

Public

All Recipients of the Serviced Grid Code

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## **THE SERVICED GRID CODE – ISSUE 6 REVISION 35**

### **INCLUSION OF REVISED SECTION**

- Glossary & Definitions
- Operating Code 2
- Operating Code 7
- Balancing Code 1

### **SUMMARY OF CHANGES**

These changes arise from the implementation of: GC0183: Generator and Interconnector Availability During a Severe Space Weather Event.

Many thanks,

Code Administrator

National Energy System Operator

# THE GRID CODE

## ISSUE 6

### REVISION 35

**04 December 2025**

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## GLOSSARY & DEFINITIONS

(GD)

GD.1 In the Grid Code the following words and expressions shall, unless the subject matter or context otherwise requires or is inconsistent therewith, bear the following meanings:

<b>Access Group</b>	<p>A group of <b>Connection Points</b> within which a <b>User</b> declares under the <b>Planning Code</b></p> <p>(a) An interconnection and/or</p> <p>(b) A need to redistribute <b>Demand</b> between those <b>Connection Points</b> either pre-fault or post-fault</p> <p>Where a single <b>Connection Point</b> does not form part of an <b>Access Group</b> in accordance with the above, that single <b>Connection Point</b> shall be considered to be an <b>Access Group</b> in its own right.</p>
<b>Access Period</b>	<p>A period of time in respect of which each <b>Transmission Interface Circuit</b> is to be assessed as whether or not it is capable of being maintained as derived in accordance with PC.A.4.1.4. The period shall commence and end on specified calendar weeks.</p>
<b>Act</b>	<p>The Electricity Act 1989.</p>

<p><b>Active Control Based Droop Power</b></p>	<p><b>The Active Control Based Power</b> output supplied by a <b>Grid Forming Plant</b> through controlled means (be it manual or automatic).</p> <p>For <b>GBGF-I</b> this is equivalent to a <b>Synchronous Generating Unit</b> with a traditional governor coupled to its prime mover.</p> <p><b>Active Control Based Droop Power</b> is used by <b>The Company</b> to control <b>System Frequency</b> changes through the instruction of <b>Primary Response</b> and <b>Secondary Response</b>.</p>
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<b>Active Control Based Power</b>	<p>The <b>Active Power</b> output supplied by a <b>Grid Forming Plant</b> through controlled means (be it manual or automatic) of the positive phase sequence Root Mean Square <b>Active Power</b> produced at fundamental <b>System Frequency</b> by the control system of a <b>Grid Forming Unit</b>.</p> <p>For <b>GBGF-I</b>, this is equivalent to a <b>Synchronous Generating Unit</b> with a traditional governor coupled to its prime mover.</p> <p><b>Active Control Based Power</b> includes <b>Active Power</b> changes that results from a change to the <b>Grid Forming Plant Owners</b> available set points that have a 5 Hz limit on the bandwidth of the provided response.</p> <p><b>Active Control Based Power</b> also includes <b>Active Power</b> components produced by the normal operation of a <b>Grid Forming Plant</b> that comply with the <b>Engineering Recommendation P28</b> limits. These <b>Active Power</b> components do not have a 5 Hz limit on the bandwidth of the provided response.</p> <p><b>Active Control Based Power</b> does not include <b>Active Power</b> components proportional to <b>System Frequency</b>, slip or deviation that provide damping power to emulate the natural damping function provided by a real <b>Synchronous Generating Unit</b>.</p>
<b>Active Damping Power</b>	<p>The <b>Active Power</b> naturally injected or absorbed by a <b>Grid Forming Plant</b> to reduce <b>Active Power</b> oscillations in the <b>Total System</b>.</p> <p>More specifically, <b>Active Damping Power</b> is the damped response of a <b>Grid Forming Plant</b> to an oscillation between the voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> and the voltage of the <b>Internal Voltage Source</b> of the <b>Grid Forming Plant</b>.</p> <p>For the avoidance of doubt, <b>Active Damping Power</b> is an inherent capability of a <b>Grid Forming Plant</b> that starts to respond naturally, within less than 5ms to low frequency oscillations in the <b>System Frequency</b>.</p>
<b>Active Energy</b>	<p>The electrical energy produced, flowing or supplied by an electric circuit during a time interval, being the integral with respect to time of the instantaneous power, measured in units of watt-hours or standard multiples thereof, ie:</p> <p>1000 Wh = 1 kWh</p> <p>1000 kWh = 1 MWh</p> <p>1000 MWh = 1 GWh</p> <p>1000 GWh = 1 TWh</p>

<b>Active Frequency Response Power</b>	<p>The injection or absorption of <b>Active Power</b> by a <b>Grid Forming Plant</b> to or from the <b>Total System</b> during a deviation of the <b>System Frequency</b> away from the <b>Target Frequency</b>.</p> <p>For a <b>GBGF-I</b> this is very similar to <b>Primary Response</b> but with a response time to achieve the declared service capability (which could be the <b>Maximum Capacity</b> or <b>Registered Capacity</b>) within 1 second.</p> <p>For <b>GBGF-I</b> this can rapidly inject or absorb <b>Active Power</b> in addition to the phase-based <b>Active Inertia Power</b> to provide a system with desirable <b>NFP</b> plot characteristics.</p> <p><b>Active Frequency Response Power</b> can be produced by any viable control technology.</p>
<b>Active Inertia Power</b>	<p>The injection or absorption of <b>Active Power</b> by a <b>Grid Forming Plant</b> to or from the <b>Total System</b> during a <b>System Frequency</b> change.</p> <p>The transient injection or absorption of <b>Active Power</b> from a <b>Grid Forming Plant</b> to the <b>Total System</b> as a result of the <b>ROCOF</b> value at the <b>Grid Entry Point</b> or <b>User System Entry Point</b>. This requires a sufficient energy storage capacity of the <b>Grid Forming Plant</b> to meet the <b>Grid Forming Capability</b> requirements specified in ECC.6.3.19.</p> <p>For the avoidance of doubt, this includes the rotational inertial energy of the complete drive train of a <b>Synchronous Generating Unit</b>.</p> <p><b>Active Inertia Power</b> is an inherent capability of a <b>Grid Forming Plant</b> to respond naturally, within less than 5ms, to changes in the <b>System Frequency</b>.</p> <p>For the avoidance of doubt, the <b>Active Inertia Power</b> has a slower frequency response compared with <b>Active Phase Jump Power</b>.</p>
<b>Active Phase Jump Power</b>	<p>The transient injection or absorption of <b>Active Power</b> from a <b>Grid Forming Plant</b> to the <b>Total System</b> as a result of changes in the phase angle between the <b>Internal Voltage Source</b> of the <b>Grid Forming Plant</b> and the <b>Grid Entry Point</b> or <b>User System Entry Point</b>.</p> <p>In the event of a disturbance or fault on the <b>Total System</b>, a <b>Grid Forming Plant</b> will instantaneously (within 5ms) inject or absorb <b>Active Phase Jump Power</b> to the <b>Total System</b> as a result of the phase angle change.</p> <p>For <b>GBGF-I</b> as a minimum value this is up to the <b>Phase Jump Angle Limit Power</b>.</p> <p><b>Active Phase Jump Power</b> is an inherent capability of a <b>Grid Forming Plant</b> that starts to respond naturally, within less than 5 ms and can have frequency components of over 1000 Hz.</p>
<b>Active Power</b>	<p>The product of voltage and the in-phase component of alternating current measured in units of watts and standard multiples thereof, ie:</p> <p>1000 Watts = 1 kW</p> <p>1000 kW = 1 MW</p> <p>1000 MW = 1 GW</p> <p>1000 GW = 1 TW</p>

<b>Active ROCOF Response Power</b>	The <b>Active Inertia Power</b> developed from a <b>Grid Forming Plant</b> plus the <b>Active Frequency Response Power</b> that can be supplied by a <b>Grid Forming Plant</b> when subject to a rate of change of the <b>System Frequency</b> .
<b>Additional BM Unit</b>	Has the meaning as set out in the <b>BSC</b>
<b>Affiliate</b>	In relation to any person, any holding company or subsidiary of such person or any subsidiary of a holding company of such person, in each case within the meaning of Section 736, 736A and 736B of the Companies Act 1985 as substituted by section 144 of the Companies Act 1989 and, if that latter section is not in force at the <b>Transfer Date</b> , as if such section were in force at such date.
<b>AF Rules</b>	Has the meaning given to “allocation framework” in section 13(2) of the Energy Act 2013.
<b>Agency</b>	As defined in the <b>ESO Licence</b> .
<b>Aggregator</b>	A <b>BM Participant</b> who controls one or more <b>Additional BM Units</b> or <b>Secondary BM Units</b> .
<b>Aggregator Impact Matrix</b>	Defined for an <b>Additional BM Unit</b> or a <b>Secondary BM Unit</b> . Provides data allowing <b>The Company</b> to model the result of a <b>Bid-Offer Acceptance</b> on each of the <b>Grid Supply Points</b> within the <b>GSP Group</b> over which the <b>Additional BM Unit</b> or <b>Secondary BM Unit</b> is defined.
<b>Alternate Member</b>	Shall mean an alternate member for the <b>Panel Members</b> elected or appointed in accordance with this GR.7.2(a) or (b).
<b>Anchor</b>	<b>Plant</b> , owned and operated by a <b>Restoration Contractor</b> which can <b>Start-Up</b> from <b>Shutdown</b> and energise a part of the <b>Total System</b> upon instruction from <b>The Company</b> or a <b>Network Operator</b> or a relevant <b>Transmission Licensee</b> within a defined time period, without an external electrical power supply from the <b>Total System</b> .
<b>Anchor DC Converter Test</b>	A test carried out by an <b>Anchor DC Converter Owner</b> on an <b>Anchor DC Converter</b> while the <b>Anchor DC Converter</b> is disconnected from all external electrical power supplies from the <b>Total System</b> .
<b>Anchor Generating Unit Test</b>	A test carried out on an <b>Anchor Generating Unit</b> or a <b>CCGT</b> unit or a <b>Power Generating Module</b> , as the case may be, at an <b>Anchor Power Station</b> while the <b>Anchor Power Station</b> remains energised from the <b>Total System</b> .
<b>Anchor HVDC System Test</b>	A test carried out by an <b>Anchor HVDC System Owner</b> while the <b>Anchor HVDC System</b> is disconnected from all external electrical power supplies from the <b>Total System</b> .

<b>Anchor Plant Capability</b>	The ability of a <b>Restoration Contractor's Plant</b> to <b>Start-Up</b> from <b>Shutdown</b> and to energise and maintain a part of the <b>Total System</b> upon instruction from <b>The Company</b> or <b>Relevant Transmission Licensee</b> (in Scotland) or relevant <b>Network Operator</b> , within a defined time period, without an external electrical power supply from the <b>Total System</b> . In the case of a <b>Local Joint Restoration Plan</b> the defined period of time is within 2 hours of an instruction from <b>The Company</b> or <b>Relevant Transmission Licensee</b> . In the case of a <b>Distribution Restoration Zone Plan</b> , the defined period of time is within 8 hours of an instruction from relevant <b>Network Operator</b> .
<b>Anchor Plant Test</b>	A test conducted on <b>Plant</b> to confirm it is capable of meeting the requirements of an <b>Anchor Restoration Contract</b> .
<b>Anchor Power Station Test</b>	A test carried out by an <b>Anchor Generator</b> at an <b>Anchor Power Station</b> while that <b>Anchor Power Station</b> is disconnected from all external electrical power supplies from the <b>Total System</b> .
<b>Anchor Restoration Contract</b>	In the case of a <b>Local Joint Restoration Plan</b> or <b>Offshore Local Joint Restoration Plan</b> , a contract between <b>The Company</b> and an <b>Anchor Restoration Contractor</b> for the provision of an <b>Anchor Plant Capability</b> . In the case of a <b>Distribution Restoration Zone Plan</b> is an agreement between <b>The Company</b> and relevant <b>Network Operator</b> and <b>Anchor Restoration Contractor</b> for the provision of an <b>Anchor Plant Capability</b> .
<b>Anchor Restoration Contractor</b>	A <b>Restoration Contractor</b> with an <b>Anchor Restoration Contract</b> .
<b>Anchor Plant Unit Test</b>	A test carried out on a <b>Generating Unit</b> or a <b>CCGT Unit</b> or a <b>Power Generating Module</b> , or a <b>HVDC System</b> or a <b>DC Converter</b> as the case may be, at the site of an <b>Anchor Plant</b> while the <b>Anchor Plant</b> is supplied from all external power supplies.
<b>Ancillary Service</b>	A <b>System Ancillary Service</b> and/or a <b>Commercial Ancillary Service</b> , as the case may be. An <b>Ancillary Service</b> may include one or more <b>Demand Response Services</b> .
<b>Ancillary Services Agreement</b>	An agreement between a <b>User</b> and <b>The Company</b> for the payment by <b>The Company</b> to that <b>User</b> in respect of the provision by such <b>User</b> of <b>Ancillary Services</b> .
<b>Annual Average Cold Spell Conditions</b> or <b>ACS Conditions</b>	A particular combination of weather elements which gives rise to a level of peak <b>Demand</b> within a <b>Financial Year</b> which has a 50% chance of being exceeded as a result of weather variation alone.
<b>Apparatus</b>	Other than in <b>OC8</b> , means all equipment in which electrical conductors are used, supported or of which they may form a part. It includes <b>Users'</b> equipment which imposes <b>Demand</b> on the <b>System</b> .  In <b>OC8</b> , it means <b>High Voltage</b> electrical circuits forming part of a <b>System</b> on which <b>Safety Precautions</b> may be applied to allow work and/or testing to be carried out on a <b>System</b> .



<b>Apparent Power</b>	The product of voltage and of alternating current measured in units of voltamperes and standard multiples thereof, ie:  1000 VA = 1 kVA 1000 kVA = 1 MVA
<b>Approved Fast Track Proposal</b>	Has the meaning given in GR.26.7, provided that no objection is received pursuant to GR.26.12.
<b>Approved Grid Code Self-Governance Proposal</b>	Has the meaning given in GR.24.10.
<b>Approved Modification</b>	Has the meaning given in GR.22.7
<b>Assimilated Law</b>	Has the same meaning as that given by section 6(7) of the European Union (Withdrawal) Act 2018
<b>Authorised Certifier</b>	An entity that issues <b>Equipment Certificates</b> and <b>Power Generating Module Documents</b> and whose accreditation is given by the United Kingdom Accreditation Service or such other body as may be established from time to time to carry out the function of accreditation.
<b>Authorised Electricity Operator</b>	Any person (other than <b>The Company</b> ) who is authorised under the <b>Act</b> to generate, participate in the transmission of, distribute or supply electricity which shall include any <b>Interconnector Owner</b> or <b>Interconnector User</b> .
<b>Authority-Led Modification</b>	A <b>Grid Code Modification Proposal</b> in respect of a <b>Significant Code Review</b> , raised by the Authority pursuant to GR.17
<b>Authority-Led Modification Report</b>	Has the meaning given in GR.17.4.
<b>Authority for Access</b>	An authority which grants the holder the right to unaccompanied access to sites containing exposed <b>HV</b> conductors.
<b>Authority, The</b>	The <b>Authority</b> established by section 1 (1) of the Utilities Act 2000.
<b>Automatic Voltage Regulator or AVR</b>	The continuously acting automatic equipment controlling the terminal voltage of a <b>Synchronous Generating Unit</b> or <b>Synchronous Power Generating Module</b> by comparing the actual terminal voltage with a reference value and controlling by appropriate means the output of an <b>Exciter</b> , depending on the deviations.
<b>Auxiliaries</b>	Any item of <b>Plant</b> and/or <b>Apparatus</b> not directly a part of the boiler plant or <b>Power Generating Module</b> or <b>Generating Unit</b> or <b>DC Converter</b> or <b>HVDC Equipment</b> or <b>Power Park Module</b> , but required for the boiler plant's or <b>Power Generating Module's</b> or <b>Generating Unit's</b> or <b>DC Converter's</b> or <b>HVDC Equipment's</b> or <b>Power Park Module's</b> functional operation.
<b>Auxiliary Diesel Engine</b>	A diesel engine driving a <b>Power Generating Module</b> or <b>Generating Unit</b> which can supply a <b>Unit Board</b> or <b>Station Board</b> , which can start without an electrical power supply from outside the <b>Power Station</b> within which it is situated.

<b>Auxiliary Energy Supplies</b>	An electricity supply (which could be derived from an <b>Auxiliary Diesel Engine</b> or <b>Auxiliary Gas Turbine</b> or other source of energy) that is necessary to power the auxiliary and ancillary equipment on which a <b>Power Generating Module</b> or <b>HVDC System</b> or <b>DC Converter</b> or other item of <b>Plant</b> relies for it to be capable of generating <b>Active</b> or <b>Reactive Power</b> and which is generally supplied via a <b>Unit Board</b> or <b>Station Board</b> , or equivalent. <b>Auxiliary Energy Supplies</b> must be available without an external electrical power supply from the <b>Total System</b> . <b>Auxiliary Energy Supplies</b> do not include the mains-independent light current supplies necessary to operate <b>Critical Tools and Facilities</b> .
<b>Auxiliary Gas Turbine</b>	A <b>Gas Turbine Unit</b> , which can supply a <b>Unit Board</b> or <b>Station Board</b> , which can start without an electrical power supply from outside the <b>Power Station</b> within which it is situated.
<b>Average Conditions</b>	That combination of weather elements within a period of time which is the average of the observed values of those weather elements during equivalent periods over many years (sometimes referred to as normal weather).
<b>Back-Up Protection</b>	A <b>Protection</b> system which will operate when a system fault is not cleared by other <b>Protection</b> .
<b>Balancing and Settlement Code</b> or <b>BSC</b>	The code of that title as from time to time amended.
<b>Balancing Code</b> or <b>BC</b>	That portion of the Grid Code which specifies the <b>Balancing Mechanism</b> process.
<b>Balancing Mechanism</b>	Has the meaning set out in the <b>ESO Licence</b> .
<b>Balancing Mechanism Reporting Agent</b> or <b>BMRA</b>	Has the meaning set out in the <b>BSC</b> .
<b>Balancing Mechanism Reporting Service</b> or <b>BMRS</b>	Has the meaning set out in the <b>BSC</b> .
<b>Balancing Principles Statement</b>	A statement prepared by <b>The Company</b> in accordance with condition C9 of the <b>ESO Licence</b> .
<b>Balancing Mechanism Window Period</b>	Has the meaning set out in the <b>BSC</b> .
<b>Baseline Forecast</b>	Has the meaning given to the term 'baseline forecast' in Section G of the <b>BSC</b> .
<b>Bid Acceptance</b>	An acceptance by a <b>BM Unit</b> of a <b>Bid-Offer Acceptance</b> to decrease its export onto, or increase its import from, the <b>National Electricity Transmission System</b> , where in this context import and export are as defined in the <b>BSC</b> .
<b>Bid-Offer Acceptance</b>	(a) A communication issued by <b>The Company</b> in accordance with BC2.7; or (b) an <b>Emergency Instruction</b> to the extent provided for in BC2.9.2.3.
<b>Bid-Offer Data</b>	Has the meaning set out in the <b>BSC</b> .

<b>Bilateral Agreement</b>	Has the meaning set out in the <b>CUSC</b> .
<b>Bilateral Embedded Generation Agreement (BEGA)</b>	Has the meaning set out in the <b>CUSC</b> .
<b>Block Loading Capability</b>	The <b>Active Power</b> step and the time between steps (from no load to <b>Rated MW</b> ), which a <b>Generating Unit</b> or <b>Power Generating Module</b> or <b>Power Park Module</b> or <b>HVDC System</b> or <b>DC Converter Station</b> (including <b>Plant</b> and <b>Apparatus</b> owned and operated by a <b>Restoration Contractor</b> ) can instantaneously supply without causing it to trip or go outside the <b>Frequency</b> range of 47.5Hz – 52Hz assuming the <b>Plant</b> is initially operating at a nominal <b>System Frequency</b> of 50Hz (or an otherwise agreed <b>Frequency</b> range).
<b>BM Participant</b>	A person who is responsible for and controls one or more <b>BM Units</b> or where a <b>Bilateral Agreement</b> specifies that a <b>User</b> is required to be treated as a <b>BM Participant</b> for the purposes of the Grid Code. For the avoidance of doubt, it does not imply that they must be active in the <b>Balancing Mechanism</b> .
<b>BM Unit</b>	Has the meaning set out in the <b>BSC</b> , except that for the purposes of the Grid Code the reference to “Party” in the <b>BSC</b> shall be a reference to <b>User</b> .
<b>BM Unit Data</b>	The collection of parameters associated with each <b>BM Unit</b> , as described in Appendix 1 of <b>BC1</b> .
<b>Boiler Time Constant</b>	Determined at <b>Registered Capacity</b> or <b>Maximum Capacity</b> (as applicable), the boiler time constant will be construed in accordance with the principles of the IEEE Committee Report "Dynamic Models for Steam and Hydro Turbines in Power System Studies" published in 1973 which apply to such phrase.
<b>British Standards or BS</b>	Those standards and specifications approved by the British Standards Institution.
<b>BSCCo</b>	Has the meaning set out in the <b>BSC</b> .
<b>BSC Panel</b>	Has meaning set out for “Panel” in the <b>BSC</b> .
<b>Business Day</b>	Any week day (other than a Saturday) on which banks are open for domestic business in the City of London.
<b>Cancellation of National Electricity Transmission System Warning</b>	The notification given to <b>Users</b> when a <b>National Electricity Transmission System Warning</b> is cancelled.
<b>Capacity Market Documents</b>	The <b>Capacity Market Rules</b> , The <b>Electricity Capacity Regulations</b> 2014 and any other Regulations made under Chapter 3 of Part 2 of the Energy Act 2013 which are in force from time to time.
<b>Capacity Market Rules</b>	The rules made under section 34 of the Energy Act 2013 as modified from time to time in accordance with that section and The Electricity Capacity Regulations 2014.

<b>Cascade Hydro Scheme</b>	<p>Two or more hydro-electric <b>Generating Units</b>, owned or controlled by the same <b>Generator</b>, which are located in the same water catchment area and are at different ordnance datums and which depend upon a common source of water for their operation, known as:</p> <ul style="list-style-type: none"> <li>(a) Moriston</li> <li>(b) Killin</li> <li>(c) Garry</li> <li>(d) Conon</li> <li>(e) Clunie</li> <li>(f) Beaully</li> </ul> <p>which will comprise more than one <b>Power Station</b>.</p>
<b>Cascade Hydro Scheme Matrix</b>	The matrix described in Appendix 1 to <b>BC1</b> under the heading <b>Cascade Hydro Scheme Matrix</b> .
<b>Category 1 Intertripping Scheme</b>	A <b>System to Generator Operational Intertripping Scheme</b> arising from a Variation to Connection Design following a request from the relevant <b>User</b> which is consistent with the criteria specified in the <b>Security and Quality of Supply Standard</b> .
<b>Category 2 Intertripping Scheme</b>	<p>A System to Generator Operational Intertripping Scheme which is:-</p> <ul style="list-style-type: none"> <li>(i) required to alleviate an overload on a circuit which connects the <b>Group</b> containing the <b>User's Connection Site</b> to the <b>National Electricity Transmission System</b>; and</li> <li>(ii) installed in accordance with the requirements of the planning criteria of the <b>Security and Quality of Supply Standard</b> in order that measures can be taken to permit maintenance access for each transmission circuit and for such measures to be economically justified,</li> </ul> <p>and the operation of which results in a reduction in <b>Active Power</b> on the overloaded circuits which connect the <b>User's Connection Site</b> to the rest of the <b>National Electricity Transmission System</b> which is equal to the reduction in <b>Active Power</b> from the <b>Connection Site</b> (once any system losses or third party system effects are discounted).</p>
<b>Category 3 Intertripping Scheme</b>	A <b>System to Generator Operational Intertripping Scheme</b> which, where agreed by <b>The Company</b> and the <b>User</b> , is installed to alleviate an overload on, and as an alternative to, the reinforcement of a third party system, such as the <b>Distribution System</b> of a <b>Public Distribution System Operator</b> .
<b>Category 4 Intertripping Scheme</b>	A <b>System to Generator Operational Intertripping Scheme</b> installed to enable the disconnection of the <b>Connection Site</b> from the <b>National Electricity Transmission System</b> in a controlled and efficient manner in order to facilitate the timely restoration of the <b>National Electricity Transmission System</b> .
<b>Caution Notice</b>	A notice conveying a warning against interference.
<b>CENELEC</b>	European Committee for Electrotechnical Standardisation.

