within 1 second. The response may require a transition from maximum **Mvar** production to maximum **Mvar** absorption or vice-versa.
CC.12.2	(s), (t),(u) ~~&~~, (v) and (w) are applicable to **Interconnectors only**: (s) +/-**MW** and +/-**Mvar** at the high **Voltage** terminals of the **Interconnector Transformer**; (t) **kV** at **Interconnector Transformer** high **Voltage** terminals; (u) **Interconnector Transformer** tap position; (v) **Interconnector** status~~.~~; and (w) Frequency.
OC2	

OC2.1 *General Inclusion of Interconnectors*.	**INTRODUCTION** Secure operation of an electricity system requires that maintenance of production facilities (**Generation Units**, **Interconnectors**, **Aggregated Generating Units** and **Demand Side Units**) should be carried out in a timely and orderly fashion. This is essential in order to enable the **TSO** to fulfil its obligations relating to operation of the **Transmission System**, and to enable **Generators**, **Interconnector Operators, Generator Aggregators** or **Dispatchable Demand Customers** to plan their **Outages** in an orderly way with due regard to **Plant** requirements and resource limitations. The mechanisms by which this is achieved are formalised in this Operational Planning Code (Generation).

OC2.2 *General Inclusion of Interconnectors*.	**OBJECTIVE** The primary objective of OC2 is to promote the development and implementation of a co-ordinated **Generation Outage Programme**, consistent with security of supply and requirements for the secure and economic operation of the **Transmission System** and the **Other Transmission System**, and with the needs of **Generators**, **Interconnector Operators**, **Generator Aggregators** or **Dispatchable Demand Customers** in respect of **Plant** maintenance requirements and resource limitations. In order to achieve this objective, OC2 defines: (a) the procedure for formal notification of **Outages** by **Generators**, **Interconnector Operators,** **Generator Aggregators**, **Dispatchable Demand Customers** and **Demand Side Aggregators** to the **TSO**; (b) the procedures by which the **Indicative**, **Provisional** and **Committed Outage Programmes** are reviewed by the **TSO**, in consultation with **Generators**, **Interconnector Operators,** **Generator Aggregators**, **Dispatchable Demand Customers** or **Demand Side Aggregators**; and (c) the co-ordination of **Outage** planning and the interchange of **Outage** schedules with the **Other TSO**. OC2 shall apply to all proposed **Outages** that may affect the ability of a **Generation Unit, Interconnector, Aggregated Generating Unit** and **Demand Side Unit** to achieve, in accordance with its **Registered Operating Characteristics,** either its full **Registered Capacity**, appropriate to each **Registered Fuel**, **Interconnector Registered Capacity** or its **Demand Reduction Capability** as the case maybe. **OC2.7** also requires **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers** to inform the **TSO** of other proposed maintenance of a **Generation Unit, Interconnector,** ~~or~~ **Aggregated Generating Unit, Demand Side Unit** or any associated **Plant** or **Apparatus**, where such maintenance will affect the availability of **Ancillary Services** in respect of that **Generation Unit**.

OC2.3 *General Inclusion of Interconnectors as appropriate*.	**SCOPE** Operational Planning applies to the **TSO** and to the following, each of which is a **User** under this OC2: (a) **Generators** which for the purposes of OC2 includes all **Generators** with **Registered Capacity** greater than 5 MW or which are subject to **Central Dispatch**; ~~(b) Generator Aggregators;~~ (b) **Interconnector Operators;** (c) **Generator Aggregators**; (d) **Dispatchable Demand Customers**; and (e) The **Distribution System Operator (DSO)**.
OC2.4.1 *General Inclusion of Interconnectors as appropriate*..	Throughout OC2 the current year shall be defined as year 0, the following year as Year 1, and so on. The **Outage** planning process in respect of a **Generation Unit, Interconnector, Aggregated Generating Unit** and **Demand Side Unit** shall commence not later than three (3) years prior to the **Scheduled Operational Date** or from the date of the relevant agreements, whichever is the later.
OC2.4.2 *General Inclusion of Interconnectors as appropriate*.	(a) submissions by the **Generator, Interconnector Operator, Generator Aggregator** and/or **Dispatchable Demand Customer** for year 2 should reflect the current **Provisional Outage Programme** for year 3; and (b) submissions by the **Generator, Interconnector Operator, Generator Aggregator** and/or **Dispatchable Demand Customer** for year 1 should reflect the current **Provisional Outage Programme** for year 2. except, in any such case, to the extent that the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** is reasonably responding to changed circumstances. This does not require **Generators, Interconnector Operators, Generator Aggregators** or **Dispatchable Demand Customers** to explain changes unless required to do so by the **TSO**. The aggregate of all **Generators' Outage Programmes** is the **Generation Outage Programme** that will comprise the **COP**, **POP** and **IOP**.

OC2.4.3 *General Inclusion of Interconnectors as appropriate*.	(a) the **Committed Outage Programme (COP)** for year 1. Other than in the first year after the planning process has commenced, this will be based on the previous year's **Provisional Outage Programme** for year 2, which period through the passage of time has now become year 1, and any changes may only reflect the **Generator's, Interconnector Operator's, Generator Aggregator's,** and **Dispatchable Demand Customer's** reasonable response to changed circumstances; (b) the **Provisional Outage Programme (POP)** for years 2 and 3; and (c) the **Indicative Outage Programme (IOP)** for years 4 to 7. In the case of **Aggregated Generating Units**, and **Demand Side Units** which consist of **Aggregated Demand Sites**, the **Generator Aggregator** or **Dispatchable Demand Customer** shall provide the aggregated **Outages**, and upon request from the **TSO** the **Generator Aggregator** or **Dispatchable Demand Customer** shall provide the **Outage** for each individual site, in a reasonable time period. **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers** shall specify with regard to each of their **Generation Units**, **Interconnector, Aggregated Generating Units** or **Demand Side Units**, the start date and time and the duration of each **Outage**.
OC2.4.4 *General Inclusion of Interconnectors as appropriate*.	In scheduling **Outages**, and in relation to all other matters under OC2, the **Generator, Interconnector Operator, Generator Aggregator or Dispatchable Demand Customer** must act reasonably and in good faith. Without limitation to such obligation, each **Generator, Interconnector Operator, Generator Aggregator** and **Dispatchable Demand Customer** should act in accordance with **Good Industry Practice** in planning their **Outages** and, in particular, so as to avoid a situation arising in which a **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** is obliged to schedule an **Outage** at short notice by reason of obligations imposed upon the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** by statute as a consequence of the **Generator, Interconnector Operator, Generator Aggregator or Dispatchable Demand Customer** not having planned in accordance with **Good Industry Practice**, for example, by not having planned sufficiently in advance its **Outages** for any statutory time limit.

OC2.4.5 *General Inclusion of Interconnectors as appropriate*.	When submitting proposed **Outages** for inclusion in the **COP**, **POP** and **IOP**, **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers** shall, unless they reasonably substantiate that an **Outage** is inflexible, specify: (a) an alternative preferred window, or alternative preferred windows, of opportunity within each year for any **Outage**; (b) the minimum **Outage** duration which would be acceptable, if less than the scheduled **Outage** duration; (c) situations where the paralleling of **Outages** of two or more of its **Generation Units, Interconnectors, Aggregated Generating Units, Demand Side Units** or **Aggregated Demand Side Units** may be required, desirable, undesirable or not possible; (d) a priority order associated with the various **Outages** scheduled by the **Generator, Interconnectors, Generator Aggregators** and **Dispatchable Demand Customer**; (e) any **Outages** where it is particularly desirable that they should take place within the year scheduled; or (f) any **Outage** where its timing is dependent on **Generation Unit** run hours, equivalent run hours or starts.
OC2.4.6 *General Inclusion of Interconnectors as appropriate*.	~~Details of proposed **Outages** for years 4 to 7~~ **Generators, Interconnector Operators, Generator Aggregators, Dispatchable Demand Customers** are required to signal adequately in advance major **Outages** which could impact on capacity adequacy or on the **TSO's** transmission outage maintenance and development programmes and are indicative only. In rolling over the **Generation Outage Programme** from one year to the next each **Generator, Interconnector Operator, Generator Aggregator** and **Dispatchable Demand Customer** shall not be constrained in making any submission by any previous **Provisional Outage Programme**.

OC2.4.7 *General Inclusion of Interconnectors as appropriate*.	Between March and June of year 0, the **TSO** shall carry out a security analysis of years 1 to 7 in light of proposed **Outages** and other relevant matters including: (a) **Outages** of other **Generation Units**, **Aggregated Generating Units** and **Demand Side Units;** (b) **Outages** of **Generation Units**, **Aggregated Generating Units** and **Demand Side Units** on the **Other Transmission System;** (c) **Interconnectors** and **Inter-jurisdictional Tie Line;** and (d) **Transmission** outages, **Load** growth and fuel security. In the event that a proposed **Generator's, Interconnector Operator's** and **Generator Aggregator's, Dispatchable Demand Customer's Outage** has a detrimental effect on **Capacity Adequacy** or system security either in the **Transmission System** or in the **Other Transmission System**, the relevant **TSO** will highlight the shortfall to all **Generators, Interconnector Operators, Generator Aggregators, Dispatchable Demand Customers** and **Suppliers.**
OC2.4.8 *General Inclusion of Interconnectors as appropriate*.	Any concerns which the **TSO** may have with the **Generation Outage Programme** must be notified to all **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers** by the end of June in year 0.
OC2.4.9 *General Inclusion of Interconnectors as appropriate*.	Between the end of June in year 0 and the end of September in year 0 any concerns raised by the **TSO** shall be notified to **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers**. The **TSO** will enter into discussions with **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers** to find a resolution. If by the end of September in year 0 no resolution has been agreed and in the opinion of the **TSO** there is a capacity shortfall in year 1, the **TSOs** will jointly issue a **System Capacity Shortfall Warning**.
OC2.4.10 *General Inclusion of Interconnectors as appropriate*.	The **TSO** shall issue to each **Generator, Interconnector Operator, Generator Aggregator** and **Dispatchable Demand Customer** a **Generation Outage Programme** for that **Generator, Generator Aggregator, Dispatchable Demand Customer** for years 1 to 3 by the last **Business Day** of September in year 0, including the **COP** for year 1.

OC2.5 *General Inclusion of Interconnectors as appropriate*.	**ASSESSMENT OF CAPACITY ADEQUACY** In assessing **Capacity Adequacy** the **TSO** shall estimate **Demand** growth, formulate **Demand** forecasts and consider the **Outages** of **Generation Units**~~**' Outages**~~ and **Interconnectors** and their respective **Forced Outage Probabilities**.
OC2.5.2.1 *General Inclusion of Interconnectors as appropriate*.	Each week during year 0 after the fifth (5th) **Business Day** of January for a forecast period of four weeks, the **TSO** shall: (a) use **Generators', Interconnectors', Generator Aggregators'** and **Dispatchable Demand Customers'** submissions for **Outages**; (b) use **Generators', Interconnectors'** and **Generator Aggregators'** submissions for **Forced Outage Probabilities**; (c) in a separate exercise, use the **TSO**'s assessment of the **Generators**', **Interconnectors'** and **Generator Aggregators' Forced Outage Probabilities**, **Generators**', **Interconnectors'** submissions and historical data; and (d) based on (a), (b), (c) and **Demand** forecasts the **TSO** shall formulate an **Availability** forecast, a **Demand** forecast, the capacity margin and a **Capacity Adequacy Indicator** for each daily peak. This information shall be published on the **TSO** website at 15.00 each **Business Day.**
OC2.6.1 *General Inclusion of Interconnectors as appropriate*.	A request for a change to an **Outage** included in the **Committed Outage Programme** or an additional **Outage** may be initiated either by the **TSO** or by a **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** at any time.
OC2.6.2.1 *General Inclusion of Interconnectors as appropriate*.	The **TSO** may at any time request from a **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** a change in the timing or duration of any **Outage** of one of the **Generator's Generation Units, Interconnectors,** ~~or~~ **Dispatchable Demand Customer's Demand Side Units** or an **Individual Demand Site** which constitutes the **Demand Side Unit** in the **Committed Outage Programme**.
OC2.6.2.2 *General Inclusion of Interconnectors as appropriate*.	A **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** may respond either by declining the request, or by agreeing to the request (in which case the **COP** shall be deemed to be amended accordingly). **Generators, Interconnector Operators, Generator Aggregators** and **Dispatchable Demand Customers** shall make every reasonable effort to co-operate with changes requested by the **TSO**.