<b>Citizens Advice</b>	Means the National Association of Citizens Advice Bureaux.
<b>Citizens Advice Scotland</b>	Means the Scottish Association of Citizens Advice Bureaux.
<b>CfD Counterparty</b>	A person designated as a “CfD counterparty” under section 7(1) of the Energy Act 2013.
<b>CfD Documents</b>	The <b>AF Rules</b> , The Contracts for Difference (Allocation) Regulations 2014, The Contracts for Difference (Definition of Eligible Generator) Regulations 2014 and The Contracts for Difference (Electricity Supplier Obligations) Regulations 2014 and any other regulations made under Chapter 2 of Part 2 of the Energy Act 2013 which are in force from time to time.
<b>CfD Settlement Services Provider</b>	means any person: <ul style="list-style-type: none"> <li>(i) appointed for the time being and from time to time by a <b>CfD Counterparty</b>; or</li> <li>(ii) who is designated by virtue of Section C1.2.1B of the Balancing and Settlement Code,</li> </ul> in either case to carry out any of the CFD settlement activities (or any successor entity performing CFD settlement activities).
<b>CCGT Module Matrix</b>	The matrix described in Appendix 1 to BC1 under the heading <b>CCGT Module Matrix</b> .
<b>CCGT Module Planning Matrix</b>	A matrix in the form set out in Appendix 3 of OC2 showing the combination of <b>CCGT Units</b> within a <b>CCGT Module</b> which would be running in relation to any given MW output.
<b>Closed Distribution System or CDSO</b>	A distribution system classified as a <b>Closed Distribution System</b> by the <b>Authority</b> which distributes electricity within a geographically confined industrial, commercial or shared services site and does not supply household <b>Customers</b> , without prejudice to incidental use by a small number of households located within the area served by the <b>System</b> and with employment or similar associations with the owner of the <b>System</b> .
<b>CM Administrative Parties</b>	The <b>Secretary of State</b> , the <b>CM Settlement Body</b> , and any <b>CM Settlement Services Provider</b> .
<b>CM Settlement Body</b>	the Electricity Settlements Company Ltd or such other person as may from time to time be appointed as Settlement Body under regulation 80 of the Electricity Capacity Regulations 2014.
<b>CM Settlement Services Provider</b>	any person with whom the <b>CM Settlement Body</b> has entered into a contract to provide services to it in relation to the performance of its functions under the <b>Capacity Market Documents</b> .

<b>Code Administration Code of Practice</b>	Means the code of practice approved by the <b>Authority</b> and: (a) developed and maintained by the code administrators in existence from time to time; and (b) amended subject to the <b>Authority's</b> approval from time to time; and (c) re-published from time to time;
<b>Code Administrator</b>	Means <b>The Company</b> carrying out the role of <b>Code Administrator</b> in accordance with the General Conditions.
<b>Combined Cycle Gas Turbine Module or CCGT Module</b>	A collection of <b>Generating Units</b> (registered as a <b>CCGT Module</b> (which could be within a <b>Power Generating Module</b> ) under the <b>PC</b> ) comprising one or more <b>Gas Turbine Units</b> (or other gas based engine units) and one or more <b>Steam Units</b> where, in normal operation, the waste heat from the <b>Gas Turbines</b> is passed to the water/steam system of the associated <b>Steam Unit</b> or <b>Steam Units</b> and where the component units within the <b>CCGT Module</b> are directly connected by steam or hot gas lines which enable those units to contribute to the efficiency of the combined cycle operation of the <b>CCGT Module</b> .
<b>Combined Cycle Gas Turbine Unit or CCGT Unit</b>	A <b>Generating Unit</b> within a <b>CCGT Module</b> .
<b>Commercial Ancillary Services</b>	<b>Ancillary Services</b> , other than <b>System Ancillary Services</b> , utilised by <b>The Company</b> in operating the <b>Total System</b> if a <b>User</b> (or other person such as a <b>Demand Response Provider</b> ) has agreed to provide them under an <b>Ancillary Services Agreement</b> or under a <b>Bilateral Agreement</b> with payment being dealt with under an <b>Ancillary Services Agreement</b> or in the case of <b>Externally Interconnected System Operators</b> or <b>Interconnector Users</b> , under any other agreement (and in the case of <b>Externally Interconnected System Operators</b> and <b>Interconnector Users</b> includes <b>Ancillary Services</b> equivalent to or similar to <b>System Ancillary Services</b> ).
<b>Commercial Boundary</b>	Has the meaning set out in the <b>CUSC</b>
<b>Committed Level</b>	The expected <b>Active Power</b> output from a <b>BM Unit</b> after accepting a <b>Bid-Offer Acceptance</b> or <b>RR Instruction</b> or a combination of <b>Bid-Offer Acceptances</b> and <b>RR Instructions</b> .
<b>Committed Project Planning Data</b>	Data relating to a <b>User Development</b> once the offer for a <b>CUSC Contract</b> is accepted.
<b>Common Collection Busbar</b>	A busbar within a <b>Power Park Module</b> to which the higher voltage side of two or more <b>Power Park Unit</b> generator transformers are connected.
<b>Competitively Appointed Transmission Licensee</b>	A person granted a <b>Transmission Licence</b> (as defined in Section 6(1)b of the Act) to own and operate an <b>Onshore Transmission System</b> on the basis of competitive tendering undertaken pursuant to Section 6C of the Electricity Act 1989.
<b>Competitively Appointed Transmission Licensee Interface Point</b>	The electrical point of connection between a <b>Transmission System</b> owned by a <b>Competitively Appointed Transmission Licensee</b> and the assets of another <b>Transmission Licensee</b> .

<b>Completion Date</b>	Has the meaning set out in the <b>Bilateral Agreement</b> with each <b>User</b> to that term or in the absence of that term to such other term reflecting the date when a <b>User</b> is expected to connect to or start using the <b>National Electricity Transmission System</b> . In the case of an <b>Embedded Medium Power Station</b> or <b>Embedded DC Converter Station</b> or <b>Embedded HVDC System</b> having a similar meaning in relation to the <b>Network Operator's System</b> as set out in the <b>Embedded Development Agreement</b> .
<b>Complex</b>	A <b>Connection Site</b> together with the associated <b>Power Station</b> and/or <b>Network Operator</b> substation and/or associated <b>Plant</b> and/or <b>Apparatus</b> , as appropriate.
<b>Compliance Processes or CP</b>	That portion of the Grid Code which is identified as the <b>Compliance Processes</b> .
<b>Compliance Statement</b>	<p>A statement completed by the relevant <b>User</b> confirming compliance with each of the relevant Grid Code provisions, and the supporting evidence in respect of such compliance, of its:</p> <p><b>Generating Unit(s)</b>; or,</p> <p><b>Power Generating Modules</b> (including <b>DC Connected Power Park Modules</b> and/or <b>Electricity Storage Modules</b>); or,</p> <p><b>CCGT Module(s)</b>; or,</p> <p><b>Power Park Module(s)</b>; or,</p> <p><b>DC Converter(s)</b>; or</p> <p><b>HVDC Systems</b>; or</p> <p><b>Plant</b> and <b>Apparatus</b> at an <b>EU Grid Supply Point</b> owned or operated by a <b>Network Operator</b>; or</p> <p><b>Network Operator's</b> entire distribution <b>System</b> where such <b>Network Operator's</b> distribution <b>System</b> comprises solely of <b>Plant</b> and <b>Apparatus</b> procured on or after 7 September 2018 and was connected to the <b>National Electricity Transmission System</b> on or after 18 August 2019. In this case, all connections to the <b>National Electricity Transmission System</b> would comprise only of <b>EU Grid Supply Points</b>; or</p> <p><b>Plant</b> and <b>Apparatus</b> at an <b>EU Grid Supply Point</b> owned or operated by a <b>Non-Embedded Customer</b> where such <b>Non-Embedded Customer</b> is defined as an <b>EU Code User</b>;</p> <p>In the form provided by <b>The Company</b> to the relevant <b>User</b> or another format as agreed between the <b>User</b> and <b>The Company</b>.</p>
<b>Configuration 1 AC Connected Offshore Power Park Module</b>	One or more <b>Offshore Power Park Modules</b> that are connected to an <b>AC Offshore Transmission System</b> and that <b>AC Offshore Transmission System</b> is connected to only one <b>Onshore</b> substation and which has one or more <b>Transmission Interface Points</b> .
<b>Configuration 2 AC Connected Offshore Power Park Module</b>	One or more <b>Offshore Power Park Modules</b> that are connected to a meshed <b>AC Offshore Transmission System</b> and that <b>AC Offshore Transmission System</b> is connected to two or more <b>Onshore</b> substations at its <b>Transmission Interface Points</b> .

<b>Configuration 1 DC Connected Power Park Module</b>	One or more <b>DC Connected Power Park Modules</b> that are connected to an <b>HVDC System</b> or <b>Transmission DC Converter</b> and that <b>HVDC System</b> or <b>Transmission DC Converter</b> is connected to only one <b>Onshore</b> substation and which has one or more <b>Transmission Interface Points</b> .
<b>Configuration 2 DC Connected Power Park Module</b>	One or more <b>DC Connected Power Park Modules</b> that are connected to an <b>HVDC System</b> or <b>Transmission DC Converter</b> and that <b>HVDC System</b> or <b>Transmission DC Converter</b> is connected to more than one <b>Onshore</b> substation at its <b>Transmission Interface Points</b> .
<b>Connection Conditions or CC</b>	That portion of the Grid Code which is identified as the <b>Connection Conditions</b> being applicable to <b>GB Code Users</b> .
<b>Connection Entry Capacity</b>	Has the meaning set out in the <b>CUSC</b> .
<b>Connected Planning Data</b>	Data which replaces data containing estimated values assumed for planning purposes by validated actual values and updated estimates for the future and by updated forecasts for <b>Forecast Data</b> items such as <b>Demand</b> .
<b>Connection Point</b>	A <b>Grid Supply Point</b> or <b>Grid Entry Point</b> , as the case may be.
<b>Connection Site</b>	A <b>Transmission Site</b> or <b>User Site</b> , as the case may be.
<b>Construction Agreement</b>	Has the meaning set out in the <b>CUSC</b>
<b>Consumer Representative</b>	Means the person appointed by the <b>Citizens Advice</b> or the <b>Citizens Advice Scotland</b> (or any successor body) representing all categories of customers, appointed in accordance with GR.4.2(b)
<b>Contingency Reserve</b>	The margin of generation over forecast <b>Demand</b> which is required in the period from 24 hours ahead down to real time to cover against uncertainties in <b>Large Power Station</b> availability and against both weather forecast and <b>Demand</b> forecast errors.
<b>Control Based Reactive Power</b>	The <b>Reactive Power</b> supplied by a <b>Grid Forming Plant</b> through controlled means based on operator adjustment selectable setpoints (these may be manual or automatic).
<b>Control Calls</b>	Telephone calls whose destination and/or origin is a <b>Control Centre</b> or <b>Control Point</b> , either from dedicated control desk telephone systems or dedicated telephone handsets, and which, for the purpose of <b>Control Telephony</b> , have the right to exercise priority over (ie. disconnect) a call of a lower status.
<b>Control Centre</b>	A location used for the purpose of control and operation of the <b>National Electricity Transmission System</b> or <b>DC Converter Station</b> owner's <b>System</b> or <b>HVDC System Owner's System</b> or a <b>User System</b> other than a <b>Generator's System</b> or an <b>External System</b> .
<b>Control Engineer</b>	A person nominated by the relevant party for the control of its <b>Plant</b> and <b>Apparatus</b> .
<b>Control Person</b>	The term used as an alternative to " <b>Safety Co-ordinator</b> " on the <b>Site Responsibility Schedule</b> only.



<b>Control Phase</b>	The <b>Control Phase</b> follows on from the <b>Programming Phase</b> and covers the period down to real time.
<b>Control Point</b>	<p>The point from which:-</p> <ul style="list-style-type: none"> <li>(a) A <b>Non-Embedded Customer's Plant</b> and <b>Apparatus</b> is controlled; or</li> <li>(b) A <b>BM Unit</b> at a <b>Large Power Station</b> or at a <b>Medium Power Station</b> or representing a <b>Cascade Hydro Scheme</b> or with a <b>Demand Capacity</b> with a magnitude of: <ul style="list-style-type: none"> <li>(i) 50MW or more in <b>NGET's Transmission Area</b>; or</li> <li>(ii) 30MW or more in <b>SPT's Transmission Area</b>; or</li> <li>(iii) 10MW or more in <b>SHETL's Transmission Area</b>,</li> <li>(iv) 10MW or more which is connected to an <b>Offshore Transmission System</b></li> </ul> <p>is physically controlled by a <b>BM Participant</b>; or</p> </li> <li>(c) In the case of any other <b>BM Unit</b> or <b>Generating Unit</b> (which could be part of a <b>Power Generating Module</b>), data submission is co-ordinated for a <b>BM Participant</b> and instructions are received from <b>The Company</b>, </li> </ul> <p>as the case may be. For a <b>Generator</b>, this will normally be at a <b>Power Station</b> but may be at an alternative location agreed with <b>The Company</b>. In the case of a <b>DC Converter Station</b> or <b>HVDC System</b>, the <b>Control Point</b> will be at a location agreed with <b>The Company</b>. In the case of a <b>BM Unit</b> of an <b>Interconnector User</b>, the <b>Control Point</b> will be the <b>Control Centre</b> of the relevant <b>Externally Interconnected System Operator</b>.</p>
<b>Control Telephony</b>	The principal method by which a <b>User's Responsible Engineer/Operator</b> , the relevant <b>Transmission Licensees' Control Engineers</b> and <b>The Company's Control Engineers</b> speak to one another for the purposes of control of the <b>Total System</b> in both normal and emergency operating conditions.
<b>Core Industry Document</b>	As defined in the <b>ESO Licence</b> .
<b>Core Industry Document Owner</b>	In relation to a <b>Core Industry Document</b> , the body(ies) or entity(ies) responsible for the management and operation of procedures for making changes to such document

<p><b>Critical Tools and Facilities</b></p>	<p><b>Apparatus</b> and tools required in relation to <b>System Restoration</b>:</p> <p>a) In the case of <b>The Company</b> include, but are not limited to:</p> <ul style="list-style-type: none"> <li>i) Tools for operating and monitoring the <b>Transmission System</b> including but not limited to state estimation, the <b>Balancing Mechanism, Load and System Frequency</b> control, alarms, real time system operation and operational security analysis including off line transmission analysis;</li> <li>ii) The ability to control, protect and monitor transmission assets including switchgear, tap changers and other <b>Transmission System</b> equipment including where available auxiliary equipment and to ensure the safe operation of <b>Plant</b> and <b>Apparatus</b> and the safety of personnel;</li> <li>iii) <b>Control Telephony</b> systems as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5;</li> <li>iv) Operational telephony as provided for in STCP 04-5; and</li> <li>v) Tools and communications systems to facilitate cross border operations.</li> </ul> <p>b) In the case of <b>Generators, HVDC System Owners, DC Converter Station Owners, Defence Service Providers and Restoration Contractors</b>:</p> <ul style="list-style-type: none"> <li>i) Tools for monitoring relevant <b>Plant</b> and <b>Apparatus</b>;</li> <li>ii) The ability to control, protect and monitor their <b>Plant</b> and <b>Apparatus</b> necessary for <b>System Restoration</b> including as applicable primary <b>Plant</b>, switchgear, tap changers and other auxiliary equipment and to ensure the safe operation of <b>Plant</b> and personnel; and</li> <li>iii) <b>Control Telephony</b> as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5.</li> </ul> <p>c) In the case of <b>BM Participants and Virtual Lead Parties</b> who are not <b>Generators, HVDC System Owners, DC Converter Station owners, Defence Service Providers or Restoration Contractors</b> as provided for in item b) above:</p> <ul style="list-style-type: none"> <li>i) Tools for monitoring relevant <b>Plant</b> and <b>Apparatus</b> (excluding <b>Plant</b> and <b>Apparatus</b> not owned by the <b>BM Participant</b> or <b>Virtual Lead Party</b>); and</li> <li>ii) <b>Control Telephony</b> as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5</li> </ul> <p>d) In the case of <b>Network Operators</b>:</p> <ul style="list-style-type: none"> <li>i) Control room <b>Apparatus</b> and tools for monitoring their <b>System</b> including but not limited to, alarms, real time system operation and operational security analysis including off line network analysis;</li> <li>ii) The ability to control, protect and monitor those assets necessary for <b>System Restoration</b> including switchgear, tap changers and other network equipment including where available auxiliary equipment and to ensure the safe operation of <b>Plant</b> and personnel; and</li> <li>iii) <b>Control Telephony</b> as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5.</li> </ul> <p>e) In the case of <b>Non-Embedded Customers</b>:</p> <ul style="list-style-type: none"> <li>i) Tools for monitoring their <b>System</b> including but not limited to, alarms and real time system operation;</li> </ul>
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	<p>ii) The ability to control, protect and monitor those assets necessary for <b>System Restoration</b> including switchgear, tap changers and other network equipment including where available auxiliary equipment and to ensure the safe operation of <b>Plant</b> and personnel; and</p> <p>iii) <b>Control Telephony</b> as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5.</p>
<b>CUSC</b>	Has the meaning set out in the <b>ESO Licence</b> .
<b>CUSC Contract</b>	<p>One or more of the following agreements as envisaged in condition E2 of the <b>ESO Licence</b>:</p> <p>(a) the <b>CUSC Framework Agreement</b>;</p> <p>(b) a <b>Bilateral Agreement</b>;</p> <p>(c) a <b>Construction Agreement</b></p> <p>or a variation to an existing <b>Bilateral Agreement</b> and/or <b>Construction Agreement</b>;</p>
<b>CUSC Framework Agreement</b>	Has the meaning set out in the <b>ESO Licence</b> .
<b>CUSC Party</b>	As defined in the <b>ESO Licence</b> and “CUSC Parties” shall be construed accordingly.
<b>Customer</b>	A person to whom electrical power is provided (whether or not they are the same person as the person who provides the electrical power).
<b>Customer Demand Management</b>	Reducing the supply of electricity to a <b>Customer</b> or disconnecting a <b>Customer</b> in a manner agreed for commercial purposes between a <b>Supplier</b> and its <b>Customer</b> .
<b>Customer Demand Management Notification Level</b>	The level above which a <b>Supplier</b> has to notify <b>The Company</b> of its proposed or achieved use of <b>Customer Demand Management</b> which is 12 MW in England and Wales and 5 MW in Scotland.
<b>Customer Generating Plant</b>	A <b>Power Station</b> or <b>Generating Unit</b> or <b>Power Generating Module</b> of a <b>Customer</b> to the extent that it operates the same exclusively to supply all or part of its own electricity requirements, and does not export electrical power to any part of the <b>Total System</b> .
<b>Damping Factor (<math>\zeta</math>)</b>	<p>The ratio of the actual damping to critical damping.</p> <p>For a <b>GBGF-I</b> the open loop phase angle, for an open loop gain of one, is measured from the systems <b>Nichols Chart</b>.</p> <p>This angle is used to define the system’s equivalent <b>Damping Factor</b> that is the same as the <b>Damping Factor</b> of a second order system with the same open loop phase angle.</p> <p>Alternatively, the <b>Damping Factor</b> refers to the damping of a specific oscillation mode that is associated with the second order system created by the power to angle transfer function as show in Figure PC.A.5.8.1(a) and PCA.5.8.1(b).</p>

<b>Data Publisher</b>	The person providing a reporting service, in relation to data which is submitted to the reporting service under OC2.4.2.3 or a <b>Transmission Licensee</b> , in relation to data which the <b>Transmission Licensee</b> is required to publish.
<b>Data Registration Code or DRC</b>	That portion of the Grid Code which is identified as the <b>Data Registration Code</b> .
<b>Data Validation, Consistency and Defaulting Rules</b>	The rules relating to validity and consistency of data, and default data to be applied, in relation to data submitted under the <b>Balancing Codes</b> , to be applied by <b>The Company</b> under the <b>Grid Code</b> as set out in the document “Data Validation, Consistency and Defaulting Rules” - Issue 8, dated 25 <sup>th</sup> January 2012. The document is available on The Company’s website or upon request from <b>The Company</b> .
<b>DC Connected Power Park Module</b>	A <b>Power Park Module</b> that is connected to one or more <b>HVDC Interface Points</b> .
<b>DC Converter</b>	Any <b>Onshore DC Converter</b> or <b>Offshore DC Converter</b> as applicable to <b>GB Code User’s</b> .
<b>DC Converter Station</b>	An installation comprising one or more <b>Onshore DC Converters</b> connecting a direct current interconnector:  to the <b>National Electricity Transmission System</b> ; or,  (if the installation has a rating of 50MW or more) to a <b>User System</b> ,  and it shall form part of the <b>External Interconnection</b> to which it relates.
<b>DC Network</b>	All items of <b>Plant</b> and <b>Apparatus</b> connected together on the direct current side of a <b>DC Converter</b> or <b>HVDC System</b> .
<b>DCUSA</b>	The Distribution Connection and Use of System Agreement approved by the <b>Authority</b> and required to be maintained in force by each <b>Electricity Distribution Licence</b> holder.
<b>Defence Service Provider</b>	A <b>User</b> with a legal or contractual obligation to provide a service contributing to one or several measures of the <b>System Defence Plan</b> or a party with a contract to meet one or more measures of the <b>System Defence Plan</b> .
<b>Defined Active Damping Power</b>	The <b>Active Damping Power</b> supplied by a <b>GBGF-I</b> when it is operating at the <b>Grid Oscillation Value</b> defined in Table PC.A.5.8.2
<b>De-Load</b>	The condition in which a <b>Genset</b> has reduced or is not delivering electrical power to the <b>System</b> to which it is <b>Synchronised</b> .
$\Delta f$	Deviation from <b>Target Frequency</b>
<b>Demand</b>	The demand of MW and MVar of electricity (i.e. both <b>Active</b> and <b>Reactive Power</b> ), unless otherwise stated.
<b>Demand Aggregation</b>	A process where one or more <b>Demand Facilities</b> or <b>Closed Distribution Systems</b> can be controlled by a <b>Demand Response Provider</b> either as a single facility or <b>Closed Distribution System</b> for the purposes of offering one or more <b>Demand Response Services</b> .