OC2.6.2.3	If a **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** responds by agreeing to the request subject to specific conditions, the **TSO** may respond by either confirming agreement to those conditions, in which case the conditions specified by the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** shall be deemed to have been accepted, or by declining agreement. Where the **TSO** agrees to the conditions the **COP** shall be deemed to be amended accordingly. Where the **TSO** declines to agree to the conditions, then the **TSO** may negotiate with the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** as to revised or alternative conditions, which would be acceptable.
OC2.6.3 *General Inclusion of Interconnectors as appropriate*.	Outage change initiated by a **Generator, Interconnector Operator, Generator Aggregator or Dispatchable Demand Customer**
OC2.6.3.1 *General Inclusion of Interconnectors as appropriate*.	**Generators, Interconnector Operators, Generator Aggregators** or **Dispatchable Demand Customers Aggregators** may at any time request the **TSO** for a change in the timing or duration of any **Outage** of one of the **Generator's Generation Units, Interconnectors** or **Dispatchable Demand Customer's Demand Side Units** or an **Individual Demand Site** which constitutes the **Demand Side Unit** in the **Committed Outage Programme**.
OC2.6.3.2 *General Inclusion of Interconnectors as appropriate*.	Where a change to the **COP** is proposed by a **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer**, the **TSO** shall evaluate whether the change is likely to have a detrimental effect on **Capacity Adequacy** or on the secure operation of the **Transmission System.** This shall be done within a reasonable time frame, taking into consideration the extent of the change and the timing of the **Outage**
OC2.6.3.3 *General Inclusion of Interconnectors as appropriate*.	Where, in accordance with OC2.5, the request is not likely to have a detrimental effect on **Capacity Adequacy** or the secure operation of the **Transmission System** then the **TSO** shall amend the **COP** accordingly. The **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** shall be advised by the **TSO** that the change has been accepted.

OC2.6.3.4 *General Inclusion of Interconnectors as appropriate*.	Where, in accordance with OC2.5, the **Outage** change is likely to have a detrimental effect on **Capacity Adequacy** or requirements for the secure operation of the **Transmission System** then the **TSO** shall not amend the **COP**. The **TSO** shall contact the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** and inform the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** that the change to the **COP** has not been accepted, the **TSO** shall at the **Generator's, Interconnector Operator's, Generator Aggregator's** or **Dispatchable Demand Customer's** request enter into discussions with the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** to facilitate an alternative modification which may meet the requirements of the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** while not having an unacceptable effect on **Capacity Adequacy** or requirements for secure operation of the **Transmission System.** In the event that the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** wishes to avail of an alternative modification, it shall submit a change request in accordance with OC2.6.3.1.
OC2.6.3.5 *General Inclusion of Interconnectors as appropriate*.	Where the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** has been notified that the change to the **COP** has not been accepted, but in the view of the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** it must force the **Generation Unit Interconnector** or **Demand Side Unit** to be unavailable due to technical or safety issues, then the **Generator, Interconnector Operator Generator Aggregator**, **Dispatchable Demand Customer** shall inform the **TSO** immediately in accordance with the requirements to submit an **Availability Notice**.
OC2.7.1 *General Inclusion of Interconnectors as appropriate*.	**Generators** and **Interconnector Operators** will inform the **TSO** of any proposed maintenance, in addition to **Outages**, which will, or is likely to, affect the capability of the **Generation Unit** or **Interconnector** to provide **Ancillary Services**, as soon as is reasonably possible.

OC2.7.2 *General Inclusion of Interconnectors as appropriate*.	The **TSO** may, where security of supply or the secure operation of the **Transmission System** or the **Other Transmission System** would be at risk, request alterations to maintenance notified under Section OC2.7.1. The **TSO** shall make reasonable endeavours to give as much notice as possible for such requests for alterations. Where the **TSO** makes such a request, the **Generator, Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** shall use reasonable endeavours to comply with the request in arriving at the **User's** final programme for such maintenance.
OC7	
OC7.1.1.2 *General Inclusion of Interconnectors as appropriate*.	The requirement to notify in OC7.1 relates generally to notification of what is expected to happen or what has happened. However, as OC7.1 provides, when an **Event** or **Operation** has occurred on the **Transmission System** which itself has been caused by (or exacerbated by) an **Operation** or **Event** on a **User System**, the **TSO** in reporting the **Event** or **Operation** on the **Transmission System** to another **User** or **External System Operator** as the case may be, can pass on what it has been told by the **User** under OC7.1 in relation to the **Operation** or **Event** on the first **User System**.
OC7.1.3.1 *General Inclusion of Interconnectors & External System Operator as appropriate*.	OC7.1 applies to the **TSO** and to **Users**, which term in OC7.1 means:- (a) **Generators**; ~~(b) **Dispatchable WFPSs;**~~ (b) **Interconnector Operators;** (c) **Dispatchable WFPSs**; (d) **Distribution System Operator**; (e) **Demand Customers**; and (f) **Dispatchable Demand Customers.**
OC7.1.11 *General Inclusion of Interconnectors as appropriate*.	When an **Event** has been reported to the **TSO** by a **Generator** or **Interconnector Operator** under OC7.1 and it is necessary in order for the **Generator** or **Interconnector Operator** to assess the implications of the **Event** on their system more accurately, the **Generator** or **Interconnector Operator** may ask the **TSO** for details of the fault levels from the **Transmission System** to their **Generation Unit or Interconnector** at the time of the **Event**, and the **TSO** will, as soon as reasonably practicable, give the **Generator or Interconnector** that information provided that the **TSO** has that information.

OC7.2.3.1 *General Inclusion of Interconnectors as appropriate*.	OC7.2 applies to the **TSO** and to **Users**, which term in OC7.2 means: (a) **Generators**; ~~(b) **Dispatchable WFPS**;~~ (b) **Interconnector Operators;** (c) **Dispatchable WFPS**; (d) **Distribution System Operator**; (e) **Demand Customers**; and (f) **Dispatchable Demand Customers.**
New Section OC7.2.4.6 Section similar to existing requirements within this section.	**OC7.2.4.6 INTERCONNECTOR OPERATORS** OC7.2.4.6.1 The **Interconnector Operator** contact locations and personnel referred to in this section OC7.2.4.6 shall be notified by the **TSO** prior to connection and thereafter updated as appropriate. OC7.2.4.6.2 The **Interconnector Operator** is required to provide a **Control Facility**. The **Interconnector Operator** shall ensure acting in accordance with **Good Industry Practice** that the **Control Facility** is staffed at appropriate levels at all times. OC7.2.4.6.3 The **Control Facility** shall be staffed by a **Responsible Operator(s)** who shall respond to communications from the **TSO** without undue delay (except, where otherwise provided for by agreement between the **Interconnector Operator** and the **TSO**, such agreement not to be unreasonably withheld) and are of suitable experience and training and are authorised to perform the following functions on behalf on the **Interconnector Operator**: (a) to accept and execute **Dispatch Instructions**; (b) to receive and acknowledge receipt of requests, for amongst other matters, operation outside the **Declared** values of **Availability**, **Ancillary Service** capability, or **Operating Characteristics** of the **Interconnectors** during **System Emergency Conditions**.

	OC7.2.4.6.4	At any point in time, a single person shall be designated by the **Interconnector Operator** and notified to the **TSO** as the **Responsible Manager.** The **Responsible Manager** shall be responsible for dealing with the **TSO** on matters relating to the **Grid Code** other than as provided in OC7.2.4.6.2 and OC7.2.4.6.3. In the event that the **Responsible Manager** is not the person on duty at the **Control Facility**, then the **Responsible Manager** must be capable of being contactable from the **Control Facility** at all times, and in the event that the **TSO** issues a request to the **Control Facility** requiring the **Responsible Manager** to contact the **NCC**, the **Responsible Manager** will comply without undue delay and in any case within 15 minutes of the request.
	OC7.2.4.6.5	The **Responsible Manager** shall be authorised by the **Interconnector Operator** to perform the following functions on behalf of the **Interconnector Operator:** (a) to make estimates in accordance with **Good Industry Practice** as to the **Availability**, **Ancillary Service** capability and **Operating Characteristics** of the **Interconnector**; (b) to make **Declarations** for the **Interconnector;** (c) to communicate with respect to issues regarding **Outages** of the **Interconnector.** The **Interconnector Operator** may, from time to time, notify a replacement contact location and personnel which meets the foregoing requirements.

OC7.2.6 *For Communications two new sections are created.* *1. TSO and the User* *2. TSO and the External TSO* *Renumbering of the Section required. No Impact to any where else within the Grid Code.*	**OC7.2.6 COMMUNICATIONS ~~BETWEEN THE TSO AND THE USER~~** **OC7.2.6.1 COMMUNICATION BETWEEN THE TSO AND THE USER** ~~Other than where specifically provided for in other sections of the **Grid Code**, communication between the **TSO** and **Users** on matters pertaining to the real time operation of the **Transmission System** shall take place between the **NCC** and the **Generator's Control Facility**.~~ OC7.2.6.1.1 Other than where specifically provided for in other sections of the **Grid Code**, communication between the **TSO** and **Users** on matters pertaining to the real time operation of the **Transmission System** shall take place between the **NCC** and the **Generator's Control Facility**. OC7.2.6.~~2~~1.2 If the **NCC** is to be moved to a different location the **TSO** shall ordinarily notify **Users** as soon as practicable after the decision to move has been made, and not less than seven (7) days prior to the move, but in the event of an emergency it may instead notify **Users** as soon as practicable after the move. OC7.2.6.~~3~~1.3 Unless otherwise specified in the **Grid Code**, all instructions given by **NCC** and communications between **NCC** and the **User 's Control Facility** shall be given by means of the facilities described in OC7.2.5. OC7.2.6.~~4~~1.4 Any automatic recording (by whatever means) of communications given by means of telephony, electronic means, facsimile transfer or telex will be accepted by the **TSO** and **Users** as evidence of those instructions or communications.

OC7.2.6.2 *New section to include communication between the TSO and the External TSO*	**OC7.2.6.2 COMMUNICATION BETWEEN THE TSO AND EXTERNAL TSO** OC7.2.6.2.1 For **Interconnectors**, the procedure for operational liaison by the **TSO** with the **External TSO** is set out in the **Interconnector Operating Protocol.** OC7.2.6.2.2 Communication between the **TSO** and **External TSO** on the real time operation of the **Transmission System** regarding **Interconnectors** shall take place between the **NCC** and the **External System's Control Facility**.
OC8	
OC8.2.3 *General Inclusion of Interconnectors as appropriate*.	OC8 is not intended to deal with tests which may be called routinely by the **TSO** in order to assess compliance of **Users** with their design, operating and connection requirements as specified in the **Grid Code** and in each **User's Connection Agreement, Ancillary Services Agreements** and **System Support Agreement**, or to assess that **Generators** or **Interconnector Operators** are in compliance with their **Registered Data** as notified by **Declarations**, where appropriate, or to determine that **Generation Units** or **Interconnectors** are in compliance with **Dispatch Instructions**. These issues are covered under OC10 (**Monitoring**, **Testing** and **Investigation**).
OC8.3 *General Inclusion of Interconnectors as appropriate*.	OC8 applies to the **TSO** and to all **Users**, which term in this OC8 means: (a) **Generators** which includes all **Generators** with units with **Registered Capacity** greater than 5 MW and **Generator Aggregators**; ~~(b) **Dispatchable Demand**;~~ (b) **Interconnectors;** (c) **Dispatchable Demand**; (d) The **Distribution System Operator**; and (e) **Demand Customers**.

OC8.6.2.5 *General Inclusion of Interconnectors as appropriate*.	where the **User** is a **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer**, the **Dispatch** or **Dispatches** required by the **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** for completion of the test, if any, including the duration of **Dispatch** shall be supplied to the **TSO** as part of the proposal. Where the **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** may not know the entire **Dispatches** required for completion of the test until part of the test is completed then the **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** when proposing the test shall: (a) divide the test into sections as appropriate; (b) indicate and discuss with the **TSO** which sections of the test can be completed in stages and which cannot; and (c) indicate possible variations of the test for the sections that can be completed in stages. Additionally, the factors that influence the completion of the stages should be outlined to the **TSO**, namely, if the procedure to be followed for a certain stage depends on the outcome of a previous stage.
OC8.6.3 *General Inclusion of Interconnectors as appropriate*.	A request by the **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** for an **Operational Test** requiring a **Generation Unit, Interconnector** or **Demand Side Unit** to be **Dispatched** to a particular **MW Output** or operating condition shall not be considered a **Re-declaration** of **Availability**, **Ancillary Service** capability or **Operating Characteristics**.
OC8.7.3 *General Inclusion of Interconnectors as appropriate*.	Where an **Operational Test** proposed by a **Generator**, **Interconnector Operator, Generator Aggregator** or **Dispatchable Demand Customer** in respect of one of its **Generation Units, Interconnector** or **Demand Side Units** requires a **Dispatch** that exceeds the currently declared values of **Availability**, **Ancillary Service** capability where applicable, or **Operating Characteristics** of the **Generation Unit, Interconnector** or **Demand Side Units**, then the **TSO** may so **Dispatch** the **Generation Unit, Interconnector** or **Demand Side Units** for the period required for the **Operational Test**, in accordance with the relevant provisions of the **Grid Code**.
OC9	