<b>Demand Capacity</b>	Has the meaning as set out in the <b>BSC</b> .
<b>Demand Control</b>	Any or all of the following methods of achieving a <b>Demand</b> reduction: <ul style="list-style-type: none"> <li>(a) <b>Customer</b> voltage reduction initiated by <b>Network Operators</b> (other than following an instruction from <b>The Company</b>);</li> <li>(b) <b>Customer Demand</b> reduction by <b>Disconnection</b> initiated by <b>Network Operators</b> (other than following an instruction from <b>The Company</b>);</li> <li>(c) <b>Demand</b> reduction instructed by <b>The Company</b>;</li> <li>(d) automatic low <b>Frequency Demand Disconnection</b>;</li> <li>(e) emergency manual <b>Demand Disconnection</b>.</li> </ul>
<b>Demand Control Notification Level</b>	The level above which a <b>Network Operator</b> has to notify <b>The Company</b> of its proposed or achieved use of <b>Demand Control</b> which is 12 MW in England and Wales and 5 MW in Scotland.
<b>Demand Facility</b>	A facility which consumes electrical energy and is connected at one or more <b>Grid Supply Points</b> to the <b>National Electricity Transmission System</b> or connection points to a <b>Network Operator's System</b> . A <b>Network Operator's System</b> and/or auxiliary supplies of a <b>Power Generating Module</b> do not constitute a <b>Demand Facility</b> .
<b>Demand Facility Owner</b>	A person who owns or operates one or more <b>Demand Units</b> within a <b>Demand Facility</b> . A <b>Demand Facility Owner</b> who owns or operates a <b>Demand Facility</b> which is directly connected to the <b>Transmission System</b> shall be treated as a <b>Non-Embedded Customer</b> .
<b>Demand Response Active Power Control</b>	<b>Demand</b> within a <b>Demand Facility</b> or <b>Closed Distribution System</b> that is available for modulation by <b>The Company</b> or <b>Network Operator</b> or <b>Relevant Transmission Licensee</b> , which results in an <b>Active Power</b> modification.
<b>Demand Response Provider</b>	A party (other than <b>The Company</b> ) who owns, operates, controls or manages <b>Main Plant and Apparatus</b> (excluding storage equipment) which was first connected to the <b>Total System</b> on or after 18 August 2019 and who had placed <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> on or after 7 September 2018 or is the subject of a <b>Substantial Modification</b> on or after 18 August 2019 and has an agreement with <b>The Company</b> to provide a <b>Demand Response Service(s)</b> . The party may be one or more <b>Customers</b> , a <b>Network Operator</b> or <b>Non-Embedded Customer</b> or <b>EU Code User</b> contracting bilaterally with <b>The Company</b> for the provision of services, or may be a third party providing <b>Demand Aggregation</b> from many individual <b>Customers</b> .
<b>Demand Response Reactive Power Control</b>	A <b>Demand Response Service</b> derived from <b>Reactive Power</b> or <b>Reactive Power</b> compensation devices in a <b>Demand Facility</b> or <b>Closed Distribution System</b> that are available for modulation by <b>The Company</b> or <b>Network Operator</b> or <b>Relevant Transmission Licensee</b> .
<b>Demand Response Transmission Constraint Management</b>	A <b>Demand Response Service</b> derived from <b>Demand</b> within a <b>Demand Facility</b> or <b>Closed Distribution System</b> that is available for modulation by <b>The Company</b> or <b>Network Operator</b> or <b>Relevant Transmission Licensee</b> to manage transmission constraints within the <b>System</b> .

<b>Demand Response Service</b>	<p>A <b>Demand Response Service</b> includes one of more of the following services:</p> <ul style="list-style-type: none"> <li>(a) <b>Demand Response Active Power Control;</b></li> <li>(b) <b>Demand Response Reactive Power Control;</b></li> <li>(c) <b>Demand Response Transmission Constraint Management;</b></li> <li>(d) <b>Demand Response System Frequency Control;</b></li> <li>(e) <b>Demand Response Very Fast Active Power Control.</b></li> </ul> <p>The above <b>Demand Response Services</b> are not exclusive and do not preclude <b>Demand Response Providers</b> from negotiating other services for demand response capability with <b>The Company</b>. Where such services are negotiated they would still be treated as a <b>Demand Response Service</b>.</p>
<b>Demand Response Services Code (DRSC)</b>	That portion of the Grid Code which is identified as the <b>Demand Response Services Code</b> being applicable to <b>Demand Response Providers</b> .
<b>Demand Response System Frequency Control</b>	A <b>Demand Response Service</b> derived from a <b>Demand</b> within one or more <b>Demand Facilities</b> or <b>Closed Distribution Systems</b> that is available for the reduction or increase in response to <b>Frequency</b> fluctuations, made by an autonomous response from those <b>Demand Facilities</b> or <b>Closed Distribution Systems</b> to diminish these fluctuations.
<b>Demand Response Unit Document (DRUD)</b>	A document, issued either by the <b>Non-Embedded Customer</b> , <b>Demand Facility Owner</b> or the <b>CDSO</b> to <b>The Company</b> or the <b>Network Operator</b> (as the case may be) for <b>Demand Units</b> with demand response and providing a <b>Demand Response Service</b> which confirms the compliance of the <b>Demand Unit</b> with the technical requirements set out in the Grid Code and provides the necessary data and statements, including a statement of compliance.
<b>Demand Response Very Fast Active Power Control</b>	A <b>Demand Response Service</b> derived from a <b>Demand</b> within a <b>Demand Facility</b> or <b>Closed Distribution System</b> that can be modulated very fast in response to a <b>Frequency</b> deviation, which results in a very fast <b>Active Power</b> modification.
<b>Demand Unit</b>	An indivisible set of installations containing equipment which can be actively controlled at one or more sites by a <b>Demand Response Provider</b> , <b>Demand Facility Owner</b> , <b>CDSO</b> or by a <b>Non Embedded Customer</b> , either individually or commonly as part of <b>Demand Aggregation</b> through a third party who has agreed to provide <b>Demand Response Services</b> .
<b>Designated Information Exchange System</b>	A facsimile machine or, as agreed between each <b>User</b> with respect to their <b>Control Centre</b> , <b>Trading Point</b> or <b>Control Point</b> and <b>The Company</b> , an <b>Electronic Communication Platform</b> that facilitates the exchange of information between a <b>User</b> and <b>The Company</b> .
<b>Designed Minimum Operating Level</b>	The output (in whole MW) below which a <b>Genset</b> or a <b>DC Converter</b> at a <b>DC Converter Station</b> (in any of its operating configurations) has no <b>High Frequency Response</b> capability.
<b>De-Synchronise</b>	<ul style="list-style-type: none"> <li>(a) The act of taking a <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b>), <b>Generating Unit</b>, <b>Power Park Module</b>, <b>HVDC System</b> or <b>DC Converter</b> off a <b>System</b> to which it has been <b>Synchronised</b>, by opening any connecting circuit breaker; or</li> <li>(b) The act of ceasing to consume electricity at an importing <b>BM Unit</b>; and the term "<b>De-Synchronising</b>" shall be construed accordingly.</li> </ul>

<b>De-synchronised Island Procedure</b>	A formal procedure as set out in OC9.5.4 for the purpose of <b>Synchronising Power Islands</b>
<b>Detailed Planning Data</b>	Detailed additional data which <b>The Company</b> requires under the <b>PC</b> in support of <b>Standard Planning Data</b> , comprising <b>DPD I</b> and <b>DPD II</b> .
<b>Detailed Planning Data Category I or DPD I</b>	The <b>Detailed Planning Data</b> categorised as such in the <b>DRC</b> , and submitted in accordance with PC.4.4.2 or PC.4.4.4 as applicable.
<b>Detailed Planning Data Category II or DPD II</b>	The <b>Detailed Planning Data</b> categorised as such in the <b>DRC</b> , and submitted in accordance with PC.4.4.2 or PC.4.4.4 as applicable.
<b>Disconnection</b>	The physical separation of <b>Users</b> (or <b>Customers</b> ) from the <b>National Electricity Transmission System</b> or a <b>User System</b> as the case may be.
<b>Discrimination</b>	The quality where a relay or protective system is enabled to pick out and cause to be disconnected only the faulty <b>Apparatus</b> .
<b>Disputes Resolution Procedure</b>	The procedure described in the <b>CUSC</b> relating to disputes resolution.
<b>Distribution Code</b>	The distribution code required to be drawn up by each <b>Electricity Distribution Licence</b> holder and approved by the <b>Authority</b> , as from time to time revised with the approval of the <b>Authority</b> .
<b>Distribution Restoration Contract</b>	An agreement between an <b>Anchor Plant Owner</b> or <b>Top Up Restoration Contractor</b> and <b>The Company</b> and a <b>Network Operator</b> under which the <b>Anchor Restoration Contractor</b> or <b>Top Up Restoration Contractor</b> , on instruction, provides a service to energise and/or contribute to the establishment of a <b>Distribution Restoration Zone</b> .
<b>Distribution Restoration Zone</b>	Part of a <b>Network Operator's System</b> which is capable of being energised by an <b>Anchor Plant</b> following a <b>Total System Shutdown</b> or <b>Partial System Shutdown</b> . The <b>Distribution Restoration Zone</b> shall contain an <b>Anchor Plant</b> and may also include one or more <b>Top Up Restoration Contractor's Plants</b> . The <b>Distribution Restoration Zone</b> primarily comprises part of the <b>Network Operator's System</b> but may include relevant parts of the <b>National Electricity Transmission System</b> in which case <b>Relevant Transmission Licensees</b> would be party to the <b>Distribution Restoration Zone Plan</b> .
<b>Distribution Restoration Zone Control System (DRZCS)</b>	A mains-independent automatic control and supervisory system which assesses the status and operational conditions of part of a <b>Network Operator's System</b> and where relevant, part of the <b>Transmission System</b> for the purposes of operating <b>Restoration Contractor's Plant</b> and <b>Apparatus</b> and/or modulating <b>Restoration Contractors' Demand</b> in addition to operating items of the <b>Network Operator's Plant</b> and <b>Apparatus</b> and relevant <b>Transmission Licensee's Plant</b> and <b>Apparatus</b> for the purposes of establishing and operating a <b>Distribution Restoration Zone</b> .

<b>Distribution Restoration Zone Plan</b>	<p>A plan produced and agreed by a <b>Network Operator</b>, <b>The Company</b>, <b>Restoration Contractors</b> and in certain situations a <b>Transmission Licensees</b> under OC9.4.7.7, detailing the agreed method and procedure by which a <b>Network Operator</b> will instruct a <b>Restoration Contractor</b> with an <b>Anchor Plant</b> to energise, part of a <b>Network Operator's System Total System</b> within 8 hours of that instruction, and subsequently meet complementary blocks of local <b>Demand</b> so as to form a <b>Power Island</b>. A <b>Distribution Restoration Zone Plan</b> may require the use of <b>Top Up Restoration Plant</b>.</p> <p>A <b>Distribution Restoration Zone Plan</b> is distinct from and falls outside the provisions of a <b>Local Joint Restoration Plan</b>.</p>
<b>Droop</b>	The ratio of the per unit steady state change in speed (or <b>Frequency</b> ), to the per unit steady state change in <b>Active Power</b> output. Whilst not mandatory, it is often common practice to express <b>Droop</b> in percentage terms.
<b>Dynamic Parameters</b>	Those parameters listed in Appendix 1 to <b>BC1</b> under the heading <b>BM Unit Data – Dynamic Parameters</b> .
<b>Dynamic Reactive Compensation Equipment</b>	<b>Plant</b> and <b>Apparatus</b> capable of injecting or absorbing <b>Reactive Power</b> in a controlled manner which includes but is not limited to Synchronous Compensators, Static Var Compensators (SVC), or STATCOM devices.
<b>E&amp;W Offshore Transmission System</b>	An <b>Offshore Transmission System</b> with an <b>Interface Point</b> in England and Wales.
<b>E&amp;W Offshore Transmission Licensee</b>	A person who owns or operates an <b>E&amp;W Offshore Transmission System</b> pursuant to a <b>Transmission Licence</b> .
<b>E&amp;W Transmission System</b>	Collectively <b>NGET's Transmission System</b> , any <b>Competitively Appointed Transmission Licensee's Transmission System</b> with <b>Plant</b> and <b>Apparatus</b> located in <b>NGET's Transmission Area</b> and any <b>E&amp;W Offshore Transmission Systems</b> .
<b>E&amp;W User</b>	A <b>User</b> in <b>England</b> and <b>Wales</b> or any <b>Offshore User</b> who owns or operates <b>Plant</b> and/or <b>Apparatus</b> connected (or which will at the <b>OTSUA Transfer Time</b> be connected) to an <b>E&amp;W Offshore Transmission System</b> .
<b>Earth Fault Factor</b>	At a selected location of a three-phase <b>System</b> (generally the point of installation of equipment) and for a given <b>System</b> configuration, the ratio of the highest root mean square phase-to-earth power <b>Frequency</b> voltage on a sound phase during a fault to earth (affecting one or more phases at any point) to the root mean square phase-to-earth power <b>Frequency</b> voltage which would be obtained at the selected location without the fault.



<b>Earthing</b>	<p>A way of providing a connection between conductors and earth by an <b>Earthing Device</b> which is either:</p> <p>(a) Immobilised and <b>Locked</b> in the earthing position. Where the <b>Earthing Device</b> is <b>Locked</b> with a <b>Safety Key</b>, the <b>Safety Key</b> must be secured in a <b>Key Safe</b> and the <b>Key Safe Key</b> must be, where reasonably practicable, given to the authorised site representative of the <b>Requesting Safety Co-ordinator</b> and is to be retained in safe custody. Where not reasonably practicable the <b>Key Safe Key</b> must be retained by the authorised site representative of the <b>Implementing Safety Co-ordinator</b> in safe custody; or</p> <p>(b) maintained and/or secured in position by such other method which must be in accordance with the <b>Local Safety Instructions</b> of <b>NGET</b> or the <b>Safety Rules</b> of the <b>Relevant Transmission Licensee</b> or that <b>User</b>, as the case may be.</p>
<b>Earthing Device</b>	A means of providing a connection between a conductor and earth being of adequate strength and capability.
<b>Elected Panel Members</b>	<p>Shall mean the following <b>Panel Members</b> elected in accordance with GR4.2(a):</p> <p>(a) the representative of the <b>Suppliers</b>;</p> <p>(b) the representative of the <b>Onshore Transmission Licensees</b>;</p> <p>(c) the representative of the <b>Offshore Transmission Licensees</b>; and</p> <p>(d) the representatives of the <b>Generators</b></p>
<b>Electrical Standard</b>	A standard listed in the Annex to the <b>General Conditions</b> .
<b>Electricity Balancing Regulation</b>	as defined in the <b>CUSC</b> .
<b>Electricity Council</b>	That body set up under the Electricity Act, 1957.
<b>Electricity Distribution Licence</b>	The licence granted pursuant to Section 6(1) (c) of the <b>Act</b> .
<b>Electricity Regulation</b>	As defined in the <b>ESO Licence</b> .
<b>Electricity Storage</b>	The conversion of electrical energy into a form of energy which can be stored, the storing of that energy, and the subsequent reconversion of that energy back into electrical energy.
<b>Electricity Storage Module</b>	Is either one or more <b>Synchronous Electricity Storage Unit(s)</b> or <b>Non-Synchronous Electricity Storage Unit(s)</b> which could also be part of a <b>Power Generating Module</b> . For the avoidance of doubt, <b>Non-Controllable Electricity Storage Equipment</b> would not be considered to be classed as an <b>Electricity Storage Module</b> or as an <b>Electricity Storage Unit</b> .
<b>Electricity Storage Unit</b>	A <b>Synchronous Electricity Storage Unit</b> or <b>Non-Synchronous Electricity Storage Unit</b> .
<b>Electricity Supply Licence</b>	The licence granted pursuant to Section 6(1) (d) of the <b>Act</b> .

<b>Electricity System Operator Licence or ESO Licence</b>	Means a licence granted or treated as granted under section 6(1)(da) of the <b>Act</b> .
<b>Electricity System Restoration Standard</b>	As defined in Special Condition 2.2 of <b>The Company's</b> Transmission Licence.
<b>Electricity Ten Year Statement</b>	A statement of network development information, prepared annually by <b>The Company</b> in accordance with the terms of the <b>ESO Licence</b> condition C12 for each of the nine succeeding financial years.
<b>Electromagnetic Compatibility Level</b>	Has the meaning set out in <b>Engineering Recommendation G5</b> .
<b>Electronic Communication Platform</b>	An information exchange platform established, provided, and maintained by <b>The Company</b> that facilitates the exchange of information between a <b>User</b> and <b>The Company</b> .
<b>Electronic Power Converter</b>	Electrical <b>Plant and Apparatus</b> which uses switched solid state power electronic devices to produce a real voltage waveform, that has a fundamental component with harmonics.
<b>Embedded</b>	Having a direct connection to a <b>User System</b> or the <b>System</b> of any other <b>User</b> to which <b>Customers</b> and/or <b>Power Stations</b> are connected, such connection being either a direct connection or a connection via a busbar of another <b>User</b> or of a <b>Relevant Transmission Licensee</b> (but with no other connection to the <b>National Electricity Transmission System</b> ).
<b>Embedded Development</b>	Has the meaning set out in PC.4.4.3(a).
<b>Embedded Development Agreement</b>	An agreement entered into between a <b>Network Operator</b> and an <b>Embedded Person</b> , identifying the relevant site of connection to the <b>Network Operator's System</b> and setting out other site specific details in relation to that use of the <b>Network Operator's System</b> .
<b>Embedded Generation Control</b>	Any or all of the following methods by which a <b>Network Operator</b> can achieve a reduction in the <b>Active Power</b> output of <b>Embedded Power Stations</b> to implement an instruction issued by <b>The Company</b> :  (a) <b>Embedded Generation De-energisation</b> ; or (b) where this is achievable in a suitable timescale to comply with an instruction, arranging to reduce the <b>Active Power</b> output of <b>Embedded Power Stations</b> or <b>Embedded Generator Unit(s)</b> connected to their <b>System</b> .
<b>Embedded Generation Deenergisation</b>	The de-energisation by <b>Network Operators</b> of one or more <b>Embedded Power Stations</b> or <b>Embedded Generating Units</b> from their <b>System</b> as part of an <b>Embedded Generation Control</b> action.
<b>Embedded Person</b>	The party responsible for a <b>Medium Power Station</b> not subject to a <b>Bilateral Agreement</b> or <b>DC Converter Station</b> not subject to a <b>Bilateral Agreement</b> or <b>HVDC System</b> not subject to a <b>Bilateral Agreement</b> connected to or proposed to be connected to a <b>Network Operator's System</b> .
<b>Emergency Deenergisation Instruction</b>	An <b>Emergency Instruction</b> issued by <b>The Company</b> to <b>De-Synchronise</b> a <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b> ), <b>Generating Unit</b> , <b>Power Park Module</b> , <b>HVDC System</b> or <b>DC Converter</b> in circumstances specified in the <b>CUSC</b> .

<b>Emergency Instruction</b>	An instruction issued by <b>The Company</b> in emergency circumstances, pursuant to BC2.9, to the <b>Control Point</b> of a <b>User</b> . In the case of such instructions applicable to a <b>BM Unit</b> , it may require an action or response which is outside the <b>Dynamic Parameters</b> or <b>Other Relevant Data</b> , and may include an instruction to trip a <b>Genset</b> .
<b>EMR Administrative Parties</b>	Has the meaning given to “administrative parties” in The Electricity Capacity Regulations 2014 and each <b>CfD Counterparty</b> and <b>CfD Settlement Services Provider</b> .
<b>EMR Documents</b>	The Energy Act 2013, The Electricity Capacity Regulations 2014, the <b>Capacity Market Rules</b> , The Contracts for Difference (Allocation) Regulations 2014, The Contracts for Difference (Definition of Eligible Generator) Regulations 2014, The Contracts for Difference (Electricity Supplier Obligations) Regulations 2014, The Electricity Market Reform (General) Regulations 2014, the <b>AF Rules</b> and any other regulations or instruments made under Chapter 2 (contracts for difference), Chapter 3 (capacity market) or Chapter 4 (investment contracts) of Part 2 of the Energy Act 2013 which are in force from time to time.
<b>EMR Functions</b>	Has the meaning given to “EMR functions” in Chapter 5 of Part 2 of the Energy Act 2013.
<b>Engineering Recommendations</b>	The documents referred to as such and issued by the Energy Networks Association or the former Electricity Council.
<b>Engineering Recommendation G5</b>	Means Engineering Recommendation G5/5.
<b>Energisation Operational Notification or EON</b>	A notification (in respect of <b>Plant</b> and <b>Apparatus</b> (including <b>OTSUA</b> ) which is directly connected to the <b>National Electricity Transmission System</b> ) from <b>The Company</b> to a <b>User</b> confirming that the <b>User</b> can in accordance with the <b>Bilateral Agreement</b> and/or <b>Construction Agreement</b> , energise such <b>User’s Plant</b> and <b>Apparatus</b> (including <b>OTSUA</b> ) specified in such notification.
<b>Equipment Certificate</b>	A document issued by an <b>Authorised Certifier</b> for equipment used by a <b>Power Generating Module, Demand Unit, Network Operators System, Non-Embedded Customers System, Demand Facility or HVDC System</b> . The <b>Equipment Certificate</b> defines the scope of its validity at a national level. For the purpose of replacing specific parts of the compliance process, the <b>Equipment Certificate</b> may include models or equivalent information that have been verified against actual test results.
<b>Estimated Registered Data</b>	Those items of <b>Standard Planning Data</b> and <b>Detailed Planning Data</b> which either upon connection will become <b>Registered Data</b> , or which for the purposes of the <b>Plant</b> and/or <b>Apparatus</b> concerned as at the date of submission are <b>Registered Data</b> , but in each case which for the nine succeeding <b>Financial Years</b> will be an estimate of what is expected.

<p><b>EU Code User</b></p>	<p>A <b>User</b> who is any of the following:-</p> <ul style="list-style-type: none"> <li>(a) A <b>Generator</b> in respect of a <b>Power Generating Module</b> (excluding a <b>DC Connected Power Park Module</b>) or <b>OTSDUA</b> (in respect of an <b>AC Offshore Transmission System</b>) whose <b>Main Plant and Apparatus</b> is connected to the <b>System</b> on or after 27 April 2019 and who concluded <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> on or after 17 May 2018</li> <li>(b) A <b>Generator</b> in respect of any <b>Type C</b> or <b>Type D Power Generating Module</b> which is the subject of a <b>Substantial Modification</b> which is effective on or after 27 April 2019.</li> <li>(c) A <b>Generator</b> in respect of any <b>DC Connected Power Park Module</b> whose <b>Main Plant and Apparatus</b> is connected to the <b>System</b> on or after 8 September 2019 and who had concluded <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> on or after 28 September 2018.</li> <li>(d) A <b>Generator</b> in respect of any <b>DC Connected Power Park Module</b> which is the subject of a <b>Substantial Modification</b> which is effective on or after 8 September 2019.</li> <li>(e) An <b>HVDC System Owner</b> or <b>OTSDUA</b> (in respect of a <b>DC Offshore Transmission System</b> including a <b>Transmission DC Converter</b>) whose <b>Main Plant and Apparatus</b> is connected to the <b>System</b> on or after 8 September 2019 and who had concluded <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> on or after 28 September 2018.</li> <li>(f) An <b>HVDC System Owner</b> or <b>OTSDUA</b> (in respect of a <b>DC Offshore Transmission System</b> including a <b>Transmission DC Converter</b>) whose <b>HVDC System</b> or <b>DC Offshore Transmission System</b> including a <b>Transmission DC Converter</b>) is the subject of a <b>Substantial Modification</b> on or after 8 September 2019.</li> <li>(g) A <b>User</b> which the <b>Authority</b> has determined should be considered as an <b>EU Code User</b>.</li> <li>(h) A <b>Network Operator</b> whose entire distribution <b>System</b> was first connected to the <b>National Electricity Transmission System</b> on or after 18 August 2019 and who had placed <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> in respect of its entire distribution <b>System</b> on or after 7 September 2018. For the avoidance of doubt, a <b>Network Operator</b> will be an <b>EU Code User</b> if its entire distribution <b>System</b> is connected to the <b>National Electricity Transmission System</b> at <b>EU Grid Supply Points</b> only.</li> <li>(i) A <b>Non-Embedded Customer</b> whose <b>Main Plant and Apparatus</b> at each <b>EU Grid Supply Point</b> was first connected to the <b>National Electricity Transmission System</b> on or after 18 August 2019 and who had placed <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> at each <b>EU Grid Supply Point</b> on or after 7 September 2018 or is the subject of a <b>Substantial Modification</b> on or after 18 August 2019.</li> <li>(j) A <b>Storage User</b> in respect of an <b>Electricity Storage Module</b> whose <b>Main Plant and Apparatus</b> is connected to the <b>System</b> on or after 20 May 2020 and who concluded <b>Purchase</b></li> </ul>
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	<b>Contracts</b> for its <b>Main Plant</b> and <b>Apparatus</b> on or after 20 May 2019.
<b>EU Generator</b>	A <b>Generator</b> or <b>OTSDUA</b> who is also an <b>EU Code User</b> .
<b>EU Grid Supply Point</b>	A <b>Grid Supply Point</b> where either:- <ul style="list-style-type: none"> <li>(i) (a) the <b>Network Operator</b> or <b>Non-Embedded Customer</b> had placed <b>Purchase Contracts</b> for all of its <b>Plant</b> and <b>Apparatus</b> at that <b>Grid Supply Point</b> on or after 7 September 2018, and</li> <li>(b) All of the <b>Network Operator's</b> or <b>Non-Embedded Customer's Plant</b> and <b>Apparatus</b> at that <b>Grid Supply Point</b> was first connected to the <b>Transmission System</b> on or after 18 August 2019; or</li> <li>(ii) the <b>Network Operator's</b> or <b>Non-Embedded Customer's Plant</b> and <b>Apparatus</b> at a <b>Grid Supply Point</b> is the subject of a <b>Substantial Modification</b> which is effective on or after 18 August 2019.</li> </ul>
<b>EU Transparency Availability Data</b>	Such relevant data as <b>Customers</b> and <b>Generators</b> are required to provide under Articles 7.1(a) and 7.1(b) and Articles 15.1(a), 15.1(b), 15.1(c), 15.1(d) of <b>Assimilated Law</b> (Commission Regulation (EU) 543/2013), and which also forms part of <b>DRC</b> Schedule 6 ( <b>Users' Outage Data</b> ).
<b>European Compliance Processes</b> or <b>ECP</b>	That portion of the Grid Code which is identified as the <b>European Compliance Processes</b> .
<b>European Connection Conditions</b> or <b>ECC</b>	That portion of the Grid Code which is identified as the <b>European Connection Conditions</b> being applicable to <b>EU Code Users</b> .
<b>European Specification</b>	A common technical specification, a <b>British Standard</b> implementing a European standard or a European technical approval. The terms "common technical specification", "European standard" and "European technical approval" shall have the meanings respectively ascribed to them in the <b>Regulations</b> .
<b>Event</b>	An unscheduled or unplanned (although it may be anticipated) occurrence on, or relating to, a <b>System</b> (including <b>Embedded Power Stations</b> ) including, without limiting that general description, faults, incidents and breakdowns and adverse weather conditions being experienced.
<b>Exciter</b>	The source of the electrical power providing the field current of a synchronous machine.
<b>Excitation System</b>	The equipment providing the field current of a machine, including all regulating and control elements, as well as field discharge or suppression equipment and protective devices.
<b>Excitation System No-Load Negative Ceiling Voltage</b>	The minimum value of direct voltage that the <b>Excitation System</b> is able to provide from its terminals when it is not loaded, which may be zero or a negative value.

<b>Excitation System Nominal Response</b>	Shall have the meaning ascribed to that term in <b>IEC 34-16-1:1991</b> [equivalent to <b>British Standard BS4999</b> Section 116.1: 1992]. The time interval applicable is the first half-second of excitation system voltage response.
<b>Excitation System On-Load Positive Ceiling Voltage</b>	Shall have the meaning ascribed to the term 'Excitation system on load ceiling voltage' in <b>IEC 34-16-1:1991</b> [equivalent to <b>British Standard BS4999</b> Section 116.1: 1992].
<b>Excitation System No-Load Positive Ceiling Voltage</b>	Shall have the meaning ascribed to the term 'Excitation system no load ceiling voltage' in <b>IEC 34-16-1:1991</b> [equivalent to <b>British Standard BS4999</b> Section 116.1: 1992].
<b>Exemptable</b>	Has the meaning set out in the <b>CUSC</b> .
<b>Existing AGR Plant</b>	<p>The following nuclear advanced gas cooled reactor plant (which was commissioned and connected to the <b>Total System</b> at the <b>Transfer Date</b>):-</p> <ul style="list-style-type: none"> <li>(a) Dungeness B</li> <li>(b) Hinkley Point B</li> <li>(c) Heysham 1</li> <li>(d) Heysham 2</li> <li>(e) Hartlepool</li> <li>(f) Hunterston B</li> <li>(g) Torness</li> </ul>
<b>Existing AGR Plant Flexibility Limit</b>	In respect of each <b>Genset</b> within each <b>Existing AGR Plant</b> which has a safety case enabling it to so operate, 8 (or such lower number which when added to the number of instances of reduction of output as instructed by <b>The Company</b> in relation to operation in <b>Frequency Sensitive Mode</b> totals 8) instances of flexibility in any calendar year (or such lower or greater number as may be agreed by the Nuclear Installations Inspectorate and notified to <b>The Company</b> ) for the purpose of assisting in the period of low <b>System NRAPM</b> and/or low <b>Localised NRAPM</b> provided that in relation to each <b>Generating Unit</b> each change in output shall not be required to be to a level where the output of the reactor is less than 80% of the reactor thermal power limit (as notified to <b>The Company</b> and which corresponds to the limit of reactor thermal power as contained in the "Operating Rules" or "Identified Operating Instructions" forming part of the safety case agreed with the Nuclear Installations Inspectorate).
<b>Existing Gas Cooled Reactor Plant</b>	Both <b>Existing Magnox Reactor Plant</b> and <b>Existing AGR Plant</b> .

<b>Existing Magnox Reactor Plant</b>	<p>The following nuclear gas cooled reactor plant (which was commissioned and connected to the <b>Total System</b> at the <b>Transfer Date</b>):-</p> <ul style="list-style-type: none"> <li>(a) Calder Hall</li> <li>(b) Chapelcross</li> <li>(c) Dungeness A</li> <li>(d) Hinkley Point A</li> <li>(e) Oldbury-on-Severn</li> <li>(f) Bradwell</li> <li>(g) Sizewell A</li> <li>(h) Wylfa</li> </ul>
<b>Export and Import Limits</b>	Those parameters listed in Appendix 1 to <b>BC1</b> under the heading <b>BM Unit Data – Export and Import Limits</b> .
<b>External Interconnection</b>	<b>Apparatus</b> for the transmission of electricity to or from the <b>National Electricity Transmission System</b> or a <b>User System</b> into or out of an <b>External System</b> . For the avoidance of doubt, a single <b>External Interconnection</b> may comprise several circuits operating in parallel.
<b>External Interconnection Circuit</b>	<b>Plant</b> or <b>Apparatus</b> which comprises a circuit and which operates in parallel with another circuit and which forms part of the <b>External Interconnection</b> .
<b>Externally Interconnected System Operator or EISO</b>	A person who operates an <b>External System</b> which is connected to the <b>National Electricity Transmission System</b> or a <b>User System</b> by an <b>External Interconnection</b> .
<b>External System</b>	In relation to an <b>Externally Interconnected System Operator</b> means the transmission or distribution system which it owns or operates which is located outside the <b>National Electricity Transmission System Operator Area</b> any <b>Apparatus</b> or <b>Plant</b> which connects that system to the <b>External Interconnection</b> and which is owned or operated by such <b>Externally Interconnected System Operator</b> .
<b>Fast Fault Current</b>	A current delivered by a <b>Power Park Module</b> or <b>HVDC System</b> during and after a voltage deviation caused by an electrical fault within the <b>System</b> with the aim of identifying a fault by network <b>Protection</b> systems at the initial stage of the fault, supporting <b>System</b> voltage retention at a later stage of the fault and <b>System</b> voltage restoration after fault clearance.
<b>Fault Current Interruption Time</b>	The time interval from fault inception until the end of the break time of the circuit breaker (as declared by the manufacturers).
<b>Fault Ride Through</b>	The capability of <b>Power Generating Modules</b> (including <b>DC Connected Power Park Modules</b> ) and <b>HVDC Systems</b> to be able to remain connected to the <b>System</b> and operate through periods of low voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> caused by secured faults.
<b>Fast Start</b>	A start by a <b>Genset</b> with a <b>Fast Start Capability</b> .
<b>Fast Start Capability</b>	The ability of a <b>Genset</b> to be <b>Synchronised</b> and <b>Loaded</b> up to full <b>Load</b> within 5 minutes.

<b>Fast Track Criteria</b>	<p>A proposed Grid Code Modification Proposal that, if implemented,</p> <p>(a) would meet the <b>Self-Governance Criteria</b>; and</p> <p>(b) is properly a housekeeping modification required as a result of some error or factual change, including but not limited to:</p> <ul style="list-style-type: none"> <li>(i) updating names or addresses listed in the <b>Grid Code</b>;</li> <li>(ii) correcting any minor typographical errors;</li> <li>(iii) correcting formatting and consistency errors, such as paragraph numbering; or</li> <li>(iv) updating out of date references to other documents or paragraphs</li> </ul>
<b>Fault Current Interruption Time</b>	The time interval from fault inception until the end of the break time of the circuit breaker (as declared by the manufacturers).
<b>Fault Ride Through</b>	The capability of <b>Power Generating Modules</b> (including <b>DC Connected Power Park Modules</b> ) and <b>HVDC Systems</b> to be able to remain connected to the <b>System</b> and operate through periods of low voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> caused by secured faults.
<b>Final-Balancing Compliance Notification</b>	<p>A notification from <b>The Company</b> to an <b>EU Generator</b> in respect of an <b>Embedded Small Power Station</b> with a <b>Bilateral Embedded Generation Agreement</b> with <b>The Company</b>, with a <b>Completion Date</b> on or after 05-09-2024, confirming that the <b>Generator</b> has demonstrated compliance with:</p> <ul style="list-style-type: none"> <li>(a) <b>Engineering Recommendation G99</b> supported by the final operational notification from the relevant <b>Network Operator</b>,</li> <li>(b) the relevant sections of the Grid Code as applicable, and</li> <li>(c) the <b>Bilateral Embedded Generation Agreement</b>,</li> </ul> <p>and that all the items in the schedule of <b>Unresolved Issues</b> have been completed to <b>The Company's</b> satisfaction.</p>
<b>Final Generation Outage Programme</b>	An outage programme as agreed by <b>The Company</b> with each <b>Generator</b> and each <b>Interconnector Owner</b> at various stages through the <b>Operational Planning Phase</b> and <b>Programming Phase</b> which does not commit the parties to abide by it, but which at various stages will be used as the basis on which <b>National Electricity Transmission System</b> outages will be planned.
<b>Final Operational Notification or FON</b>	<p>A notification from <b>The Company</b> to a <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> or <b>Network Operator</b> or <b>Non-Embedded Customer</b> confirming that the <b>User</b> has demonstrated compliance:</p> <ul style="list-style-type: none"> <li>(a) with the Grid Code, (or where they apply, that relevant derogations have been granted), and</li> <li>(b) where applicable, with Appendices F1 to F5 of the <b>Bilateral Agreement</b>,</li> </ul> <p>in each case in respect of the <b>Plant</b> and <b>Apparatus</b> specified in such notification.</p>



<b>Final Physical Notification Data</b>	Has the meaning set out in the <b>BSC</b> .
<b>Final Report</b>	A report prepared by the <b>Test Proposer</b> at the conclusion of a <b>System Test</b> for submission to <b>The Company</b> (if it did not propose the <b>System Test</b> ) and other members of the <b>Test Panel</b> .
<b>Financial Year</b>	As defined in the <b>ESO Licence</b> .
<b>Fixed Proposed Implementation Date</b>	The proposed date(s) for the implementation of a <b>Grid Code Modification Proposal</b> or <b>Workgroup Alternative Grid Code Modification</b> such date to be a specific date by reference to an assumed date by which a direction from the <b>Authority</b> approving the <b>Grid Code Modification Proposal</b> or <b>Workgroup Alternative Grid Code Modification</b> is required in order for the <b>Grid Code Modification Proposal</b> or any <b>Workgroup Alternative Grid Code Modification</b> , if it were approved, to be implemented by the proposed date.
<b>Flicker Severity (Long Term)</b>	A value derived from 12 successive measurements of <b>Flicker Severity (Short Term)</b> (over a two hour period) and a calculation of the cube root of the mean sum of the cubes of 12 individual measurements, as further set out in <b>Engineering Recommendation P28</b> as current at the <b>Transfer Date</b> .
<b>Flicker Severity (Short Term)</b>	A measure of the visual severity of flicker derived from the time series output of a flickermeter over a 10 minute period and as such provides an indication of the risk of <b>Customer</b> complaints.
<b>Forecast Data</b>	Those items of <b>Standard Planning Data</b> and <b>Detailed Planning Data</b> which will always be forecast.
<b>Frequency</b>	The number of alternating current cycles per second (expressed in Hertz) at which a <b>System</b> is running.
<b>Frequency Containment Reserves (FCR)</b>	means, in the context of <b>Balancing Services</b> , the <b>Active Power</b> reserves available to contain <b>System Frequency</b> after the occurrence of an imbalance.
<b>Frequency Response Deadband</b>	An interval used intentionally to make the <b>Frequency</b> control unresponsive.  In the case of mechanical governor systems, the <b>Frequency Response Deadband</b> is the same as <b>Frequency Response Insensitivity</b> .
<b>Frequency Response Insensitivity</b>	The inherent feature of the control system specified as the minimum magnitude of change in the <b>Frequency</b> or input signal that results in a change of output power or output signal.
<b>Frequency Restoration Reserves (FRR)</b>	Means, in the context of <b>Balancing Services</b> , the <b>Active Power</b> reserves available to restore <b>System Frequency</b> to the nominal <b>Frequency</b> .
<b>Frequency Sensitive AGR Unit</b>	Each <b>Generating Unit</b> in an <b>Existing AGR Plant</b> for which the <b>Generator</b> has notified <b>The Company</b> that it has a safety case agreed with the Nuclear Installations Inspectorate enabling it to operate in <b>Frequency Sensitive Mode</b> , to the extent that such unit is within its <b>Frequency Sensitive AGR Unit Limit</b> . Each such <b>Generating Unit</b> shall be treated as if it were operating in accordance with BC3.5.1 provided that it is complying with its <b>Frequency Sensitive AGR Unit Limit</b> .

<b>Frequency Sensitive AGR Unit Limit</b>	In respect of each <b>Frequency Sensitive AGR Unit</b> , 8 (or such lower number which when added to the number of instances of flexibility for the purposes of assisting in a period of low <b>System</b> or <b>Localised NRAPM</b> totals 8) instances of reduction of output in any calendar year as instructed by <b>The Company</b> in relation to operation in <b>Frequency Sensitive Mode</b> (or such greater number as may be agreed between <b>The Company</b> and the <b>Generator</b> ), for the purpose of assisting with <b>Frequency</b> control, provided the level of operation of each <b>Frequency Sensitive AGR Unit</b> in <b>Frequency Sensitive Mode</b> shall not be outside that agreed by the Nuclear Installations Inspectorate in the relevant safety case.
<b>Frequency Sensitive Mode</b>	A <b>Genset</b> , or <b>Type C Power Generating Module</b> or <b>Type D Power Generating Module</b> or <b>DC Connected Power Park Module</b> or <b>HVDC System</b> operating mode which will result in <b>Active Power</b> output changing, in response to a change in <b>System Frequency</b> , in a direction which assists in the recovery to <b>Target Frequency</b> , by operating so as to provide <b>Primary Response</b> and/or <b>Secondary Response</b> and/or <b>High Frequency Response</b> .
<b>Fuel Security Code</b>	The document of that title designated as such by the <b>Secretary of State</b> , as from time to time amended.
<b>Future State of Energy (FSOE)</b>	For each <b>Electricity Storage Module</b> , this is a series of MWh figures and associated times, which is calculated by <b>The Company</b> using the data provided under BC1.A.11.1, making up an estimated profile of the energy stored in that <b>Electricity Storage Module</b> .
<b>Gas System Planner Licence or GSP Licence</b>	Means a licence granted or treated as granted under section 7AA(1) of the <b>Gas Act 1986</b> .
<b>Gas Turbine Unit</b>	A <b>Generating Unit</b> driven by a gas turbine (for instance by an aero-engine).
<b>Gas Zone Diagram</b>	A single line diagram showing boundaries of, and interfaces between, gas-insulated <b>HV Apparatus</b> modules which comprise part, or the whole, of a substation at a <b>Connection Site</b> (or in the case of <b>OTSDUW Plant and Apparatus, Transmission Interface Site</b> ), together with the associated stop valves and gas monitors required for the safe operation of the <b>National Electricity Transmission System</b> or the <b>User System</b> , as the case may be.
<b>Gate Closure</b>	Has the meaning set out in the <b>BSC</b> .

GB Code User	<p>A <b>User</b> in respect of:-</p> <ul style="list-style-type: none"> <li>(a) A <b>Generator</b> or <b>OTSDUA</b> whose <b>Main Plant and Apparatus</b> (excluding a <b>DC Connected Power Park Module</b>) is connected to the <b>System</b> before 27 April 2019, or who had concluded <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> before 17 May 2018, or whose <b>Plant and Apparatus</b> is not the subject of a <b>Substantial Modification</b> which is effective on or after 27 April 2019; or</li> <li>(b) A <b>DC Converter Station</b> owner whose <b>Main Plant and Apparatus</b> is connected to the <b>System</b> before 8 September 2019, or who had concluded <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> before 28 September 2018, or whose <b>Plant and Apparatus</b> is not the subject of a <b>Substantial Modification</b> which is effective on or after 8 September 2019; or</li> <li>(c) A <b>Non-Embedded Customer</b> whose <b>Main Plant and Apparatus</b> was connected to the <b>National Electricity Transmission System</b> at a <b>GB Grid Supply Point</b> before 18 August 2019 or who had placed <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> before 7 September 2018 or that <b>Non-Embedded Customer</b> is not the subject of a <b>Substantial Modification</b> which is effective on or after 18 August 2019; or</li> <li>(d) A <b>Network Operator</b> whose entire distribution <b>System</b> was connected to the <b>National Electricity Transmission System</b> at one or more <b>GB Grid Supply Points</b> before 18 August 2019 or who had placed <b>Purchase Contracts</b> for its <b>Main Plant and Apparatus</b> in respect of its entire distribution <b>System</b> before 7 September 2018 or its entire distribution <b>System</b> is not the subject of a <b>Substantial Modification</b> which is effective on or after 18 August 2019. For the avoidance of doubt, a <b>Network Operator</b> would still be classed as a <b>GB Code User</b> where its entire distribution <b>System</b> was connected to the <b>National Electricity Transmission System</b> at one or more <b>GB Grid Supply Points</b>, even where that entire distribution <b>System</b> may have one or more <b>EU Grid Supply Points</b> but still comprises of <b>GB Grid Supply Points</b>.</li> </ul>
GB Generator	A <b>Generator</b> , or <b>OTSDUA</b> , who is also a <b>GB Code User</b> .
GB Generator Final-Balancing Compliance Notification	<p>A notification from <b>The Company</b> to a <b>GB Generator</b> in respect of an <b>Embedded Small Power Station</b> with a <b>Bilateral Embedded Generation Agreement</b> with <b>The Company</b>, with a <b>Completion Date</b> on or after 05-09-2024, confirming that the <b>GB Generator</b> has demonstrated compliance with:</p> <ul style="list-style-type: none"> <li>(a) the relevant sections of the Grid Code as applicable, and</li> <li>(b) the <b>Bilateral Embedded Generation Agreement</b>,</li> </ul> <p>and that all the items in the schedule of <b>Unresolved Issues</b> have been completed to <b>The Company's</b> satisfaction.</p>

<b>GB Generator Interim-Balancing Compliance Notification</b>	<p>A notification from <b>The Company</b> to a <b>GB Generator</b> in respect of an <b>Embedded Small Power Station</b> with a <b>Bilateral Embedded Generation Agreement</b> with <b>The Company</b>, with a <b>Completion Date</b> on or after 05-09-2024, acknowledging that the <b>GB Generator</b> has demonstrated compliance, except for the <b>Unresolved Issues</b>, with:</p> <p>(a) the relevant sections of the Grid Code as applicable, and</p> <p>(b) the <b>Bilateral Embedded Generation Agreement</b>.</p>
<b>GBGF Fast Fault Current Injection</b>	The ability of a <b>Grid Forming Plant</b> to supply reactive current, that starts to be delivered into the <b>Total System</b> in less than 5ms when the voltage falls below 90% of its nominal value at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> .
<b>GB Grid Forming - Inverter or GBGF-I</b>	Is any <b>Power Park Module</b> , <b>HVDC System</b> , <b>DC Converter</b> , <b>OTSDUW Plant and Apparatus</b> , <b>Non-Synchronous Electricity Storage Module</b> , <b>Dynamic Reactive Compensation Equipment</b> or any <b>Plant and Apparatus</b> (including a smart load) which is connected or partly connected to the <b>Total System</b> via an <b>Electronic Power Converter</b> which has a <b>Grid Forming Capability (GBGF-I)</b> .
<b>GB Grid Forming – Synchronous or GBGF-S</b>	Is a <b>Synchronous Power Generating Module</b> , <b>Synchronous Electricity Storage Module</b> or <b>Synchronous Generating Unit</b> with a <b>Grid Forming Capability</b> .
<b>GB Grid Supply Point</b>	A <b>Grid Supply Point</b> which is not an <b>EU Grid Supply Point</b> .
<b>GB Synchronous Area</b>	The AC power <b>System</b> in <b>Great Britain</b> which connects <b>User's</b> , <b>Relevant Transmission Licensee's</b> whose AC <b>Plant and Apparatus</b> is considered to operate in synchronism with each other at each <b>Connection Point</b> or <b>User System Entry Point</b> and at the same <b>System Frequency</b> .
<b>GCDF</b>	Means the Grid Code Development Forum.
<b>General Conditions or GC</b>	That portion of the Grid Code which is identified as the <b>General Conditions</b> .
<b>Generating Plant Demand Margin</b>	The difference between <b>Output Usable</b> and forecast <b>Demand</b> .
<b>Generating Unit</b>	An <b>Onshore Generating Unit</b> and/or an <b>Offshore Generating Unit</b> which could also be part of a <b>Power Generating Module</b> .