OC9.3 *General Inclusion of Interconnectors as appropriate*.	**SCOPE** OC9 applies to the **TSO** and to all **Users**, which term in this OC9 means: (a) **Generators** which for the purposes of OC9 includes all **Generators** with **Registered Capacity** greater than 5 MW; ~~(b) The **Distribution System Operator**; and~~ (b) **Interconnector Operators**; (c) The **Distribution System Operator**; and (d) **Demand Customers** including **Dispatchable Demand Customers**.
OC10	
OC10.2.2 *General Inclusion of Interconnectors as appropriate*.	(a) whether **Centrally Dispatched Generation Units (CDGU), Interconnectors** and **Demand Side Units** comply with **Dispatch Instructions**; (b) whether **Generators**, **Interconnectors**, **Dispatchable Demand Customers** and **Generator Aggregators** are in compliance with **Declarations** of **Availability**, **Ancillary Services** capabilities, **Operating Characteristics** and any other data required to be registered by those **Generators**, **Interconnectors**, **Dispatchable Demand Customers** and **Demand Side Unit Aggregators** under the **Grid Code**;

OC10.3 *General Inclusion of Interconnectors as appropriate*.	**OC10.3 SCOPE** OC10 applies to the **TSO** and to the following **Users** (a) **Generators** which, for the purposes of OC10, include all **Generators** with **Generation Unit(s)** subject to **Central Dispatch** or with **Generation Unit(s)** that have a total **Registered Capacity** greater than 4 MW on a single **Site**; ~~(b) The **Distribution System Operator;**~~ (b) **Interconnector Operators;** (c) The **Distribution System Operator**; (d) **Suppliers**; (e) **Demand Customers**; (f) **Dispatchable Demand Customers** in respect of their **Demand Side Units;** and; (g) **Generator Aggregators** in respect of the **Generation Units** which they represent.
OC.10.5.7.3	The **TSO** may require a **Generator** or **Interconnector Operator** with a **Black Start Station** to carry out a **Black Start Unit Test** at any time (but will not require a **Black Start Unit Test** to be carried out more than once in each calendar year in respect of any particular **CDGU** or **Interconnector** unless it can justify on reasonable grounds the necessity for further tests or unless the further test is a re-test, and will not require a **Black Start Station Test** to be carried out more than once in every two calendar years in respect of any particular **CDGU** unless it can justify on reasonable grounds the necessity for further tests or unless the further test is a re-test).
OC.10.5.7.4	When the **TSO** wishes a **Generator** or **Interconnector Operator** with a **Black Start Station** to carry out a **Black Start Test**, it shall notify the relevant **Generator** or **Interconnector Operator** at least 7 **Business Days** prior to the time of the **Black Start Test** with details of the proposed **Black Start Test**.
OC10.7.1 *General Inclusion of Interconnectors as appropriate*.	**Non-compliance with a Dispatch Instruction issued by the TSO to a Generator, Interconnector Operator, Dispatchable Demand Customer or Generator Aggregator.**

OC10.7.1.1 *General Inclusion of Interconnectors as appropriate*.	When the **TSO** considers that a **Generator**, **Interconnector Operator,** a **Dispatchable Demand Customer** or a **Generator Aggregator** is not in compliance with a **Dispatch Instruction** then the **TSO** shall inform the **Generator**, the **Interconnector Operator,** the **Dispatchable Demand Customer** or the **Generator Aggregator** by agreed methods, identifying the relevant **Generation Unit, Interconnector** or **Demand Side Unit,** and identifying the **Dispatch Instruction** and the time of issue of the **Dispatch Instruction** with which the **TSO** considers the **Generator**, the **Interconnector Operator**, the **Dispatchable Demand Customer** or the **Generator Aggregator** is not in compliance. This shall be known as a "**Warning** for non-compliance with a **Dispatch Instruction**". The **Warning** is to contain a **Dispatch Instruction** which may be identical to the original **Dispatch Instruction** or which may differ from it. The occurrence of the **Warning** shall be logged by the **TSO** and by the **Generator**, the **Interconnector Operator**, the **Dispatchable Demand Customer** or the **Generator Aggregator.**
OC10.7.1.2 *General Inclusion of Interconnectors as appropriate*.	On receipt of a **Warning** for non-compliance with a **Dispatch Instruction**, the **Generator**, the **Interconnector Operator**, **Dispatchable Demand Customer** or **Generator Aggregator** must as soon as possible, and in any case within ten (10) minutes of the receipt of the **Warning**: (a) commence to comply with the **Dispatch Instruction** included with the **Warning** (this may be the original or a modified **Dispatch Instruction** as outlined in OC10.7.1.1); or (b) reply to the **TSO**, disputing in good faith the validity of the original **Dispatch Instruction**, detailing the grounds on which the validity is being disputed; or (c) reply to the **TSO**, disputing in good faith the validity of the assessment of non-compliance. In this event the **Generator**, the **Interconnector Operator**, the **Dispatchable Demand Customer** or the **Generator Aggregator** must as soon as is reasonably practicable, inform the **TSO** in detail of the grounds on which the assessment of non-compliance is being disputed; or (d) reply to the **TSO**, giving a reason for inability to comply with the **Dispatch Instruction**, and making a revised **Declaration** in respect of the **Availability**, **Ancillary Service** capabilities or **Operating Characteristics**, as appropriate.