<b>Generating Unit Data</b>	<p>The <b>Physical Notification, Export and Import Limits</b> and <b>Other Relevant Data</b> only in respect of each <b>Generating Unit</b> (which could be part of a <b>Power Generating Module</b>):</p> <ul style="list-style-type: none"> <li>(a) which forms part of the <b>BM Unit</b> which represents that <b>Cascade Hydro Scheme</b>;</li> <li>(b) at an <b>Embedded Exemptable Large Power Station</b>, where the relevant <b>Bilateral Agreement</b> specifies that compliance with <b>BC1</b> and/or <b>BC2</b> is required: <ul style="list-style-type: none"> <li>(i) to each <b>Generating Unit</b>, or</li> <li>(ii) to each <b>Power Park Module</b> where the <b>Power Station</b> comprises <b>Power Park Modules</b>.</li> </ul> </li> </ul>
<b>Generation Capacity</b>	Has the meaning set out in the <b>BSC</b> .
<b>Generation Planning Parameters</b>	Those parameters listed in Appendix 2 of <b>OC2</b> .
<b>Generator</b>	A person who generates electricity or undertakes <b>Electricity Storage</b> under licence or exemption under the <b>Act</b> , acting in its capacity as a generator in <b>Great Britain</b> or <b>Offshore</b> . The term <b>Generator</b> includes a <b>EU Generator</b> and a <b>GB Generator</b> .
<b>Generator Performance Chart</b>	A diagram which shows the MW and MVar capability limits within which a <b>Generating Unit</b> will be expected to operate under steady state conditions.
<b>Genset</b>	A <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b> and/or <b>Electricity Storage Module</b> ), <b>Generating Unit</b> , <b>Power Park Module</b> or <b>CCGT Module</b> at a <b>Large Power Station</b> or any <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b> ), <b>Generating Unit</b> , <b>Power Park Module</b> or <b>CCGT Module</b> which is directly connected to the <b>National Electricity Transmission System</b> .
<b>Good Industry Practice</b>	The exercise of that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances.
<b>Governance Rules or GR</b>	That portion of the <b>Grid Code</b> which is identified as the <b>Governance Rules</b> .
<b>Governor Deadband</b>	An interval used intentionally to make the <b>frequency</b> control unresponsive.
<b>Great Britain or GB</b>	The landmass of England and Wales and Scotland, including internal waters.
<b>Grid Code Fast Track Proposals</b>	A proposal to modify the <b>Grid Code</b> which is raised pursuant to GR.26 and has not yet been approved or rejected by the <b>Grid Code Review Panel</b> .
<b>Grid Code Modification Fast Track Report</b>	A report prepared pursuant to GR.26

<b>Grid Code Modification Register</b>	Has the meaning given in GR.13.1.
<b>Grid Code Modification Report</b>	Has the meaning given in GR.22.1.
<b>Grid Code Modification Procedures</b>	The procedures for the modification of the <b>Grid Code</b> (including the implementation of <b>Approved Modifications</b> ) as set out in the <b>Governance Rules</b> .
<b>Grid Code Modification Proposal</b>	A proposal to modify the <b>Grid Code</b> which is not yet rejected pursuant to GR.15.5 or GR.15.6 and has not yet been implemented.
<b>Grid Code Modification Self- Governance Report</b>	Has the meaning given in GR.24.5
<b>Grid Code Objectives</b>	Means the objectives referred to in condition E3.2(b) of the <b>ESO Licence</b> .
<b>Grid Code Review Panel or Panel</b>	The panel with the functions set out in GR.1.2.
<b>Grid Code Review Panel Recommendation Vote</b>	The vote of <b>Panel Members</b> undertaken by the <b>Panel Chairperson</b> in accordance with Paragraph GR.22.4 as to whether in their view they believe each proposed <b>Grid Code Modification Proposal</b> , or <b>Workgroup Alternative Grid Code Modification</b> would better facilitate achievement of the <b>Grid Code Objective(s)</b> and so should be made.
<b>Grid Code Review Panel Self-Governance Vote</b>	The vote of <b>Panel Members</b> undertaken by the <b>Panel Chairperson</b> in accordance with GR.24.9 as to whether they believe each proposed Grid Code Modification Proposal, as compared with the then existing provisions of the <b>Grid Code</b> and any <b>Workgroup Alternative Grid Code Modification</b> set out in the <b>Grid Code Modification Self-Governance Report</b> , would better facilitate achievement of the <b>Grid Code Objective(s)</b> .
<b>Grid Code Self-Governance Proposals</b>	<b>Grid Code Modification Proposals</b> which satisfy the <b>Self Governance Criteria</b> .
<b>Grid Entry Point</b>	An <b>Onshore Grid Entry Point</b> or an <b>Offshore Grid Entry Point</b> .
<b>Grid Forming Active Power</b>	<b>Grid Forming Active Power</b> is the inherent <b>Active Power</b> produced by <b>Grid Forming Plant</b> that includes <b>Active Inertia Power</b> plus <b>Active Phase Jump Power</b> plus <b>Active Damping Power</b> .

<b>Grid Forming Capability</b>	<p>Is (but not limited to) the capability a <b>Power Generating Module</b>, <b>HVDC Converter</b> (which could form part of an <b>HVDC System</b>), <b>Generating Unit</b>, <b>Power Park Module</b>, <b>DC Converter</b>, <b>OTSDUW Plant and Apparatus</b>, <b>Electricity Storage Module</b>, <b>Dynamic Reactive Compensation Equipment</b> or any <b>Plant and Apparatus</b> (including a smart load) whose supplied <b>Active Power</b> is directly proportional to the difference between the magnitude and phase of its <b>Internal Voltage Source</b> and the magnitude and phase of the voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> and the sine of the <b>Load Angle</b>. As a consequence, <b>Plant and Apparatus</b> which has a <b>Grid Forming Capability</b> has a frequency of rotation of the <b>Internal Voltage Source</b> which is the same as the <b>System Frequency</b> for normal operation, with only the <b>Load Angle</b> defining the relative position between the two. In the case of a <b>GBGF-I</b>, a <b>Grid Forming Unit</b> forming part of a <b>GBGF-I</b> shall be capable of sustaining a voltage at its terminals irrespective of the voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> for normal operating conditions.</p> <p>For <b>GBGF-I</b>, the control system, which determines the amplitude and phase of the <b>Internal Voltage Source</b>, shall have a response to the voltage and <b>System Frequency</b> at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> with a bandwidth that is less than a defined value as shown by the control system's <b>NFP Plot</b>. Exceptions to this requirement are only allowed during transients caused by <b>System</b> faults, voltage dips/surges and/or step or ramp changes in the phase angle which are large enough to cause damage to the <b>Grid Forming Plant</b> via excessive currents.</p>
<b>Grid Forming Electronic Power Converter</b>	A <b>Grid Forming Plant</b> whose output is derived from an <b>Electronic Power Converter</b> with a <b>GBGF-I</b> capability.
<b>Grid Forming Plant</b>	A site which contains <b>Plant and Apparatus</b> which is classified as either a <b>GBGF-S</b> or a <b>GBGF-I</b>
<b>Grid Forming Plant Owner</b>	The owner or operator of a <b>Grid Forming Plant</b> .
<b>Grid Forming Unit</b>	A <b>Power Park Unit</b> or <b>Electricity Storage Unit</b> or a <b>Synchronous Power Generating Unit</b> or individual <b>Load</b> with a <b>Grid Forming Capability</b> .
<b>Grid Oscillation Value</b>	An injected test frequency signal applied at nominal <b>System Frequency</b> with a superimposed oscillatory response overlayed onto the nominal <b>System Frequency</b> with an amplitude of 0.05 Hz peak to peak at a frequency of 1 Hz and is used for determining the rating of the <b>Defined Active Damping Power</b> .
<b>Grid Supply Point</b>	A point of supply from the <b>National Electricity Transmission System</b> to <b>Network Operators</b> or <b>Non-Embedded Customers</b> which could be a <b>GB Grid Supply Point</b> or an <b>EU Grid Supply Point</b> .
<b>Group</b>	Those <b>National Electricity Transmission System</b> sub-stations bounded solely by the faulted circuit(s) and the overloaded circuit(s) excluding any third party connections between the <b>Group</b> and the rest of the <b>National Electricity Transmission System</b> , the faulted circuit(s) being a <b>Secured Event</b> .
<b>GSP Group</b>	Has the meaning as set out in the <b>BSC</b> .

<b>Headroom</b>	The <b>Power Available</b> (in MW) less the actual <b>Active Power</b> exported from the <b>Power Park Module</b> (in MW).
<b>High Frequency Response</b>	An automatic reduction in <b>Active Power</b> output in response to an increase in <b>System Frequency</b> above the <b>Target Frequency</b> (or such other level of <b>Frequency</b> as may have been agreed in an <b>Ancillary Services Agreement</b> ). This reduction in <b>Active Power</b> output must be in accordance with the provisions of the relevant <b>Ancillary Services Agreement</b> which will provide that it will be released increasingly with time over the period 0 to 10 seconds from the time of the <b>Frequency</b> increase on the basis set out in the <b>Ancillary Services Agreement</b> and fully achieved within 10 seconds of the time of the start of the <b>Frequency</b> increase and it must be sustained at no lesser reduction thereafter. The interpretation of the <b>High Frequency Response</b> to a + 0.5 Hz frequency change is shown diagrammatically in Figure CC.A.3.3 and Figure ECC.A.3.3.
<b>High Voltage or HV</b>	For <b>E&amp;W Transmission Systems</b> , a voltage exceeding 650 volts. For <b>Scottish Transmission Systems</b> , a voltage exceeding 1000 volts.
<b>Historic Frequency Data</b>	<b>System Frequency</b> data at a maximum of one second intervals for the whole month, published by <b>The Company</b> as detailed in OC3.4.4.
<b>Houseload Operation</b>	Operation which ensures that a <b>Power Station</b> is able to continue to supply its in-house load in the event of <b>System</b> faults resulting in <b>Power-Generating Modules</b> being disconnected from the <b>System</b> and tripped onto their auxiliary supplies
<b>HP Turbine Power Fraction</b>	Ratio of steady state mechanical power delivered by the HP turbine to the total steady state mechanical power delivered by the total steam turbine at <b>Registered Capacity</b> or <b>Maximum Capacity</b> .
<b>HV Connections</b>	<b>Apparatus</b> connected at the same voltage as that of the <b>National Electricity Transmission System</b> , including <b>Users'</b> circuits, the higher voltage windings of <b>Users'</b> transformers and associated connection <b>Apparatus</b> .
<b>HVDC Converter</b>	Any <b>EU Code User Apparatus</b> used to convert alternating current electricity to direct current electricity, or vice versa. An <b>HVDC Converter</b> is a standalone operative configuration at a single site comprising one or more converter bridges, together with one or more converter transformers, reactors, converter control equipment, essential protective and switching devices and auxiliaries, if any, used for conversion. In a bipolar arrangement, an <b>HVDC Converter</b> represents the bipolar configuration.
<b>HVDC Converter Station</b>	Part of an <b>HVDC System</b> which consists of one or more <b>HVDC Converters</b> installed in a single location together with buildings, reactors, filters reactive power devices, control, monitoring, protective, measuring and auxiliary equipment.
<b>HVDC Equipment</b>	Collectively means an <b>HVDC System</b> and a <b>DC Connected Power Park Module</b> and a <b>Remote End HVDC Converter Station</b> .
<b>HVDC Interface Point</b>	A point at which <b>HVDC Plant</b> and <b>Apparatus</b> is connected to an AC <b>System</b> at which technical specifications affecting the performance of the <b>Plant</b> and <b>Apparatus</b> can be prescribed.
<b>HVDC System</b>	An electrical power system which transfers energy in the form of high voltage direct current between two or more alternating current (AC) buses and comprises at least two <b>HVDC Converter Stations</b> with DC <b>Transmission</b> lines or cables between the <b>HVDC Converter Stations</b> .



<b>HVDC System Owner</b>	A party who owns and is responsible for an <b>HVDC System</b> . For the avoidance of doubt a <b>DC Connected Power Park Module</b> owner would be treated as a <b>Generator</b> .
<b>IEC</b>	International Electrotechnical Commission.
<b>IEC Standard</b>	A standard approved by the International Electrotechnical Commission.
<b>Implementation Date</b>	Is the date and time for implementation of an <b>Approved Modification</b> as specified in accordance with Paragraph GR.25.3.
<b>Implementing Safety Co-ordinator</b>	The <b>Safety Co-ordinator</b> implementing <b>Safety Precautions</b> .
<b>Import Usable</b>	That portion of <b>Registered Import Capacity</b> which is expected to be available and which is not unavailable due to a <b>Planned Outage</b> .
<b>Incident Centre</b>	A centre established by <b>The Company</b> or a <b>User</b> as the focal point in <b>The Company</b> or in that <b>User</b> , as the case may be, for the communication and dissemination of information between the senior management representatives of <b>The Company</b> , or of that <b>User</b> , as the case may be, and the relevant other parties during a <b>Joint System Incident</b> in order to avoid overloading <b>The Company's</b> , or that <b>User's</b> , as the case may be, existing operational/control arrangements.
<b>Independent Back-Up Protection</b>	A <b>Back-Up Protection</b> system which utilises a discrete relay, different current transformers and an alternate operating principle to the <b>Main Protection</b> systems(s) such that it can operate autonomously in the event of a failure of the <b>Main Protection</b> .
<b>Independent Main Protection</b>	A <b>Main Protection</b> system which utilises a physically discrete relay and different current transformers to any other <b>Main Protection</b> .
<b>Indicated Constraint Boundary Margin</b>	The difference between a constraint boundary transfer limit and the difference between the sum of <b>BM Unit</b> Maximum Export Limits and the forecast of local <b>Demand</b> within the constraint boundary.
<b>Indicated Imbalance</b>	The difference between the sum of <b>Physical Notifications</b> for <b>BM Units</b> comprising <b>Generating Units</b> or <b>CCGT Modules</b> or <b>Power Generating Modules</b> and the forecast of <b>Demand</b> for the whole or any part of the <b>System</b> .
<b>Indicated Margin</b>	The difference between the sum of <b>BM Unit</b> Maximum Export Limits submitted and the forecast of <b>Demand</b> for the whole or any part of the <b>System</b> .
<b>Inertia Constant H</b>	For a <b>GBGF-S</b> the <b>Inertia Constant H</b> is measured in MWsec/MVA.
<b>Inertia Constant He</b>	For a <b>GBGF- I Electronic Power Converter</b> the <b>Inertia Constant He</b> , is measured in MWsec/MVA and produced by the <b>Active ROCOF Response Power</b> .
<b>Information Request Notice</b>	A notice that will be issued by <b>The Company</b> to a relevant party setting out <b>The Company's</b> reasonable requirements for relevant information in accordance with section 172 of the Energy Act 2023. This will be prepared in accordance with <b>The Company's</b> published <b>Information Request Statement</b> .

<b>Information Request Statement</b>	A statement prepared and published by <b>The Company</b> , in accordance with section 172 of the Energy Act 2023 and condition D2.5 of the <b>ESO Licence</b> and <b>GSP Licence</b> , setting out the process that <b>The Company</b> will follow when requesting information from relevant parties by the issue of an <b>Information Request Notice</b> .
<b>Installation Document</b>	A simple structured document containing information about a <b>Type A Power Generating Module</b> or a <b>Demand Unit</b> , with demand response connected below 1000 V, and confirming its compliance with the relevant requirements
<b>Instructor Facilities</b>	A device or system which gives certain <b>Transmission Control Centre</b> instructions with an audible or visible alarm, and incorporates the means to return message acknowledgements to the <b>Transmission Control Centre</b> .
<b>Integral Equipment Test or IET</b>	A test on equipment, associated with <b>Plant</b> and/or <b>Apparatus</b> , which takes place when that <b>Plant</b> and/or <b>Apparatus</b> forms part of a <b>Synchronised System</b> and which, in the reasonable judgement of the person wishing to perform the test, may cause an <b>Operational Effect</b> .
<b>Intellectual Property" or "IPRs</b>	Patents, trade marks, service marks, rights in designs, trade names, copyrights and topography rights (whether or not any of the same are registered and including applications for registration of any of the same) and rights under licences and consents in relation to any of the same and all rights or forms of protection of a similar nature or having equivalent or similar effect to any of the same which may subsist anywhere in the world.
<b>Interconnector</b>	as defined in the <b>BSC</b>
<b>Interconnection Agreement</b>	An agreement made between <b>The Company</b> and an <b>Externally Interconnected System Operator</b> and/or an <b>Interconnector User</b> and/or other relevant persons for the <b>External Interconnection</b> relating to an <b>External Interconnection</b> and/or an agreement under which an <b>Interconnector User</b> can use an <b>External Interconnection</b> .
<b>Interconnector Export Capacity</b>	In relation to an <b>External Interconnection</b> means the (daily or weekly) forecast value (in MW) at the time of the (daily or weekly) peak demand, of the maximum level at which the <b>External Interconnection</b> can export to the <b>Grid Entry Point</b> .
<b>Interconnector Import Capacity</b>	In relation to an <b>External Interconnection</b> means the (daily or weekly) forecast value (in MW) at the time of the (daily or weekly) peak demand of the maximum level at which the <b>External Interconnection</b> can import from the <b>Grid Entry Point</b> .
<b>Interconnector Owner</b>	Has the meaning given to the term in the <b>Connection and Use of System Code</b> .
<b>Interconnector Reference Programme</b>	Has the meaning given to that term in section BC1.A.3.
<b>Interconnector User</b>	Has the meaning set out in the <b>BSC</b> .
<b>Interface Agreement</b>	Has the meaning set out in the <b>CUSC</b> .

<b>Interface Point</b>	As the context admits or requires either; (a) the electrical point of connection between an <b>Offshore Transmission System</b> and an <b>Onshore Transmission System</b> , or (b) the electrical point of connection between an <b>Offshore Transmission System</b> and a <b>Network Operator's User System</b> .
<b>Interface Point Capacity</b>	The maximum amount of <b>Active Power</b> transferable at the <b>Interface Point</b> as declared by a <b>User</b> under the <b>OTSDUW Arrangements</b> expressed in whole MW.
<b>Interface Point Target Voltage/Power factor</b>	The nominal target voltage/power factor at an <b>Interface Point</b> which a <b>Network Operator</b> requires <b>The Company</b> to achieve by operation of the relevant <b>Offshore Transmission System</b> .
<b><u>Interim-Balancing Compliance Notification</u></b>	A notification from <b>The Company</b> to an <b>EU Generator</b> in respect of an <b>Embedded Small Power Station</b> with a <b>Bilateral Embedded Generation Agreement</b> with <b>The Company</b> , with a <b>Completion Date</b> on or after 05-09-2024, acknowledging that the <b>Generator</b> has demonstrated compliance, except for the <b>Unresolved Issues</b> , with: (a) <b>Engineering Recommendation G99</b> as required by the relevant <b>Network Operator</b> , (b) The relevant sections of the Grid Code and <b>Bilateral Embedded Generation Agreement</b> .
<b>Interim Operational Notification or ION</b>	A notification from <b>The Company</b> to a <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> or <b>Network Operator</b> or <b>Non-Embedded Customer</b> acknowledging that the <b>User</b> has demonstrated compliance, except for the <b>Unresolved Issues</b> ; (a) with the Grid Code, and (b) where applicable, with Appendices F1 to F5 of the <b>Bilateral Agreement</b> , in each case in respect of the <b>Plant</b> and <b>Apparatus</b> (including <b>OTSUA</b> ) specified in such notification and provided that in the case of the <b>OTSDUW Arrangements</b> such notification shall be provided to a <b>Generator</b> in two parts dealing with the <b>OTSUA</b> and <b>Generator's Plant</b> and <b>Apparatus</b> (called respectively " <b>Interim Operational Notification Part A</b> " or " <b>ION A</b> " and " <b>Interim Operational Notification Part B</b> " or " <b>ION B</b> ") as provided for in the <b>CP</b> or <b>ECP</b> .
<b>Intermittent Power Source</b>	The primary source of power for a <b>Generating Unit</b> or <b>Power Generating Module</b> that cannot be considered as controllable, e.g. wind, wave or solar. For the avoidance of doubt, the output from an <b>Electricity Storage Module</b> would not be considered to be an <b>Intermittent Power Source</b> .

<b>Internal Voltage Source or IVS</b>	<p>For a <b>GBGF-S</b>, a real magnetic field, that rotates synchronously with the <b>System Frequency</b> under normal operating conditions, which as a consequence induces an internal voltage (which is often referred to as the Electro Motive Force (EMF)) in the stationary generator winding that has a real impedance.</p> <p>In a <b>GBGF-I</b>, switched power electronic devices are used to produce a voltage waveform, with harmonics, that has a fundamental rotational component called the <b>Internal Voltage Source (IVS)</b> that rotates synchronously with the <b>System Frequency</b> under normal operating conditions.</p> <p>For a <b>GBGF-I</b> there must be an impedance between the <b>Internal Voltage Source</b> and the <b>Grid Entry Point</b> or <b>User System Entry Point</b>.</p> <p>For the avoidance of doubt, the impedance between the <b>Internal Voltage Source</b> and the <b>Grid Entry Point</b> or <b>User System Entry Point</b> could be virtual, real, or a combination of the two.</p>
<b>Intertripping</b>	<p>(a) The tripping of circuit-breaker(s) by commands initiated from <b>Protection</b> at a remote location independent of the state of the local <b>Protection</b>; or</p> <p>(b) <b>Operational Intertripping</b>.</p>
<b>Intertrip Apparatus</b>	<b>Apparatus</b> which performs <b>Intertripping</b> .
<b>IP Completion Day</b>	31 December 2020 as defined in Section 39 of the European Union (Withdrawal Agreement) Act 2020.
<b>IP Turbine Power Fraction</b>	Ratio of steady state mechanical power delivered by the IP turbine to the total steady state mechanical power delivered by the total steam turbine at <b>Registered Capacity</b> or <b>Maximum Capacity</b> .
<b>Isolating Device</b>	A device for achieving <b>Isolation</b> .

<b>Isolation</b>	<p>The disconnection of <b>HV Apparatus</b> (as defined in OC8A.1.6.2 and OC8B.1.7.2) from the remainder of the <b>System</b> in which that <b>HV Apparatus</b> is situated by either of the following:</p> <ul style="list-style-type: none"> <li>(a) an <b>Isolating Device</b> maintained in an isolating position. The isolating position must either be: <ul style="list-style-type: none"> <li>(i) maintained by immobilising and <b>Locking</b> the <b>Isolating Device</b> in the isolating position and affixing a <b>Caution Notice</b> to it. Where the <b>Isolating Device</b> is <b>Locked</b> with a <b>Safety Key</b>, the <b>Safety Key</b> must be secured in a <b>Key Safe</b> and the <b>Key Safe Key</b> must be, where reasonably practicable, given to the authorised site representative of the <b>Requesting Safety Co-Ordinator</b> and is to be retained in safe custody. Where not reasonably practicable the <b>Key Safe Key</b> must be retained by the authorised site representative of the <b>Implementing Safety Co-ordinator</b> in safe custody; or</li> <li>(ii) maintained and/or secured by such other method which must be in accordance with the <b>Local Safety Instructions</b> or the <b>Safety Rules</b> of the <b>Relevant Transmission Licensee</b> or that <b>User</b>, as the case may be; or</li> </ul> </li> <li>(b) an adequate physical separation which must be in accordance with and maintained by the method set out in the <b>Local Safety Instructions</b> or the <b>Safety Rules</b> of the <b>Relevant Transmission Licensee</b> or that <b>User</b>, as the case may be.</li> </ul>
<b>ISOP</b>	Independent System Operator and Planner, means a person designated by the Secretary of State under section 162 of the Energy Act 2023 as the holder of the <b>ESO Licence</b> , and the <b>GSP Licence</b> . For the time being that person is the <b>NESO</b> .
<b>Joint System Incident</b>	An <b>Event</b> wherever occurring (other than on an <b>Embedded Medium Power Station</b> or an <b>Embedded Small Power Station</b> ) which, in the opinion of <b>The Company</b> or a <b>User</b> , has or may have a serious and/or widespread effect, in the case of an <b>Event</b> on a <b>User(s) System(s)</b> (other than on an <b>Embedded Medium Power Station</b> or <b>Embedded Small Power Station</b> ), on the <b>National Electricity Transmission System</b> , and in the case of an <b>Event</b> on the <b>National Electricity Transmission System</b> , on a <b>User(s) System(s)</b> (other than on an <b>Embedded Medium Power Station</b> or <b>Embedded Small Power Station</b> ).
<b>Key Safe</b>	A device for the secure retention of keys.
<b>Key Safe Key</b>	A key unique at a <b>Location</b> capable of operating a lock, other than a control lock, on a <b>Key Safe</b> .