OC10.7.1.3 *General Inclusion of Interconnectors as appropriate*.	If the **Generator**, **Interconnector Operator**, **Dispatchable Demand Customer** or **Generator Aggregator** complies in accordance with OC10.7.1.2 (a), no further action shall arise.
OC10.7.1.4 *General Inclusion of Interconnectors as appropriate*.	In the event of the **Generator**, **Interconnector Operator**, **Dispatchable Demand Customer** or **Generator Aggregator** making a revised **Declaration** under OC10.7.1.2 (d), the **TSO** shall then issue a new **Dispatch Instruction**, consistent with the revised **Declaration**. The revised **Declaration** will be backdated to the time of issue of the relevant **Dispatch Instruction**. Notwithstanding the backdating of the revised **Declaration**, the **Generator**, **Interconnector Operator**, **Dispatchable Demand Customer** or **Generator Aggregator** will still be deemed under OC10.7.1.1 as having failed to comply with a **Dispatch Instruction**.
OC10.7.1.5 *General Inclusion of Interconnectors as appropriate*.	In the event of OC10.7.1.2 (b) or OC10.7.1.2 (c) applying, the **TSO** shall consider the substance of the **Generator's**, **Interconnector Operator's, Dispatchable Demand Customer's** or **Generator Aggregator's** disputation. The **TSO** shall, where the **TSO** considers appropriate, communicate with the **Generator**, **Interconnector Operator, Dispatchable Demand Customer** or **Generator Aggregator** to clarify aspects relating to the issue and receiving of the **Dispatch Instruction**, and the **Generator's**, **Interconnector Operator's**, **Dispatchable Demand Customer's** or **Generator Aggregator's** actions. The **TSO** shall acting reasonably determine the validity of the **Generator's**, **Interconnector Operator's**, **Dispatchable Demand Customer's** or **Generator Aggregator's** disputation, and shall inform the **Generator, Interconnector Operator's, Dispatchable Demand Customer** or **Generator Aggregator** as to its decision. The **TSO** shall record both its decision, and also all pertinent information relating to the event, including the **Generator's**, **Interconnector Operator's**, **Dispatchable Demand Customer's** or **Generator Aggregator's** disputation and such information shall be deemed to be **Operational Data**.

OC10.7.1.6 *General Inclusion of Interconnectors as appropriate*.	Where the **TSO**, acting reasonably, is of the view that a disputation given by a **Generator**, **Interconnector Operator,** **Dispatchable Demand Customer** or **Generator Aggregator** is not valid or not wholly valid or if the **Generator**, **Interconnector Operator,** **Dispatchable Demand Customer** or **Generator Aggregator** has not replied in accordance with OC10.7.1.2, the **TSO** shall inform the **Generator**, **Interconnector Operator,** **Dispatchable Demand Customer** or **Generator Aggregator** that it is overriding, by means of a **Post Event Notice**, the **Generator's Declaration** or **Interconnector's Declaration** in respect of the **Availability**, **Ancillary Service** capabilities or **Operating Characteristics** of the **Generation Unit**, or **Interconnector** as appropriate. The **Post Event Notice** shall govern until such times as the **Generator**, **Interconnector Operator**, **Dispatchable Demand Customer** or **Generator Aggregator** submits a revised **Availability Notice**.
OC10.7.1.7 *General Inclusion of Interconnectors as appropriate*.	Where the **TSO** gives a **Post Event Notice** under OC10.7.1.6, the **Post Event Notice** shall be backdated to the time of issue of the relevant **Dispatch Instruction**, or the latest time for which there exists compelling evidence that the **Generation Unit**, **Interconnector** and **Demand Side Unit** was acting in compliance with the **Dispatch Instruction**, whichever is the later. The **Post Event Notice** shall set the level of **Declared Availability**, **Declared Ancillary Service** capability or declared **Technical Parameter**, as the case may be, at such level as the **Monitoring**, **Testing** or **Investigation** indicates the **Generation Unit**, or **Interconnector** actually achieved. Notwithstanding the backdating of the **Post Event Notice**, the **User** will still be deemed under OC10.7.1.1 as having failed to comply with a **Dispatch Instruction**.
OC10.7.2 *General Inclusion of Interconnectors as appropriate*.	**Non-compliance by a Generator and Interconnector Operator with Declared Operating Reserve**
OC10.7.2.1 *General Inclusion of Interconnectors as appropriate*.	In evaluating the adequacy of the performance of a **Generation Unit** or **Interconnector** as the case may be, the **TSO** shall compare the actual performance as measured, with the expected performance for that **Generation Unit** or **Interconnector**. The expected performance from the **Generation Unit** or **Interconnector** shall be calculated based on the **Frequency** deviation from the **Pre-Incident** Frequency, and the **Generation Unit's** or **Interconnector's** then **Declared values** of **Availability**, **POR**, **SOR**, **TOR1**, **TOR2** and Governor Droop;

OC10.7.2.2 *General Inclusion of Interconnectors as appropriate*.	Where the performance of a **Generation Unit** or **Interconnector** is deemed by the **TSO** to be in non-compliance with **Declared Operating Reserve**, then the **TSO** shall notify the **Generator** or **Interconnector Operator**, of the non-compliance, identifying the system or procedure by which non-compliance was measured. The **TSO** shall by means of a **Post Event Notice** override the **Generator's** or **Interconnector Operator's Declaration** in respect of **Operating Reserve**. The revised **Declaration** shall be effective from the time of commencement of the **Test** or **Event** on which the non-compliance has been assessed, or such later time as may, in the opinion of the **TSO** acting reasonably, be appropriate if the non-compliance did not apply to the full period of the **Test** or **Event**.
OC10.7.2.3 *General Inclusion of Interconnectors as appropriate*.	Following the notification of non-compliance, the **TSO** shall make available to the **Generator** or **Interconnector Operator**, within three **Business Days** relevant data in relation to the system **Frequency** and **Generation Unit** or **Interconnector** performance, that the **Generator** or **Interconnector** may reasonably require substantiating the assessment of non-compliance.
OC10.7.2.4 *General Inclusion of Interconnectors as appropriate*.	The consequences of non-compliance by a **Generator** or **Interconnector** with **Declared Operating Reserve** will be addressed in the **Trading and Settlement Code** and other agreements as appropriate.
OC10.7.3 *General Inclusion of Interconnectors as appropriate*.	**Non-compliance by a Generator, Interconnector Operator, Dispatchable Demand Customer or Generator Aggregator with an Availability Notice**
OC10.7.3.1 *General Inclusion of Interconnectors as appropriate*.	In the event that the performance of a **Generation Unit**, **Interconnector**, **Demand Side Unit** or **Aggregated Generator** is deemed by the **TSO** to be in non-compliance with its **Declared Availability**, then the **TSO** shall notify the **Generator**, **Interconnector Operator, Dispatchable Demand Customer** or the **Generator Aggregator** of the non-compliance.
OC10.7.3.2 *General Inclusion of Interconnectors as appropriate*.	Having so informed the **Generator**, **Interconnector Operator, Dispatchable Demand Customer** or **Generator Aggregator**, the **TSO** shall, by means of a **Post Event Notice**, override the **User's Availability Notice**, with a value as appropriate to the outcome of the **Test** or **Investigation**. The revised **Declaration** shall be effective from the time of commencement of the **Test** or **Investigation** on which the non-compliance has been assessed, or such later time as may, in the opinion of the **TSO** acting reasonably, be appropriate if the non-compliance did not apply to the full period of the **Test** or **Investigation**.