<b>Large Power Station</b>	<p>A <b>Power Station</b> which is</p> <p>(a) directly connected to:</p> <ul style="list-style-type: none"> <li>(i) <b>NGET's Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 100MW or more; or</li> <li>(ii) <b>SPT's Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 30MW or more; or</li> <li>(iii) <b>SHETL's Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 10MW or more; or</li> <li>(iv) an <b>Offshore Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 10MW or more;</li> </ul> <p>or,</p> <p>(b) <b>Embedded</b> within a <b>User System</b> (or part thereof) where such <b>User System</b> (or part thereof) is connected under normal operating conditions to:</p> <ul style="list-style-type: none"> <li>(i) <b>NGET's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of 100MW or more; or</li> <li>(ii) <b>SPT's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of 30MW or more; or</li> <li>(iii) <b>SHETL's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of 10MW or more;</li> </ul> <p>or,</p> <p>(c) <b>Embedded</b> within a <b>User System</b> (or part thereof) where the <b>User System</b> (or part thereof) is not connected to the <b>National Electricity Transmission System</b>, although such <b>Power Station</b> is in:</p> <ul style="list-style-type: none"> <li>(i) <b>NGET's Transmission Area</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 100MW or more; or</li> <li>(ii) <b>SPT's Transmission Area</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 30MW or more; or</li> <li>(iii) <b>SHETL's Transmission Area</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 10MW or more;</li> </ul> <p>For the avoidance of doubt, a <b>Large Power Station</b> could comprise of <b>Type A, Type B, Type C</b> or <b>Type D Power Generating Modules</b>.</p>
<b>Legally Binding Decisions of the European Commission and/or the Agency</b>	Any relevant legally binding decision or decisions of the European Commission and/or the <b>Agency</b> , but a binding decision does not include a decision that is not, or so much of a decision as is not, <b>Assimilated Law</b> .
<b>Legal Challenge</b>	Where permitted by law, a judicial review in respect of the <b>Authority's</b> decision to approve or not to approve a <b>Grid Code Modification Proposal</b> .
<b>Licence</b>	Any licence granted to <b>The Company</b> or a <b>Relevant Transmission Licensee</b> or a <b>User</b> , under Section 6 of the <b>Act</b> .

<b>Licence Standards</b>	Those standards set out or referred to in condition E7 of <b>The Company's ESO Licence</b> and/or condition D3 and/or condition E16 of a <b>Relevant Transmission Licensee's Transmission Licence</b> .
<b>Limited-Balancing Compliance Notification</b>	<p>A notification from <b>The Company</b> to an <b>EU Generator</b> in respect of an <b>Embedded Small Power Station</b> with a <b>Bilateral Embedded Generation Agreement</b> with <b>The Company</b>, with a <b>Completion Date</b> on or after 05-09-2024, stating that the <b>Generator's Plant</b> and/or <b>Apparatus</b> specified in such notification may be, or is, unable to comply:</p> <ul style="list-style-type: none"> <li>(a) with the relevant provisions of the Grid Code and the <b>Bilateral Embedded Generation Agreement</b>; and/or</li> <li>(b) in accordance with ECP.9.1 (ii) of the Grid Code, upon receipt of notification from the <b>Network Operator</b> concerning an <b>EU Generator</b> failing to meet the requirements of <b>Engineering Recommendation G99</b> or any provisions of the Grid Code, or where applicable <b>Bilateral Agreement</b>.</li> </ul>
<b>Limited Frequency Sensitive Mode</b>	A mode whereby the operation of the <b>Genset</b> or <b>Power Generating Module</b> (or <b>DC Converter</b> at a <b>DC Converter Station</b> or <b>HVDC Systems</b> exporting <b>Active Power</b> to the <b>Total System</b> ) is <b>Frequency</b> insensitive except when the <b>System Frequency</b> exceeds 50.4Hz, from which point <b>Limited High Frequency Response</b> must be provided. For <b>Power Generating Modules</b> (including <b>DC Connected Power Park Modules</b> ) and <b>HVDC Systems</b> , operation in <b>Limited Frequency Sensitive Mode</b> would require <b>Limited Frequency Sensitive Mode – Overfrequency (LFSM-O)</b> capability and <b>Limited Frequency Sensitive Mode – Underfrequency (LFSM-U)</b> capability.
<b>Limited Frequency Sensitive Mode – Overfrequency or LFSM-O</b>	A <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b> ) or <b>HVDC System</b> operating mode which will result in <b>Active Power</b> output reduction in response to a change in <b>System Frequency</b> above a certain value.
<b>Limited Frequency Sensitive Mode – Underfrequency or LFSM-U</b>	A <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b> ) or <b>HVDC System</b> operating mode which will result in <b>Active Power</b> output increase in response to a change in <b>System Frequency</b> below a certain value.
<b>Limited High Frequency Response</b>	A response of a <b>Genset</b> (or <b>DC Converter</b> at a <b>DC Converter Station</b> exporting <b>Active Power</b> to the <b>Total System</b> ) to an increase in <b>System Frequency</b> above 50.4Hz leading to a reduction in <b>Active Power</b> in accordance with the provisions of BC3.7.2.1.
<b>Limited Membership Workgroup</b>	<p>A <b>Workgroup</b> having less than five (5) but more than two (2) persons that have nominated themselves for membership in addition to the <b>Code Administrator</b> representative and the chairperson of the <b>Workgroup</b>.</p> <p>Members of a <b>Limited Membership Workgroup</b> where employed by companies that are considered to be an <b>Affiliate</b> of each other will be considered to be a single workgroup member for the purposes of fulfilling this minimum requirement.</p>

<b>Limited Operational Notification or LON</b>	<p>A notification from <b>The Company</b> to a <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> or <b>Network Operator</b> or <b>Non-Embedded Customer</b> stating that the <b>User's Plant</b> and/or <b>Apparatus</b> specified in such notification may be, or is, unable to comply:</p> <p>(a) with the provisions of the Grid Code specified in the notice, and</p> <p>(b) where applicable, with Appendices F1 to F5 of the <b>Bilateral Agreement</b> ,</p> <p>and specifying the <b>Unresolved Issues</b>.</p>
<b>Load</b>	The <b>Active, Reactive or Apparent Power</b> , as the context requires, generated, transmitted or distributed.
<b>Loaded</b>	Supplying electrical power to the <b>System</b> .
<b>Load Angle</b>	The angle in radians between the voltage of the <b>Internal Voltage Source</b> and the voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> .
<b>Load Factor</b>	The ratio of the actual output of a <b>Generating Unit</b> or <b>Power Generating Module</b> to the possible maximum output of that <b>Generating Unit</b> or <b>Power Generating Module</b> .
<b>Load Management Block</b>	A block of <b>Demand</b> controlled by a <b>Supplier</b> or other party through the means of radio teleswitching or by some other means.
<b>Local Joint Restoration Plan</b>	<p>A plan produced and agreed by <b>The Company, Transmission Licensee, Restoration Contractors</b> and a <b>Network Operator</b> under OC9.4.7.7, detailing the agreed method and procedure by which <b>The Company</b> or <b>Transmission Licensee</b> in Scotland will instruct a <b>Restoration Contractor</b> with an <b>Anchor Plant</b> to energise, part of the <b>Total System</b> within 2 hours of that instruction and subsequently meet complementary blocks of local <b>Demand</b> so as to form a <b>Power Island</b>. A <b>Local Joint Restoration Plan</b> may require the use of <b>Top Up Restoration Plant</b>.</p> <p>A <b>Local Joint Restoration Plan</b> is distinct from and falls outside the provisions of a <b>Distribution Restoration Zone Plan</b>.</p>
<b>Local Safety Instructions</b>	For safety co-ordination in England and Wales, instructions on each <b>User Site</b> and <b>Transmission Site</b> , approved by <b>NGET's</b> , the relevant <b>Competitively Appointed Transmission Licensee's</b> or <b>User's</b> relevant manager as relevant for the <b>User Site</b> location, setting down the methods of achieving the objectives of <b>NGET's</b> or the relevant <b>Competitively Appointed Transmission Licensee's</b> or the <b>User's Safety Rules</b> , as the case may be, to ensure the safety of personnel carrying out work or testing on <b>Plant</b> and/or <b>Apparatus</b> on which their <b>Safety Rules</b> apply and, in the case of a <b>User</b> , any other document(s) on a <b>User Site</b> which contains rules with regard to maintaining or securing the isolating position of an <b>Isolating Device</b> , or maintaining a physical separation or maintaining or securing the position of an <b>Earthing Device</b> .
<b>Local Switching Procedure</b>	A procedure produced under OC7.6 detailing the agreed arrangements in respect of carrying out of <b>Operational Switching</b> at <b>Connection Sites</b> and parts of the <b>National Electricity Transmission System</b> adjacent to those <b>Connection Sites</b> .



<b>Localised Negative Reserve Active Power Margin or Localised NRAPM</b>	That margin of <b>Active Power</b> sufficient to allow transfers to and from a <b>System Constraint Group</b> (as the case may be) to be contained within such reasonable limit as <b>The Company</b> may determine.
<b>Location</b>	Any place at which <b>Safety Precautions</b> are to be applied.
<b>Locked</b>	A condition of <b>HV Apparatus</b> that cannot be altered without the operation of a locking device.
<b>Locking</b>	The application of a locking device which enables <b>HV Apparatus</b> to be <b>Locked</b> .
<b>London Court of International Arbitration</b>	The leading London-based arbitral institution and not-for-profit company limited by guarantee of that name with a registered company number of 0204767 providing for the resolution of commercial disputes in accordance with its arbitration rules.
<b>Low Frequency Relay</b>	Has the same meaning as <b>Under Frequency Relay</b> .
<b>Low Voltage or LV</b>	For <b>E&amp;W Transmission Systems</b> a voltage not exceeding 250 volts. For <b>Scottish Transmission Systems</b> , a voltage exceeding 50 volts but not exceeding 1000 volts.
<b>LV Side of the Offshore Platform</b>	Unless otherwise specified in the <b>Bilateral Agreement</b> , the busbar on the <b>Offshore Platform</b> (typically 33kV) at which the relevant <b>Offshore Grid Entry Point</b> is located.
<b>Main Plant and Apparatus</b>	<p>In respect of a <b>Power Station</b> (including <b>Power Stations</b> comprising of <b>DC Connected Power Park Modules</b> and <b>Electricity Storage Modules</b>) is one or more of the principal items of <b>Plant</b> or <b>Apparatus</b> required to convert or re-convert the primary source of energy into electricity.</p> <p>In respect of <b>HVDC Systems</b> or <b>DC Converters</b> or <b>Transmission DC Converters</b> is one of the principal items of <b>Plant</b> or <b>Apparatus</b> used to convert high voltage direct current to high voltage alternating current or vice versa.</p> <p>In respect of a <b>Network Operator's</b> equipment or a <b>Non-Embedded Customer's</b> equipment, is one of the principal items of <b>Plant</b> or <b>Apparatus</b> required to facilitate the import or export of <b>Active Power</b> or <b>Reactive Power</b> to or from a <b>Network Operator's</b> or <b>Non-Embedded Customer's System</b>.</p>
<b>Main Protection</b>	A <b>Protection</b> system which has priority above other <b>Protection</b> in initiating either a fault clearance or an action to terminate an abnormal condition in a power system.
<b>Manufacturer's Data &amp; Performance Report</b>	A report submitted by a manufacturer to <b>The Company</b> relating to a specific version of a <b>Power Park Unit</b> demonstrating the performance characteristics of such <b>Power Park Unit</b> in respect of which <b>The Company</b> has evaluated its relevance for the purposes of the <b>Compliance Processes</b> .

<b>Manufacturer's Test Certificates</b>	A certificate prepared by a manufacturer which demonstrates that its <b>Power Generating Module</b> has undergone appropriate tests and conforms to the performance requirements expected by <b>The Company</b> in satisfying its compliance requirements and thereby satisfies the appropriate requirements of the Grid Code and <b>Bilateral Agreement</b> .
<b>Market Operation Data Interface System (MODIS)</b>	A computer system operated by <b>The Company</b> and made available for use by <b>Customers</b> connected to or using the <b>National Electricity Transmission System</b> for the purpose of submitting <b>EU Transparency Availability Data</b> to <b>The Company</b> .
<b>Market Suspension Threshold</b>	Has the meaning given to the term 'Market Suspension Threshold' in Section G of the <b>BSC</b> .
<b>Material Effect</b>	An effect causing <b>The Company</b> or a <b>Relevant Transmission Licensee</b> to effect any works or to alter the manner of operation of <b>Transmission Plant</b> and/or <b>Transmission Apparatus</b> at the <b>Connection Site</b> (which term shall, in this definition and in the definition of " <b>Modification</b> " only, have the meaning ascribed thereto in the <b>CUSC</b> ) or the site of connection or a <b>User</b> to effect any works or to alter the manner of operation of its <b>Plant</b> and/or <b>Apparatus</b> at the <b>Connection Site</b> or the site of connection which in either case involves that party in expenditure of more than £10,000.
<b>Materially Affected Party</b>	Any person or class of persons designated by the <b>Authority</b> as such.
<b>Maximum Delivery Offer (MDO)</b>	As defined in BC1.A.1.5 <b>Dynamic Parameters</b> .
<b>Maximum Delivery Bid (MDB)</b>	As defined in BC1.A.1.5 <b>Dynamic Parameters</b> .
<b>Maximum Export Capability</b>	The maximum continuous <b>Active Power</b> that a <b>Network Operator</b> or <b>Non-Embedded Customer</b> can export to the <b>Transmission System</b> at the <b>Grid Supply Point</b> , as specified in the <b>Bilateral Agreement</b> .
<b>Maximum Export Capacity</b>	The maximum continuous <b>Apparent Power</b> expressed in MVA and maximum continuous <b>Active Power</b> expressed in MW which can flow from an <b>Offshore Transmission System</b> connected to a <b>Network Operator's User System</b> , to that <b>User System</b> .
<b>Maximum Capacity or <math>P_{\max}</math></b>	The maximum continuous <b>Active Power</b> which a <b>Power Generating Module</b> can supply to the <b>Total System</b> , less any demand associated solely with facilitating the operation of that <b>Power Generating Module</b> and not fed into the <b>System</b> . In the case of an <b>Electricity Storage Module</b> , the <b>Maximum Capacity</b> is the maximum continuous <b>Active Power</b> which an <b>Electricity Storage Module</b> can export to the <b>Total System</b> less any demand associated with facilitating the operation of that <b>Electricity Storage Module</b> when fully charged and operating in a mode analogous to <b>Generation</b> .
<b>Maximum Generation Service or MGS</b>	A service utilised by <b>The Company</b> in accordance with the <b>CUSC</b> and the <b>Balancing Principles Statement</b> in operating the <b>Total System</b> .

<b>Maximum Generation Service Agreement</b>	An agreement between a <b>User</b> and <b>The Company</b> for the payment by <b>The Company</b> to that <b>User</b> in respect of the provision by such <b>User</b> of a <b>Maximum Generation Service</b> .
<b>Maximum HVDC Active Power Transmission Capacity (PHmax)</b>	The maximum continuous <b>Active Power</b> which an <b>HVDC System</b> can exchange with the network at each <b>Grid Entry Point</b> or <b>User System Entry Point</b> as specified in the <b>Bilateral Agreement</b> or as agreed between <b>The Company</b> and the <b>HVDC System Owner</b> .
<b>Maximum Import Capability</b>	The maximum continuous <b>Active Power</b> that a <b>Network Operator</b> or <b>Non-Embedded Customer</b> can import from the <b>Transmission System</b> at the <b>Grid Supply Point</b> , as specified in the <b>Bilateral Agreement</b> .
<b>Maximum Import Capacity</b>	The maximum continuous <b>Apparent Power</b> expressed in MVA and maximum continuous <b>Active Power</b> expressed in MW which can flow to an <b>Offshore Transmission System</b> connected to a <b>Network Operator's User System</b> , from that <b>User System</b> .
<b>Maximum Import Power</b>	The maximum continuous <b>Active Power</b> which an <b>Electricity Storage Module</b> can import from the <b>Total System</b> , when fully discharged and operating in a mode analogous to <b>Demand</b> .
<b>Medium Power Station</b>	<p>A <b>Power Station</b> which is</p> <p>(a) directly connected to <b>NGET's Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of 50MW or more but less than 100MW;</p> <p>or,</p> <p>(b) <b>Embedded</b> within a <b>User System</b> (or part thereof) where such <b>User System</b> (or part thereof) is connected under normal operating conditions to <b>NGET's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of 50MW or more but less than 100MW;</p> <p>or,</p> <p>(c) <b>Embedded</b> within a <b>User System</b> (or part thereof) where the <b>User System</b> (or part thereof) is not connected to the <b>National Electricity Transmission System</b>, although such <b>Power Station</b> is in <b>NGET's Transmission Area</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of 50MW or more but less than 100MW.</p> <p>For the avoidance of doubt a <b>Medium Power Station</b> could comprise of <b>Type A, Type B, Type C</b> or <b>Type D Power Generating Modules</b>.</p>
<b>Medium Voltage or MV</b>	For <b>E&amp;W Transmission Systems</b> a voltage exceeding 250 volts but not exceeding 650 volts.
<b>Mills</b>	Milling plant which supplies pulverised fuel to the boiler of a coal fired <b>Power Station</b> .
<b>Minimum Generation</b>	The minimum output (in whole MW) which a <b>Genset</b> can generate or <b>DC Converter</b> at a <b>DC Converter Station</b> or <b>Electricity Storage Module</b> can import or export to the <b>Total System</b> under stable operating conditions, as registered with <b>The Company</b> under the <b>PC</b> (and amended pursuant to the <b>PC</b> ). For the avoidance of doubt, the output may go below this level as a result of operation in accordance with BC3.7.

<b>Minimum Active Power Transmission Capacity (PHmin)</b>	The minimum continuous <b>Active Power</b> which an <b>HVDC System</b> can exchange with the <b>System</b> at each <b>Grid Entry Point</b> or <b>User System Entry Point</b> as specified in the <b>Bilateral Agreement</b> or as agreed between <b>The Company</b> and the <b>HVDC System Owner</b> .
<b>Minimum Import Capacity</b>	The minimum input (in whole MW) into a <b>DC Converter</b> at a <b>DC Converter Station</b> or <b>HVDC System</b> at an <b>HVDC Converter</b> (in any of its operating configurations) at the <b>Onshore Grid Entry Point</b> (or in the case of an <b>Embedded DC Converter</b> or an <b>Embedded HVDC Converter</b> at the <b>User System Entry Point</b> ) at which a <b>DC Converter</b> or <b>HVDC Converter</b> can operate in a stable manner, as registered with <b>The Company</b> under the <b>PC</b> (and amended pursuant to the <b>PC</b> ).
<b>Minimum Regulating Level</b>	The minimum <b>Active Power</b> , as specified in the <b>Bilateral Agreement</b> or as agreed between <b>The Company</b> and the <b>Generator</b> or <b>HVDC System Owner</b> , down to which the <b>Power Generating Module</b> (including a <b>DC Connected Power Park Module</b> ) or <b>HVDC System</b> can control <b>Active Power</b> .
<b>Minimum Stable Operating Level</b>	The minimum <b>Active Power</b> , as specified in the <b>Bilateral Agreement</b> or as agreed between <b>The Company</b> and the <b>Generator</b> , at which the <b>Power Generating Module</b> can be operated stably for an unlimited time.
<b>Minister of the Crown</b>	As defined in the <b>ESO Licence</b> .
<b>Modification</b>	Any actual or proposed replacement, renovation, modification, alteration or construction by or on behalf of a <b>User</b> or <b>The Company</b> to either that <b>User's Plant</b> or <b>Apparatus</b> or <b>Transmission Plant</b> or <b>Apparatus</b> , as the case may be, or the manner of its operation which has or may have a <b>Material Effect</b> on <b>The Company</b> or a <b>User</b> , as the case may be, at a particular <b>Connection Site</b> .
<b>Mothballed DC Connected Power Park Module</b>	A <b>DC Connected Power Park Module</b> that has previously generated which the <b>Generator</b> plans not to use to generate for the remainder of the current <b>Financial Year</b> but which could be returned to service.
<b>Mothballed DC Converter at a DC Converter Station</b>	A <b>DC Converter</b> at a <b>DC Converter Station</b> that has previously imported or exported power which the <b>DC Converter Station Owner</b> plans not to use to import or export power for the remainder of the current <b>Financial Year</b> but which could be returned to service.
<b>Mothballed HVDC System</b>	An <b>HVDC System</b> that has previously imported or exported power which the <b>HVDC System Owner</b> plans not to use to import or export power for the remainder of the current <b>Financial Year</b> but which could be returned to service.
<b>Mothballed HVDC Converter</b>	An <b>HVDC Converter</b> which is part of an <b>HVDC System</b> that has previously imported or exported power which the <b>HVDC System Owner</b> plans not to use to import or export power for the remainder of the current <b>Financial Year</b> but which could be returned to service.
<b>Mothballed Generating Unit</b>	A <b>Generating Unit</b> that has previously generated which the <b>Generator</b> plans not to use to generate for the remainder of the current <b>Financial Year</b> but which could be returned to service. For the avoidance of doubt a <b>Mothballed Generating Unit</b> could be part of a <b>Power Generating Module</b> .

<b>Mothballed Power Generating Module</b>	A <b>Power Generating Module</b> that has previously generated which the <b>Generator</b> plans not to use to generate for the remainder of the current <b>Financial Year</b> but which could be returned to service.
<b>Mothballed Power Park Module</b>	A <b>Power Park Module</b> that has previously generated which the <b>Generator</b> plans not to use to generate for the remainder of the current <b>Financial Year</b> but which could be returned to service.
<b>Multiple Point of Connection</b>	A double (or more) <b>Point of Connection</b> , being two (or more) <b>Points of Connection</b> interconnected to each other through the <b>User's System</b> .
<b>MSID</b>	Has the meaning a set out in the <b>BSC</b> , covers Metering System Identifier.
<b>National Demand</b>	<p>The amount of electricity supplied from the <b>Grid Supply Points</b> plus:-</p> <ul style="list-style-type: none"> <li>that supplied by <b>Embedded Large Power Stations</b>, and</li> <li><b>National Electricity Transmission System Losses</b>,</li> </ul> <p>minus:-</p> <ul style="list-style-type: none"> <li>the <b>Demand</b> taken by <b>Station Transformers</b> and, <b>Pumped Storage Units</b> and <b>Electricity Storage Modules</b>’.</li> </ul> <p>and, for the purposes of this definition, does not include:-</p> <ul style="list-style-type: none"> <li>any exports from the <b>National Electricity Transmission System</b> across <b>External Interconnections</b>.</li> </ul>
<b>National Electricity Transmission System</b>	The <b>Onshore Transmission System</b> and, where owned by <b>Offshore Transmission Licensees</b> , <b>Offshore Transmission Systems</b> .
<b>National Electricity Transmission System Demand</b>	<p>The amount of electricity supplied from the <b>Grid Supply Points</b> plus:-</p> <ul style="list-style-type: none"> <li>that supplied by <b>Embedded Large Power Stations</b>, and</li> <li>exports from the <b>National Electricity Transmission System</b> across <b>External Interconnections</b>, and</li> <li><b>National Electricity Transmission System Losses</b>,</li> </ul> <p>and, for the purposes of this definition, includes:-</p> <ul style="list-style-type: none"> <li>the <b>Demand</b> taken by <b>Station Transformers</b> and, <b>Pumped Storage Units</b> and <b>Electricity Storage Modules</b>’.</li> </ul>
<b>National Electricity Transmission System Losses</b>	The losses of electricity incurred on the <b>National Electricity Transmission System</b> .
<b>National Electricity Transmission System Operator Area</b>	Means the area by that name as set out in the terms of the <b>ESO Licence</b> .
<b>National Electricity Transmission System Study Network Data File</b>	A computer file produced by <b>The Company</b> which in <b>The Company's</b> view provides an appropriate representation of the <b>National Electricity Transmission System</b> for a specific point in time. The computer file will contain information and data on <b>Demand</b> on the <b>National Electricity Transmission System</b> and on <b>Large Power Stations</b> including <b>Genset</b> power output consistent with <b>Output Usable</b> and <b>The Company's</b> view of prevailing system conditions.