OC10.7.3.3 *General Inclusion of Interconnectors as appropriate*.	The economic consequence of non-compliance by a **Generator**, **Interconnector Operator, Dispatchable Demand Customer** or **Generator Aggregator** with **Declared Availability** will be addressed in the **SEM Trading and Settlement Code** and other agreements as appropriate.
OC10.7.4 *General Inclusion of Interconnectors as appropriate*.	**Non-compliance by a Generator or Interconnector Operator, with Declared Ancillary Services or Declared Technical Parameters**
OC10.7.4.1 *General Inclusion of Interconnectors as appropriate*.	In the event that the performance of a **Generation Unit** or **Interconnector** is deemed by the **TSO** to be in non-compliance with its **Declared Ancillary Services** capability or **Operating Characteristics**, then the **TSO** shall notify the **Generator** or **Interconnector Operator** of the non-compliance, and having so informed the **Generator** or **Interconnector Operator** then the **TSO** shall by means of a **Post Event Notice** override the **Generator's Declaration, Interconnector Operator's Declaration** in respect of **Ancillary Services** or **Operating Characteristics** as appropriate.
OC10.7.4.2 *General Inclusion of Interconnectors as appropriate*.	The consequences of non-compliance by a **Generator** or **Interconnector Operator** with **Declared Ancillary Services** or **Declared Technical Parameters** will be addressed in the **SEM Trading and Settlement Co**de and other agreements as appropriate.
OC10.7.5.2 *Paragraph adjusted to account for Interconnectors to remain consistent with the layout of the Grid Code. Demand Side units now repositioned in a new paragraph OC10.7.5.3. No dependencies elsewhere within the Grid Code.*	In the event that the performance of an **Interconnector** is deemed by the **TSO** in accordance with the provisions of this OC10 to be in non-compliance with its **Operating Characteristics,** or with a **Connection Condition**, then the **TSO** shall notify the **Interconnector Operator** of the non-compliance and the **Interconnector Operator** shall take immediate action to remedy such non compliance. The terms of this OC10.7.5 shall be without prejudice to the rights of the **TSO** to **De-energise** the **Interconnector** and **Apparatus** in accordance with the terms of OC9.6.

OC10.7.5.3 *Renumbering applied to this paragraph.*	In the event that the performance of a **Demand Side Unit** is deemed by the **TSO** in accordance with the provisions of this OC10 to be in non-compliance with its **Operating Characteristics,** including **Demand Profile,** or with a **Connection Condition**, then the **TSO** shall notify the **Dispatchable Demand Customer** or the **Aggregator** of the non-compliance and the **Dispatchable Demand Customer** shall take immediate action to remedy such non compliance. The terms of this OC10.7.5 shall be without prejudice to the rights of the **TSO** to **De-energise** the **Demand Site** and **Apparatus** in accordance with the terms of OC9.6.
OC10.7.6.2	If a **Black Start Station** fails to pass a **Black Start Test** the **Generator** or **Interconnector Operator** must provide the **TSO** with a written report specifying in reasonable detail the reasons for any failure of the test so far as they are then known to the **Generator** or **Interconnector Operator** after due and careful enquiry. This must be provided within five **Business Days** of the test. If a dispute arises relating to the failure, the **TSO** and the relevant **Generator** or **Interconnector Operator** shall seek to resolve the dispute by discussion, and if they fail to reach agreement, the **Generator** or **Interconnector Operator** may require the **TSO** to carry out a further **Black Start Test** on 48 hours notice which shall be carried out following the agreed procedure as the case may be, as if the **TSO** had issued an instruction at the time of notice from the **Generator** or **Interconnector Operator**.
OC10.7.6.4	If following the procedure in OC10.7.6.2 and OC10.7.6.3 it is accepted that the **Black Start Station** has failed the **Black Start Test** (or a re-test carried out under OC10.7.6.2), within 14 days, or such longer period as the **TSO** may reasonably agree, following such failure, the relevant **Generator** or **Interconnector Operator** shall submit to the **TSO** in writing for approval, the date and time by which that **Generator** or **Interconnector Operator** shall have brought that **Black Start Station** to a condition where it has a **Black Start Capability** and would pass the **Black Start Test**, and the **TSO** will not unreasonably withhold or delay its approval of the **Generator's** or **Interconnector Operator's** proposed date and time submitted. Should the **TSO** not approve the **Generator's** or **Interconnector Operator's** proposed date and time (or any revised proposal) the **Generator** or **Interconnector Operator** shall revise such proposal having regard to any comments the **TSO** may have made and resubmit it for approval.

OC10.7.6.5	Once the **Generator** or **Interconnector Operator** has indicated to the **TSO** that the **Generating Station** or **Interconnector** has a **Black Start Capability**, the **TSO** shall either accept this information or require the **Generator** or **Interconnector Operator** to demonstrate that the relevant **Black Start Station** has its **Black Start Capability** restored, by means of a repetition of the **Black Start Test** referred to in OC10.5.7.4 following the same procedure as for the initial **Black Start Test**. The provisions of this OC10.5.7 will apply to such test.
OC11	
OC11.3 *General Inclusion of Interconnectors as appropriate*.	**SCOPE** OC11 applies to the **TSO** and to the following **Users**: (a) **Generators**; ~~(b) the **Distributor System Operator**;~~ (b) **Interconnector Operators;** (c) the **Distribution System Operator**; (d) **Demand Customers**; (e) **Dispatchable Demand Customers**; (f) the **TAO**; and (g) agents of **the TSO** or agents of any **User** (as defined in OC 11.3 (a), (b), (c), (d) and (e)).
Glossary	
Availability	At any given time the measure of **Active Power** a **Generation Unit(s)** is capable of delivering to the **Connection Point** and the term "**Availabilities**" shall be construed accordingly. This can be calculated as a gross figure. In terms of a **Demand Side Unit** the measure at any given time of the **Demand Reduction** the **Demand Side Unit** is capable of delivering to the **Connection Point.** At any given time the measure of **Active Power** an **Interconnector** is capable of importing to or exporting from the **Connection Point** and the term **"Availabilities"** shall be constructed accordingly. This can be calculated as a gross figure.

Black Start Capability	Ability in respect of a **Black Start Station**, for at least one of its **Centrally Dispatched Generation Units** or **Interconnector** to start-up from **Shutdown**, without importing energy from the **Transmission System**, and to energise a part of the **Transmission System** and be **Synchronised** or energised (for **Interconnectors**) to the **Transmission System** upon instruction from the **TSO.**
Black Start Station	A **Power Station** and or **Interconnector** which is registered pursuant to **Grid Code** as having a **Black Start Capability**
Committed Outage Programme	A programme of **Outages** of **the Generator's Generation Units** and of **Interconnectors** prepared by the **TSO** pursuant to Section OC2 and covering year 1.
Dispatch	The issue by the **TSO** of instructions to a **Generator, Pumped Storage Generator**, **Interconnector Owner or InterconnectorOperator**, **Dispatchable Demand Customer** 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.
Emergency Instruction	A **Dispatch** instruction issued by the **TSO,** pursuant to SDC2.11 to a **CDGU** or **Interconnectors** which may require an action or response which is outside the limits implied by the then current **Declarations.**
Forced Outage Probability	The probability, in percentage terms, of a **Generation Unit** or an **Interconnector** not being available to provide **Energy** or **Ancillary Services.**
Indicative Outage Programme	A programme of **Outages** of the **Generator**'s **Generation Units or Interconnectors** prepared by the **TSO** pursuant to OC2 and covering years 4-7 ahead.
Interconnector Filter	A tuned 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**.
Operating Reserve	The additional **MW Output** required from **Generation Units** or **Interconnector** import or **Interconnector** export adjustment or **Demand** reduction which must be realisable in real time operation to contain and correct any potential **Power System Frequency** deviation to an acceptable level. It will include **Primary Operating Reserve, Secondary Operating Reserve** and **Tertiary Operating Reserve.**

Outage	In relation to a **Generation Unit**, a total or partial reduction in **Availability** such that the **Generation Unit** is unavailable to achieve its full **Registered Capacity** in accordance with its **Registered Operating Characteristics.** In relation to a **Demand Side Unit**, a total or partial reduction in **Availability** such that the **Demand Side Unit** is unavailable to achieve its full **Demand Reduction Capability** in accordance with its submitted **Technical Parameters**. In relation to an **Interconnector**, a total or partial reduction in **Availability** such that the **Interconnector** is unavailable to achieve its full **Interconnector Registered Capacity** in accordance with its **Registered Operating Characteristics.**
Provisional Outage	An **Outage** programme of the **Generator's Generation Units** and of **Interconnectors**, as prepared by the **TSO** pursuant to OC2 and covering years 2-3 ahead.
Registered Operating Characteristics	The values of a **Generation Unit's Operating Characteristics** for operation of the **Generation Unit** pursuant to the **Grid Code** registered under the **Connection Conditions**. The values of an **Interconnector's Operating Characteristics** for operation of the **Interconnector** pursuant to the **Grid Code** registered under the **Connection Conditions**.
Reserve Characteristics	The MW level of reserve available at any given MW **Output** of a **CDGU** or **Interconnector** as set out in the available **Ancillary Service Agreement**.

User System	Any system owned or operated by a **User** comprising:- (i) **Generating Units;** (ii) **Interconnectors;** and/or (iii) systems consisting (wholly or mainly) of electric circuits used for the distribution of electricity from **Grid Supply Points** or **Generating Units** or other entry points to the point of delivery to **Customers**, or other **Users**; and **Plant** and/or **Apparatus** connecting:- (i) the system as described above; or (ii) **Demand Customers'** equipment; to the **Transmission System** or to the relevant other **User System**, as the case may be. The **User System** includes any **Remote Transmission Assets** operated by such **User** or other person and any **Plant** and/or **Apparatus** and meters owned or operated by the **User** or other person in connection with the distribution of electricity but does not include any part of the **Transmission System**.
Voltage Regulation Set-point	The **Voltage** in kV that the **Voltage Regulation System** will act to regulate by continuous modulation of the **Interconnector's** or **Wind Farms Power Station**'s **Reactive Power**.
Voltage Regulation System Slope Setting	The percentage change in **Transmission System Voltage** that would cause the **Reactive Power** output of the **Interconnector** or **Controllable WFPS** to vary from maximum **Mvar** production to maximum **Mvar** absorption or vice-versa.

MODIFICATION DESCRIPTION Overview SUMMARY DESCRIPTION OF: a) THE REASON FOR THE RECOMMENDED MODIFICATION b) HISTORY OF PROGRESSION THROUGH GCRPS, WORKING GROUP AND/OR CONSULTATION c) SUMMARY NOTE OF ANY OBJECTIONS TO THE RECOMMENDED CHANGE FROM GCRP MEMBERS OR CONSULTATION RESPONSES d) OUTCOME OF ANY GCRP MEETING ACTIONS RELATING TO THE RECOMMENDED MODIFICATION	These Grid Code modifications establish minimum technical requirements for current and future Interconnector development to the Power System and are a continuation of the modification previously proposed to the GCRP (MPID 187). Additional Requirements are highlighted within the Planning Code section which set the Registered Data requirements for Interconnectors. The requirements within the applicable OC sections (excluding relevant OC4 & SDC sections which will be presented to GCRP in the future) capture Interconnectors in the relevant Operating Code Sections as listed above. These OC sections set the relationship between the TSO and Interconnector Operator for various Operating requirements during the lifetime of the plant. This modification was presented at GCRP #27, 23rd Feb 2011 and has been accepted by the panel members of GCRP #27 subject to some minor modifications to the text as included in the Minutes of the GCRP #27. No objections were received to the recommended changes.
IMPLICATION OF NOT IMPLEMENTING THE MODIFICATION	Currently no technical requirements exist in the Grid Code for Interconnectors. The GCRP panel member representing Interconnectors stressed that the East-West Interconnector is at a critical stage of the design phase, financial and timing risks exist while these technical requirements remain unapproved.