<b>National Electricity Transmission System Warning</b>	<p>A warning issued by <b>The Company</b> to <b>Users</b> (or to certain <b>Users</b> only) in accordance with OC7.4.8.2, which provides information relating to <b>System</b> conditions or <b>Events</b> and is intended to:</p> <ul style="list-style-type: none"> <li>(a) alert <b>Users</b> to possible or actual <b>Plant</b> shortage, <b>System</b> problems and/or <b>Demand</b> reductions;</li> <li>(b) inform of the applicable period;</li> <li>(c) indicate intended consequences for <b>Users</b>; and</li> <li>(d) enable specified <b>Users</b> to be in a state of readiness to receive instructions from <b>The Company</b>.</li> </ul>
<b>National Electricity Transmission System Warning - Demand Control Imminent</b>	A warning issued by <b>The Company</b> , in accordance with OC7.4.8.7, which is intended to provide short term notice, where possible, to those <b>Users</b> who are likely to receive <b>Demand</b> reduction instructions from <b>The Company</b> within 30 minutes.
<b>National Electricity Transmission System Warning - Electricity Margin Notice</b>	A warning issued by <b>The Company</b> , in accordance with OC7.4.8.5, which is intended to invite a response from and to alert recipients to a decreased <b>System Margin</b> .
<b>National Electricity Transmission System Warning – Embedded Generation Control Imminent</b>	A warning issued by <b>The Company</b> , in accordance with OC7.4.8.12, which is intended to provide short term notice, where possible, to those <b>Network Operators</b> who are likely to receive <b>Embedded Generation Control</b> instructions from <b>The Company</b> within 30 minutes.
<b>National Electricity Transmission System Warning - High Risk of Demand Reduction</b>	A warning issued by <b>The Company</b> , in accordance with OC7.4.8.6, which is intended to alert recipients that there is a high risk of <b>Demand</b> reduction being implemented and which may normally result from an <b>Electricity Margin Notice</b> .
<b>National Electricity Transmission System Warning - High Risk of Embedded Generation Reduction</b>	A warning issued by <b>The Company</b> , in accordance with OC7.4.8.11, which is intended to alert recipients that there is a high risk of <b>Embedded Generation Control</b> being implemented and which may result from a <b>National Electricity Transmission System Warning – System NRAPM</b> .
<b>National Electricity Transmission System Warning – Localised NRAPM</b>	A warning issued by <b>The Company</b> , in accordance with OC.7.4.8.10, which is intended to invite a response from and to alert recipients to a decreased <b>Localised NRAPM</b> .
<b>National Electricity Transmission System Warning - Risk of System Disturbance</b>	A warning issued by <b>The Company</b> , in accordance with OC7.4.8.8, which is intended to alert <b>Users</b> of the risk of widespread and serious <b>System</b> disturbance which may affect <b>Users</b> .
<b>National Electricity Transmission System Warning – System NRAPM</b>	A warning issued by <b>The Company</b> , in accordance with OC.7.4.8.9, which is intended to invite a response from and to alert recipients to a decreased <b>System NRAPM</b> .
<b>National Energy System Operator or NESO</b>	The company with registered number 11014226, as the designated <b>ISOP</b> and holder of the <b>ESO Licence</b> and the <b>GSP Licence</b> .

<b>Network Data</b>	The data to be provided by <b>The Company</b> to <b>Users</b> in accordance with the <b>PC</b> , as listed in Part 3 of the Appendix to the <b>PC</b> .
<b>Network Frequency Perturbation Plot</b>	<p>A form of Bode Plot which plots the amplitude (%) and phase (degrees) of the resulting output oscillation responding to an applied input oscillation across a frequency base. The plot will be used to assess the capability and performance of a <b>Grid Forming Plant</b> and to ensure that it does not pose a risk to other <b>Plant</b> and <b>Apparatus</b> connected to the <b>Total System</b>.</p> <p>For <b>GBGF-I</b>, these are used to provide data to <b>The Company</b> which together with the associated <b>Nichols Chart</b> (or equivalent) defines the effects on a <b>GBGF-I</b> for changes in the frequency of the applied input oscillation.</p> <p>The input is the applied as an input oscillation and the output is the resulting oscillations in the <b>GBGF-I's Active Power</b>.</p> <p>For the avoidance of doubt, <b>Generators</b> in respect of <b>GBGF-S</b> can provide their data using the existing formats and do not need to supply <b>NFP</b> plots.</p>
<b>Network Gas Supply Emergency</b>	Has the meaning set out in the <b>BSC</b> .
<b>Network Operator</b>	A person with a <b>User System</b> directly connected to the <b>National Electricity Transmission System</b> to which <b>Customers</b> and/or <b>Power Stations</b> (not forming part of the <b>User System</b> ) are connected, acting in its capacity as an operator of the <b>User System</b> , but shall not include a person acting in the capacity of an <b>Externally Interconnected System Operator</b> or a <b>Generator</b> in respect of <b>OTSUA</b> .
<b>NGET</b>	National Grid Electricity Transmission plc (NO: 2366977) whose registered office is at 1-3 Strand, London, WC2N 5EH.
<b>Nichols Chart</b>	For a <b>GBGF-I</b> , a chart derived from the open loop Bode Plots that are used to produce an <b>NFP Plot</b> . The <b>Nichols Chart</b> plots open loop gain versus open loop phase angle. This enables the open loop phase for an open loop gain of 1 to be identified for use in defining the <b>GBGF-I's</b> equivalent <b>Damping Factor</b> .
<b>No-Load Field Voltage</b>	Shall have the meaning ascribed to that term in <b>IEC 34-16-1:1991</b> [equivalent to <b>British Standard BS4999</b> Section 116.1 : 1992].
<b>No System Connection</b>	As defined in OC8A.1.6.2 and OC8B.1.7.2.
<b>Non-CUSC Party</b>	A Party who does not accede to the <b>Connection and Use of System Code (CUSC)</b> .
<b>Non-Synchronous Electricity Storage Module</b>	A <b>Power Park Module</b> comprising solely of one or more <b>Non-Synchronous Electricity Storage Units</b> .
<b>Notification of User's Intention to Operate</b>	A notification from a <b>Network Operator</b> or <b>Non-Embedded Customer</b> to <b>The Company</b> informing <b>The Company</b> of the date upon which any <b>Network Operator's</b> or <b>Non-Embedded Customer's Plant</b> and <b>Apparatus</b> at an <b>EU Grid Supply Point</b> will be ready to be connected to the <b>Transmission System</b> .

<b>Notification of User's Intention to Synchronise</b>	A notification from a <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> to <b>The Company</b> informing <b>The Company</b> of the date upon which any <b>OTSUA</b> , a <b>Generating Unit(s)</b> , <b>CCGT Module(s)</b> , <b>Power Park Module(s)</b> , <b>Power Generating Module(s)</b> (including a <b>DC Connected Power Park Module(s)</b> ), <b>HVDC System</b> or <b>DC Converter(s)</b> will be ready to be <b>Synchronised</b> to the <b>Total System</b> .
<b>Non-Controllable Electricity Storage Equipment</b>	An item of storage <b>Plant</b> , including but not limited to a <b>Synchronous Flywheel</b> or <b>Synchronous Compensation Equipment</b> or <b>Regenerative Braking</b> whose active output power cannot be independently controlled.
<b>Non-Dynamic Frequency Response Service</b>	A <b>Demand Response Service</b> in which the <b>Demand</b> is controlled through discrete switching rather than through continuous load changes in response to <b>System Frequency</b> changes.
<b>Non-Embedded Customer</b>	A <b>Customer</b> in <b>Great Britain</b> , except for a <b>Network Operator</b> acting in its capacity as such, receiving electricity direct from the <b>Onshore Transmission System</b> irrespective of from whom it is supplied.
<b>Non-Synchronous Electricity Storage Module</b>	A <b>Power Park Module</b> comprising solely of one or more <b>Non-Synchronous Electricity Storage Units</b> .
<b>Non-Synchronous Electricity Storage Unit</b>	A <b>Power Park Unit</b> which can produce electrical energy by converting or re-converting another source of energy such that the frequency of the generated voltage is not inherently in synchronism with the frequency of the <b>System</b> .
<b>Non-Synchronous Generating Unit</b>	An <b>Onshore Non-Synchronous Generating Unit</b> or <b>Offshore Non-Synchronous Generating Unit</b> which could form part of a <b>Power Generating Module</b> .
<b>Normal CCGT Module</b>	A <b>CCGT Module</b> other than a <b>Range CCGT Module</b> .
<b>Novel Unit</b>	A tidal, wave, wind, geothermal, or any similar, <b>Generating Unit</b> .
<b>OC9 De-synchronised Island Procedure</b>	Has the meaning set out in OC9.5.4.
<b>Offer Acceptance</b>	An acceptance by a <b>BM Unit</b> of a <b>Bid-Offer Acceptance</b> to increase its export onto, or decrease its import from, the <b>National Electricity Transmission System</b> , where in this context import and export are as defined in the <b>BSC</b> .
<b>Offshore</b>	Means wholly or partly in <b>Offshore Waters</b> , and when used in conjunction with another term and not defined means that the associated term is to be read accordingly.
<b>Offshore DC Converter</b>	Any <b>User Apparatus</b> located <b>Offshore</b> used to convert alternating current electricity to direct current electricity, or vice versa. An <b>Offshore DC Converter</b> is a standalone operative configuration at a single site comprising one or more converter bridges, together with one or more converter transformers, converter control equipment, essential protective and switching devices and auxiliaries, if any, used for conversion.



<b>Offshore HVDC Converter</b>	Any <b>User Apparatus</b> located <b>Offshore</b> used to convert alternating current electricity to direct current electricity, or vice versa. An <b>Offshore HVDC Converter</b> is a standalone operative configuration at a single site comprising one or more converter bridges, together with one or more converter transformers, converter control equipment, essential protective and switching devices and auxiliaries, if any, used for conversion.
<b>Offshore Development Information Statement</b>	A statement prepared by <b>The Company</b> .
<b>Offshore Generating Unit</b>	Unless otherwise provided in the Grid Code, any <b>Apparatus</b> located <b>Offshore</b> which produces electrical energy by converting or re-converting another source of energy, including, an <b>Offshore Synchronous Generating Unit</b> or <b>Offshore Non-Synchronous Generating Unit</b> which could also be part of a <b>Power Generating Module</b> or <b>Electricity Storage Module</b>
<b>Offshore Grid Entry Point</b>	In the case of:- (a) an <b>Offshore Generating Unit</b> or an <b>Offshore Synchronous Power Generating Module</b> or an <b>Offshore DC Converter</b> or an <b>Offshore HVDC Converter</b> , as the case may be, which is directly connected to an <b>Offshore Transmission System</b> , the point at which it connects to that <b>Offshore Transmission System</b> , or; (b) an <b>Offshore Power Park Module</b> which is directly connected to an <b>Offshore Transmission System</b> , the point where one <b>Power Park String</b> (registered by itself as a <b>Power Park Module</b> ) or the collection of points where a number of <b>Offshore Power Park Strings</b> (registered as a single <b>Power Park Module</b> ) connects to that <b>Offshore Transmission System</b> , or; (c) an <b>External Interconnection</b> which is directly connected to an <b>Offshore Transmission System</b> , the point at which it connects to that <b>Offshore Transmission System</b> .
<b>Offshore Local Joint Restoration Plan</b>	A plan produced and agreed by <b>The Company</b> , <b>Offshore Transmission Licensees</b> , <b>Restoration Contractors</b> , a <b>Network Operator</b> and in some cases an <b>Onshore Transmission Licensee</b> under OC9.4.7.7, detailing the agreed method and procedure by which <b>The Company</b> will instruct a <b>Restoration Contractor</b> with an <b>Anchor Plant</b> located <b>Offshore</b> to energise, part of the <b>Total System</b> (including but not limited to parts of the <b>Offshore Transmission System</b> ) within 2 hours of that instruction and subsequently meet complementary blocks of local <b>Demand</b> so as to form a <b>Power Island</b> . An <b>Offshore Local Joint Restoration Plan</b> may require the use of <b>Top Up Restoration Plant</b> .  An <b>Offshore Local Joint Restoration Plan</b> is distinct from and falls outside the provisions of a <b>Distribution Restoration Zone Plan</b>
<b>Offshore Non-Synchronous Generating Unit</b>	An <b>Offshore Generating Unit</b> that is not an <b>Offshore Synchronous Generating Unit</b> including for the avoidance of doubt a <b>Power Park Unit</b> or <b>Non-Synchronous Electricity Storage Unit</b> located <b>Offshore</b> .
<b>Offshore Platform</b>	A single structure comprising of <b>Plant</b> and <b>Apparatus</b> located <b>Offshore</b> which includes one or more <b>Offshore Grid Entry Points</b> .

<b>Offshore Power Park Module</b>	<p>A collection of one or more <b>Offshore Power Park Strings</b> (registered as a <b>Power Park Module</b> under the <b>PC</b>). There is no limit to the number of <b>Power Park Strings</b> within the <b>Power Park Module</b>, so long as they either:</p> <ul style="list-style-type: none"> <li>(a) connect to the same busbar which cannot be electrically split; or</li> <li>(b) connect to a collection of directly electrically connected busbars of the same nominal voltage and are configured in accordance with the operating arrangements set out in the relevant <b>Bilateral Agreement</b>.</li> </ul>
<b>Offshore Power Park String</b>	<p>A collection of <b>Offshore Generating Units</b> or <b>Power Park Units</b> or <b>Non-Synchronous Electricity Storage Unit</b> that are powered by an <b>Intermittent Power Source</b>, joined together by cables forming part of a <b>User System</b> with a single point of connection to an <b>Offshore Transmission System</b>. The connection to an <b>Offshore Transmission System</b> may include a <b>DC Converter</b> or <b>HVDC Converter</b>.</p>
<b>Offshore Synchronous Generating Unit</b>	<p>A <b>Generating Unit</b> or <b>Synchronous Electricity Storage Unit</b> located <b>Offshore</b> which could be part of an <b>Offshore Synchronous Power Generating Module</b> in which, under all steady state conditions, the rotor rotates at a mechanical speed equal to the electrical frequency of the <b>National Electricity Transmission System</b> divided by the number of pole pairs of the <b>Generating Unit</b>.</p>
<b>Offshore Synchronous Power Generating Module</b>	<p>A <b>Synchronous Power Generating Module</b> or <b>Synchronous Electricity Storage Module</b> located <b>Offshore</b>.</p>
<b>Offshore Tender Process</b>	<p>The process followed by the <b>Authority</b> to make, in prescribed cases, a determination on a competitive basis of the person to whom an offshore transmission licence is to be granted.</p>
<b>Offshore Transmission Distribution Connection Agreement</b>	<p>An agreement entered into by <b>The Company</b> and a <b>Network Operator</b> in respect of the connection to and use of a <b>Network Operator's User System</b> by an <b>Offshore Transmission System</b>.</p>
<b>Offshore Transmission Licensee</b>	<p>Such person in relation to whose <b>Transmission Licence</b> the standard conditions in Section E (offshore transmission owner standard conditions) of such <b>Transmission Licence</b> have been given effect, or any person in that prospective role who has acceded to the <b>STC</b>.</p>
<b>Offshore Transmission System</b>	<p>A system consisting (wholly or mainly) of high voltage electric lines and used for the transmission of electricity from one <b>Power Station</b> to a sub-station or to another <b>Power Station</b> or between sub-stations, and includes any <b>Plant</b> and <b>Apparatus</b> (including <b>OTSUA</b>) and meters in connection with the transmission of electricity but does not include any <b>Remote Transmission Assets</b>. An <b>Offshore Transmission System</b> extends from the <b>Interface Point</b>, or the <b>Offshore Grid Entry Point(s)</b> and may include <b>Plant</b> and <b>Apparatus</b> located <b>Onshore</b> and <b>Offshore</b> and, where the context permits, references to the <b>Offshore Transmission System</b> includes <b>OTSUA</b>.</p>

<b>Offshore Transmission System Development User Works or OTSDUW</b>	In relation to a particular <b>User</b> where the <b>OTSDUW Arrangements</b> apply, means those activities and/or works for the design, planning, consenting and/or construction and installation of the <b>Offshore Transmission System</b> to be undertaken by the <b>User</b> as identified in Part 2 of Appendix I of the relevant <b>Construction Agreement</b> .
<b>Offshore Transmission System User Assets or OTSUA</b>	<b>OTSDUW Plant and Apparatus</b> constructed and/or installed by a <b>User</b> under the <b>OTSDUW Arrangements</b> which form an <b>Offshore Transmission System</b> that once transferred to a <b>Relevant Transmission Licensee</b> under an <b>Offshore Tender Process</b> will become part of the <b>National Electricity Transmission System</b> .
<b>Offshore Waters</b>	Has the meaning given to “offshore waters” in Section 90(9) of the Energy Act 2004.
<b>Offshore Works Assumptions</b>	In relation to a particular <b>User</b> , means those assumptions set out in Appendix P of the relevant <b>Construction Agreement</b> as amended from time to time.
<b>Onshore</b>	Means within <b>Great Britain</b> , and when used in conjunction with another term and not defined means that the associated term is to be read accordingly.
<b>Onshore DC Converter</b>	Any <b>User Apparatus</b> located <b>Onshore</b> with a <b>Completion Date</b> after 1 <sup>st</sup> April 2005 used to convert alternating current electricity to direct current electricity, or vice versa. An <b>Onshore DC Converter</b> is a standalone operative configuration at a single site comprising one or more converter bridges, together with one or more converter transformers, converter control equipment, essential protective and switching devices and auxiliaries, if any, used for conversion. In a bipolar arrangement, an <b>Onshore DC Converter</b> represents the bipolar configuration.
<b>Onshore Generating Unit</b>	Unless otherwise provided in the Grid Code, any <b>Apparatus</b> located <b>Onshore</b> which produces electrical energy by converting or re-converting another source of energy, including, an <b>Onshore Synchronous Generating Unit</b> or <b>Onshore Non-Synchronous Generating Unit</b> which could also be part of a <b>Power Generating Module</b> or an <b>Electricity Storage Module</b> .
<b>Onshore Grid Entry Point</b>	A point at which a <b>Onshore Generating Unit</b> or a <b>CCGT Module</b> or a <b>CCGT Unit</b> or an <b>Onshore Power Generating Module</b> or a <b>Onshore DC Converter</b> or an <b>Onshore HVDC Converter</b> or a <b>Onshore Power Park Module</b> or an <b>Onshore Electricity Storage Module</b> or an <b>External Interconnection</b> , as the case may be, which is directly connected to the <b>Onshore Transmission System</b> connects to the <b>Onshore Transmission System</b> .
<b>Onshore HVDC Converter</b>	Any <b>User Apparatus</b> located <b>Onshore</b> used to convert alternating current electricity to direct current electricity, or vice versa. An <b>Onshore HVDC Converter</b> is a standalone operative configuration at a single site comprising one or more converter bridges, together with one or more converter transformers, converter control equipment, essential protective and switching devices and auxiliaries, if any, used for conversion. In a bipolar arrangement, an <b>Onshore HVDC Converter</b> represents the bipolar configuration.

<b>Onshore Non-Synchronous Generating Unit</b>	A <b>Generating Unit</b> located <b>Onshore</b> that is not a <b>Synchronous Generating Unit</b> or <b>Synchronous Electricity Storage Unit</b> including for the avoidance of doubt a <b>Power Park Unit</b> or <b>Non-Synchronous Electricity Storage Unit</b> located <b>Onshore</b> .
<b>Onshore Power Park Module</b>	A collection of <b>Non-Synchronous Generating Units</b> that are powered by an <b>Intermittent Power Source</b> or connected through power electronic conversion technology or <b>Non-Synchronous Electricity Storage Units</b> , joined together by a <b>System</b> (registered as a <b>Power Park Module</b> under the <b>PC</b> ) with a single electrical point of connection directly to the <b>Onshore Transmission System</b> (or <b>User System</b> if <b>Embedded</b> ) with no intermediate <b>Offshore Transmission System</b> connections. The connection to the <b>Onshore Transmission System</b> (or <b>User System</b> if <b>Embedded</b> ) may include a <b>DC Converter</b> or <b>HVDC Converter</b> .
<b>Onshore Synchronous Generating Unit</b>	An <b>Onshore Generating Unit</b> or <b>Onshore Synchronous Electricity Storage Unit</b> (which could also be part of an <b>Onshore Power Generating Module</b> ) including, for the avoidance of doubt, a <b>CCGT Unit</b> or <b>Synchronous Electricity Storage Unit</b> in which, under all steady state conditions, the rotor rotates at a mechanical speed equal to the electrical frequency of the <b>National Electricity Transmission System</b> divided by the number of pole pairs of the <b>Generating Unit</b> .
<b>Onshore Synchronous Power Generating Module</b>	A <b>Synchronous Power Generating Module</b> or <b>Synchronous Electricity Storage Module</b> located <b>Onshore</b> .
<b>Onshore Transmission Licensee</b>	<b>NGET</b> , <b>SPT</b> , <b>SHETL</b> , or a <b>Competitively Appointed Transmission Licensee</b> .
<b>Onshore Transmission System</b>	The system consisting (wholly or mainly) of high voltage electric lines owned or operated by <b>Onshore Transmission Licensees</b> or operated by <b>The Company</b> and used for the transmission of electricity from one <b>Power Station</b> to a substation or to another <b>Power Station</b> or between substations or to or from <b>Offshore Transmission Systems</b> or to or from any <b>External Interconnection</b> , and includes any <b>Plant</b> and <b>Apparatus</b> and meters owned or operated by any <b>Onshore Transmission Licensee</b> in connection with the transmission of electricity but does not include any <b>Remote Transmission Assets</b> .
<b>On-Site Generator Site</b>	A site which is determined by the <b>BSC Panel</b> to be a Trading Unit under the <b>BSC</b> by reason of having fulfilled the Class 1 or Class 2 requirements as such terms are used in the <b>BSC</b> .
<b>Operating Code</b> or <b>OC</b>	That portion of the Grid Code which is identified as the <b>Operating Code</b> .
<b>Operating Margin</b>	<b>Contingency Reserve</b> plus <b>Operating Reserve</b> .
<b>Operating Reserve</b>	The additional output from <b>Large Power Stations</b> or the reduction in <b>Demand</b> , which must be realisable in real-time operation to respond in order to contribute to containing and correcting any <b>System Frequency</b> fall to an acceptable level in the event of a loss of generation or a loss of import from an <b>External Interconnection</b> or mismatch between generation and <b>Demand</b> .
<b>Operation</b>	A scheduled or planned action relating to the operation of a <b>System</b> (including an <b>Embedded Power Station</b> ).

<b>Operational Data</b>	Data required under the <b>Operating Codes</b> and/or <b>Balancing Codes</b> .
<b>Operational Day</b>	The period from 0500 hours on one day to 0500 on the following day.
<b>Operation Diagrams</b>	Diagrams which are a schematic representation of the <b>HV Apparatus</b> and the connections to all external circuits at a <b>Connection Site</b> (and in the case of <b>OTSDUW, Transmission Interface Site</b> ), incorporating its numbering, nomenclature and labelling.
<b>Operational Effect</b>	Any effect on the operation of the relevant other <b>System</b> which causes the <b>National Electricity Transmission System</b> or the <b>System</b> of the other <b>User</b> or <b>Users</b> , as the case may be, to operate (or be at a materially increased risk of operating) differently to the way in which they would or may have operated in the absence of that effect.
<b>Operational Intertripping</b>	The automatic tripping of circuit-breakers to prevent abnormal system conditions occurring, such as over voltage, overload, <b>System</b> instability, etc. after the tripping of other circuit-breakers following power <b>System</b> fault(s) which includes <b>System</b> to <b>Generating Unit</b> , <b>System</b> to <b>CCGT Module</b> , <b>System</b> to <b>Power Park Module</b> , <b>System</b> to <b>Electricity Storage Module</b> , <b>System</b> to <b>DC Converter</b> , <b>System</b> to <b>Power Generating Module</b> , <b>System</b> to <b>HVDC Converter</b> and <b>System</b> to <b>Demand</b> intertripping schemes.
<b>Operational Notifications</b>	Any <b>Energisation Operational Notification</b> , <b>Interim Operational Notification</b> , <b>Final Operational Notification</b> or <b>Limited Operational Notification</b> issued from <b>The Company</b> to a <b>User</b> .
<b>Operational Planning</b>	Planning through various timescales the matching of generation output with forecast <b>National Electricity Transmission System Demand</b> together with a reserve of generation to provide a margin, taking into account outages of certain <b>Generating Units</b> or <b>Power Generating Modules</b> , of parts of the <b>National Electricity Transmission System</b> and of parts of <b>User Systems</b> to which <b>Power Stations</b> and/or <b>Customers</b> are connected, carried out to achieve, so far as possible, the standards of security set out in the <b>ESO Licence</b> , each <b>Relevant Transmission Licensee's Transmission Licence</b> or <b>Electricity Distribution Licence</b> , as the case may be.
<b>Operational Planning Margin</b>	An operational planning margin set by <b>The Company</b> .
<b>Operational Planning Phase</b>	The period from 8 weeks to the end of the 5 <sup>th</sup> year ahead of real time operation.
<b>Operational Procedures</b>	Management instructions and procedures, both in support of the <b>Safety Rules</b> and for the local and remote operation of <b>Plant</b> and <b>Apparatus</b> , issued in connection with the actual operation of <b>Plant</b> and/or <b>Apparatus</b> at or from a <b>Connection Site</b> .
<b>Operational Switching</b>	Operation of <b>Plant</b> and/or <b>Apparatus</b> to the instruction of the relevant <b>Control Engineer</b> . For the avoidance of doubt, the operation of <b>Transmission Plant</b> and/or <b>Apparatus</b> forming part of the <b>National Electricity Transmission System</b> will be to the instruction of the <b>Relevant Transmission Licensee</b> .

<b>Other Relevant Data</b>	The data listed in BC1.4.2(f) under the heading <b>Other Relevant Data</b> .
<b>OTSDUW Arrangements</b>	The arrangements whereby certain aspects of the design, consenting, construction, installation and/or commissioning of transmission assets are capable of being undertaken by a <b>User</b> prior to the transfer of those assets to a <b>Relevant Transmission Licensee</b> under an <b>Offshore Tender Process</b> .
<b>OTSDUW Data and Information</b>	The data and information to be provided by <b>Users</b> undertaking <b>OTSDUW</b> , to <b>The Company</b> in accordance with Appendix F of the <b>Planning Code</b> .
<b>OTSDUW DC Converter</b>	A <b>Transmission DC Converter</b> designed and/or constructed and/or installed by a <b>User</b> under the <b>OTSDUW Arrangements</b> and/or operated by the <b>User</b> until the <b>OTSUA Transfer Time</b> .
<b>OTSDUW Development and Data Timetable</b>	The timetable for both the delivery of <b>OTSDUW Data and Information</b> and <b>OTSDUW Network Data and Information</b> as referred to in Appendix F of the <b>Planning Code</b> and the development of the scope of the <b>OTSDUW</b> .
<b>OTSDUW Network Data and Information</b>	The data and information to be provided by <b>The Company</b> to <b>Users</b> undertaking <b>OTSDUW</b> in accordance with Appendix F of the <b>Planning Code</b> .
<b>OTSDUW Plant and Apparatus</b>	<b>Plant</b> and <b>Apparatus</b> , including any <b>OTSDUW DC Converter</b> , designed by the <b>User</b> under the <b>OTSDUW Arrangements</b> .
<b>OTSUA Transfer Time</b>	The time and date at which the <b>OTSUA</b> are transferred to a <b>Relevant Transmission Licensee</b> .
<b>Out of Synchronism</b>	The condition where a <b>System</b> or <b>Generating Unit</b> or <b>Power Generating Module</b> cannot meet the requirements to enable it to be <b>Synchronised</b> .
<b>Output Usable or OU</b>	<p>The forecast value (in MW), profiled across the time period affected by the unplanned or planned Event of the level at which the <b>Genset</b> can export to the <b>Grid Entry Point</b>, or in the case of <b>Embedded Power Stations</b>, to the <b>User System Entry Point</b>. In addition, for a <b>Genset</b> powered by an <b>Intermittent Power Source</b> the forecast value is based upon the <b>Intermittent Power Source</b> being at a level which would enable the <b>Genset</b> to generate at <b>Registered Capacity</b>.</p> <p>For the purpose of OC2 only, the term <b>Output Usable</b> shall include the terms <b>Interconnector Export Capacity</b> and <b>Interconnector Import Capacity</b> where the term <b>Output Usable</b> is being applied to an <b>External Interconnection</b>.</p>
<b>Over-excitation Limiter</b>	Shall have the meaning ascribed to that term in <b>IEC 34-16-1:1991</b> [equivalent to <b>British Standard BS4999</b> Section 116.1: 1992].
<b>Panel Chairperson</b>	A person appointed as such in accordance with GR.4.1.
<b>Panel Member</b>	Any of the persons identified as such in GR.4.
<b>Panel Members' Recommendation</b>	The recommendation in accordance with the " <b>Grid Code Review Panel Recommendation Vote</b> ".

<b>Panel Secretary</b>	A person appointed as such in accordance with GR.3.1.2(d).
<b>Part 1 System Ancillary Services</b>	<b>Ancillary Services</b> which are required for <b>System</b> reasons and which must be provided by <b>Users</b> in accordance with the <b>Connection Conditions</b> or <b>European Connection Conditions</b> . An exhaustive list of <b>Part 1 System Ancillary Services</b> is included in that part of CC.8.1 or ECC.8.1 headed Part 1.
<b>Part 2 System Ancillary Services</b>	<b>Ancillary Services</b> which are required for <b>System</b> reasons and which must be provided by a <b>User</b> if the <b>User</b> has agreed to provide them under a <b>Bilateral Agreement</b> . A non-exhaustive list of <b>Part 2 System Ancillary Services</b> is included in that part of CC.8.1 or ECC.8.1 headed Part 2.
<b>Part Load</b>	The condition of a <b>Genset</b> , or <b>Cascade Hydro Scheme</b> which is <b>Loaded</b> but is not running at its Maximum Export Limit.
<b>Peak Current Rating</b>	<p>For a <b>GBGF-I</b> this is the larger of either the: -</p> <ul style="list-style-type: none"> <li>• The registered maximum steady-state current plus the maximum additional current to supply the <b>Active ROCOF Response Power</b> plus the <b>Defined Active Damping Power</b>; or.</li> <li>• The registered maximum steady-state current plus the maximum additional current to supply the <b>Phase Jump Angle</b> limit power, or.</li> </ul> <p>This is the maximum short term total current as declared by the <b>Grid Forming Plant Owner</b> in accordance with PC.A.5.8.1.</p>
<b>Permit for Work for proximity work</b>	<p>In respect of <b>E&amp;W Transmission Systems</b>, a document issued by the <b>Relevant E&amp;W Transmission Licensee</b> or an <b>E&amp;W User</b> in accordance with its respective <b>Safety Rules</b> to enable work to be carried out in accordance with OC8A.8 and which provides for <b>Safety Precautions</b> to be applied and maintained. An example format of a <b>Relevant E&amp;W Transmission Licensee's</b> permit for work is attached as Appendix E to <b>OC8A</b>.</p> <p>In respect of <b>Scottish Transmission Systems</b>, a document issued by a <b>Relevant Scottish Transmission Licensee</b> or a <b>Scottish User</b> in accordance with its respective <b>Safety Rules</b> to enable work to be carried out in accordance with OC8B.8 and which provides for <b>Safety Precautions</b> to be applied and maintained. Example formats of <b>Relevant Scottish Transmission Licensees'</b> permits for work are attached as Appendix E to <b>OC8B</b>.</p>
<b>Partial Shutdown</b>	The same as a <b>Total Shutdown</b> except that all generation has ceased in a separate part of the <b>Total System</b> and there is no electricity supply from <b>External Interconnections</b> or other parts of the <b>Total System</b> to that part of the <b>Total System</b> and, therefore, that part of the <b>Total System</b> is shutdown, with the result that it is not possible for that part of the <b>Total System</b> to begin to function again without <b>The Company's</b> directions relating to <b>System Restoration</b> .

<b>Pending Grid Code Modification Proposal</b>	A <b>Grid Code Modification Proposal</b> in respect of which, at the relevant time, the <b>Authority</b> has not yet made a decision as to whether to direct such <b>Grid Code Modification Proposal</b> to be made pursuant to the <b>ESO Licence</b> (whether or not a <b>Grid Code Modification Report</b> has been submitted in respect of such <b>Grid Code Modification Proposal</b> ) or, in the case of a <b>Grid Code Self Governance Proposals</b> , in respect of which the <b>Grid Code Review Panel</b> has not yet voted whether or not to approve.
<b>Phase Jump Angle</b>	The difference in the measured phase angle of the voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> in a given mains half cycle compared with the measured phase angle of the voltage at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> in the previous mains half cycle.
<b>Phase Jump Angle Limit</b>	The maximum <b>Phase Jump Angle</b> when applied to a <b>GBGF-I</b> which will result in a linear controlled response without activating current limiting functions. This is specified for a <b>System</b> angle near to zero which will be considered to be the normal operating angle under steady state conditions.
<b>Phase Jump Angle Withstand</b>	The maximum <b>Phase Jump Angle</b> change when applied to a <b>GBGF-I</b> which will result in the <b>GBGF-I</b> remaining in stable operation with current limiting functions activated. This is specified for a <b>System</b> angle near to zero which will be considered to be the normal operating angle under steady state conditions.
<b>Phase (Voltage) Unbalance</b>	The ratio (in percent) between the rms values of the negative sequence component and the positive sequence component of the voltage.
<b>Physical Notification</b>	Data that describes the <b>BM Participant's</b> best estimate of the expected input or output of <b>Active Power</b> of a <b>BM Unit</b> and/or (where relevant) <b>Generating Unit</b> , except in the instance of a Stage 2 or higher <b>Network Gas Supply Emergency</b> , with the accuracy of the <b>Physical Notification</b> being commensurate with <b>Good Industry Practice</b> .
<b>Planning Code or PC</b>	That portion of the Grid Code which is identified as the <b>Planning Code</b> .
<b>Planned Maintenance Outage</b>	An outage of <b>The Company's</b> electronic data communication facilities as provided for in CC.6.5.8 or ECC.6.5.8 and <b>The Company's</b> associated computer facilities of which normally at least 5 days notice is given, but in any event of which at least twelve hours notice has been given by <b>The Company</b> to the <b>User</b> and which is anticipated to last no longer than 2 hours. The length of such an outage may in exceptional circumstances be extended where at least 24 hours notice has been given by <b>The Company</b> to the <b>User</b> . It is anticipated that normally any planned outage would only last around one hour.
<b>Planned Outage</b>	An outage of a <b>Large Power Station</b> or of part of the <b>National Electricity Transmission System</b> , or of part of a <b>User System</b> , co-ordinated by <b>The Company</b> under <b>OC2</b> .
<b>Plant</b>	Fixed and movable items used in the generation and/or supply and/or transmission of electricity, other than <b>Apparatus</b> .



<b>Point of Common Coupling</b>	That point on the <b>National Electricity Transmission System</b> electrically nearest to the <b>User</b> installation at which either <b>Demands</b> or <b>Loads</b> are, or may be, connected.
<b>Point of Connection</b>	An electrical point of connection between the <b>National Electricity Transmission System</b> and a <b>User's System</b> .
<b>Point of Isolation</b>	The point on <b>Apparatus</b> (as defined in OC8A.1.6.2 and OC8B.1.7.2) at which <b>Isolation</b> is achieved.
<b>Post-Control Phase</b>	The period following real time operation.
<b>Power Available</b>	A signal prepared in accordance with good industry practice, representing the instantaneous sum of the potential <b>Active Power</b> available from each individual <b>Power Park Unit</b> within the <b>Power Park Module</b> calculated using any applicable combination of electrical or mechanical or meteorological data (including wind speed) measured at each <b>Power Park Unit</b> at a specified time. <b>Power Available</b> shall be a value between 0MW and <b>Registered Capacity</b> or <b>Maximum Capacity</b> which is the sum of the potential <b>Active Power</b> available of each <b>Power Park Unit</b> within the <b>Power Park Module</b> . A unit that is not generating or supplying power will be considered as not available. For the avoidance of doubt, the <b>Power Available</b> signal would be the <b>Active Power</b> output that a <b>Power Park Module</b> could reasonably be expected to export at the <b>Grid Entry Point</b> or <b>User System Entry Point</b> taking all the above criteria into account including <b>Power Park Unit</b> constraints such as optimisation modes but would exclude a reduction in the <b>Active Power</b> export of the <b>Power Park Module</b> instructed by <b>The Company</b> (for example) for the purposes selecting a <b>Power Park Module</b> to operate in <b>Frequency Sensitive Mode</b> or when an <b>Emergency Instruction</b> has been issued.
<b>Power Factor</b>	The ratio of <b>Active Power</b> to <b>Apparent Power</b> .
<b>Power-Generating Module</b>	Either a <b>Synchronous Power Generating Module</b> , a <b>Synchronous Electricity Storage Module</b> , a <b>Power Park Module</b> or a <b>Non-Synchronous Electricity Storage Module</b> owned or operated by an <b>EU Generator</b> .
<b>Power-Generating Module Document (PGMD)</b>	A document provided by the <b>Generator</b> to <b>The Company</b> for a <b>Type B</b> or <b>Type C Power Generating Module</b> which confirms that the <b>Power Generating Module's</b> compliance with the technical criteria set out in the Grid Code has been demonstrated and provides the necessary data and statements, including a statement of compliance.
<b>Power Generating Module Performance Chart</b>	A diagram showing the <b>Active Power</b> (MW) and <b>Reactive Power</b> (MVar) capability limits within which a <b>Synchronous Power Generating Module</b> or <b>Power Park Module</b> at its <b>Grid Entry Point</b> or <b>User System Entry Point</b> will be expected to operate under steady state conditions.
<b>Power Island</b>	Part of the <b>Total System</b> which is disconnected from, and out of <b>Synchronism</b> with, the rest of the <b>Total System</b> containing <b>Generating Unit(s)</b> at one or more <b>Power Stations</b> , and/or <b>HVDC Systems</b> and/or <b>DC Converters</b> , together with complementary local <b>Demand</b> .
<b>Power Park Module</b>	Any <b>Onshore Power Park Module</b> or <b>Offshore Power Park Module</b> .
<b>Power Park Module Availability Matrix</b>	The matrix described in Appendix 1 to BC1 under the heading <b>Power Park Module Availability Matrix</b> .

<b>Power Park Module Planning Matrix</b>	A matrix in the form set out in Appendix 4 of OC2 showing the combination of <b>Power Park Units</b> within a <b>Power Park Module</b> which would be expected to be running under normal conditions.
<b>Power Park Unit</b>	A <b>Generating Unit</b> within a <b>Power Park Module</b> .
<b>Power Station</b>	An installation comprising one or more <b>Generating Units</b> or <b>Power Park Modules</b> or <b>Power Generating Modules</b> or <b>Electricity Storage Modules</b> (even where sited separately) owned and/or controlled by the same <b>Generator</b> , which may reasonably be considered as being managed as one <b>Power Station</b> .
<b>Power System Stabiliser or PSS</b>	Equipment controlling the <b>Exciter</b> output via the voltage regulator in such a way that power oscillations of the synchronous machines are dampened. Input variables may be speed, frequency or power (or a combination of these).
<b>Preface</b>	The preface to the Grid Code (which does not form part of the Grid Code and therefore is not binding).
<b>Preliminary Notice</b>	A notice in writing, sent by <b>The Company</b> both to all <b>Users</b> identified by it under OC12.4.2.1 and to the <b>Test Proposer</b> , notifying them of a proposed <b>System Test</b> .
<b>Preliminary Project Planning Data</b>	Data relating to a proposed <b>User Development</b> at the time the <b>User</b> applies for a <b>CUSC Contract</b> but before an offer is made and accepted.
<b>Primary Response</b>	The automatic increase in <b>Active Power</b> output of a <b>Genset</b> or, as the case may be, the decrease in <b>Active Power Demand</b> in response to a <b>System Frequency</b> fall. This increase in <b>Active Power</b> output or, as the case may be, the decrease in <b>Active Power Demand</b> must be in accordance with the provisions of the relevant <b>Ancillary Services Agreement</b> which will provide that it will be released increasingly with time over the period 0 to 10 seconds from the time of the start of the <b>Frequency</b> fall on the basis set out in the <b>Ancillary Services Agreement</b> and fully available by the latter, and sustainable for at least a further 20 seconds. The interpretation of the <b>Primary Response</b> to a – 0.5 Hz frequency change is shown diagrammatically in Figure CC.A.3.2 and Figure ECC.A.3.2
<b>Private Network</b>	A network which connects to a <b>Network Operator's System</b> and that network belongs to a <b>User</b> who is not classified as a <b>Generator</b> , <b>Network Operator</b> or <b>Non-Embedded Customer</b> .
<b>Programming Phase</b>	The period between the <b>Operational Planning Phase</b> and the <b>Control Phase</b> . It starts at the 8 weeks ahead stage and finishes at 17:00 on the day ahead of real time.
<b>Proposal Notice</b>	A notice submitted to <b>The Company</b> by a <b>User</b> which would like to undertake a <b>System Test</b> .

<b>Proposal Report</b>	<p>A report submitted by the <b>Test Panel</b> which contains:</p> <ul style="list-style-type: none"> <li>(a) proposals for carrying out a <b>System Test</b> (including the manner in which the <b>System Test</b> is to be monitored);</li> <li>(b) an allocation of costs (including un-anticipated costs) between the affected parties (the general principle being that the <b>Test Proposer</b> will bear the costs); and</li> <li>(c) such other matters as the <b>Test Panel</b> considers appropriate.</li> </ul> <p>The report may include requirements for indemnities to be given in respect of claims and losses arising from a <b>System Test</b>.</p>
<b>Proposed Implementation Date</b>	<p>The proposed date(s) for the implementation of a <b>Grid Code Modification Proposal</b> or <b>Workgroup Alternative Grid Code Modification</b> such date(s) to be either (i) described by reference to a specified period after a direction from the Authority approving the <b>Grid Code Modification Proposal</b> or <b>Workgroup Alternative Grid Code Modification</b> or (ii) a <b>Fixed Proposed Implementation Date</b>.</p>
<b>Proposer</b>	<p>In relation to a particular <b>Grid Code Modification Proposal</b>, the person who makes such <b>Grid Code Modification Proposal</b>.</p>
<b>Protection</b>	<p>The provisions for detecting abnormal conditions on a <b>System</b> and initiating fault clearance or actuating signals or indications.</p>
<b>Protection Apparatus</b>	<p>A group of one or more <b>Protection</b> relays and/or logic elements designated to perform a specified <b>Protection</b> function.</p>
<b>Pumped Storage</b>	<p>A hydro unit in which water can be raised by means of pumps and stored to be used for the generation of electrical energy;</p>
<b>Pumped Storage Generating Unit</b>	<p>A <b>Generating Unit</b> at a <b>Pumped Storage Plant</b></p>
<b>Pumped Storage Generator</b>	<p>A <b>Generator</b> which owns and/or operates any <b>Pumped Storage Plant</b>.</p>
<b>Pumped Storage Plant</b>	<p>A <b>Power Station</b> comprising <b>Pumped Storage Generating Units</b>.</p>
<b>Pumped Storage Unit</b>	<p>A <b>Generating Unit</b> within a <b>Pumped Storage Plant</b>. For the avoidance of doubt, a <b>Pumped Storage Unit</b> is not considered to form part of an <b>Electricity Storage Unit</b> unless specifically declared by the <b>Generator</b>.</p>
<b>Purchase Contracts</b>	<p>A final and binding contract for the purchase of the <b>Main Plant and Apparatus</b>.</p>
<b>Q/Pmax</b>	<p>The ratio of <b>Reactive Power</b> to the <b>Maximum Capacity</b>. The relationship between <b>Power Factor</b> and <b>Q/Pmax</b> is given by the formula:-</p> $\text{Power Factor} = \cos \left[ \arctan \left[ \frac{Q}{P_{\max}} \right] \right]$ <p>For example, a <b>Power Park Module</b> with a Q/P value of +0.33 would equate to a <b>Power Factor</b> of <math>\cos(\arctan 0.33) = 0.95</math> <b>Power Factor</b> lag.</p>

<b>Quick Resynchronisation Capability</b>	The capability of a <b>Type C</b> or <b>Type D Power Generating Module</b> as defined in ECC.6.3.5.6. For the avoidance of doubt this requirement is only mandatory for <b>EU Code Generators</b> who own or operate a <b>Type C</b> or <b>Type D Power Generating Module</b> but does not preclude owners of other generation electing to provide the capability.
<b>Quick Resynchronisation Unit Test</b>	A test undertaken on <b>Generating Unit</b> forming part of a <b>Type C</b> or <b>Type D Power Generating Module</b> as detailed in OC5.7.2.5 necessary to determine its ability to demonstrate a <b>Quick Resynchronisation Capability</b> .
<b>Range CCGT Module</b>	A <b>CCGT Module</b> where there is a physical connection by way of a steam or hot gas main between that <b>CCGT Module</b> and another <b>CCGT Module</b> or other <b>CCGT Modules</b> , which connection contributes (if open) to efficient modular operation, and which physical connection can be varied by the operator.
<b>Rated Field Voltage</b>	Shall have the meaning ascribed to that term in IEC 34-16-1:1991 [equivalent to <b>British Standard BS4999</b> Section 116.1: 1992].
<b>Rated MW</b>	<p>The “rating-plate” MW output of a <b>Power Generating Module</b>, <b>Generating Unit</b>, <b>Power Park Module</b>, <b>Electricity Storage Module</b>, <b>HVDC Converter</b> or <b>DC Converter</b>, being:</p> <ul style="list-style-type: none"> <li>(a) that output up to which the <b>Generating Unit</b> was designed to operate (Calculated as specified in <b>British Standard BS EN 60034 – 1: 1995</b>); or</li> <li>(b) the nominal rating for the MW output of a <b>Power Park Module</b> or <b>Power Generating Module</b> being the maximum continuous electric output power which the <b>Power Park Module</b> or <b>Power Generating Module</b> was designed to achieve under normal operating conditions; or</li> <li>(c) the nominal rating for the MW import capacity and export capacity (if at a <b>DC Converter Station</b> or <b>HVDC Converter Station</b>) of a <b>DC Converter</b> or <b>HVDC Converter</b>.</li> <li>(d) in an importing mode, is that input up to which an <b>Electricity Storage Module</b> was designed to operate being the maximum continuous electric input which the <b>Electricity Storage Module</b> was designed to achieve under normal operating conditions. In an exporting mode is:- <ul style="list-style-type: none"> <li>(i) that output up to which the <b>Synchronous Electricity Storage Unit</b> was designed to operate (Calculated as specified in <b>British Standard BS EN 60034 – 1: 1995</b>); or</li> <li>(ii) the nominal rating for the MW output of a <b>Non-Synchronous Electricity Storage Module</b> being the maximum continuous electric output power which the <b>Non-Synchronous Electricity Storage Module</b> was designed to achieve under normal operating conditions.</li> </ul> </li> </ul>
<b>Reactive Despatch Instruction</b>	Has the meaning set out in the <b>CUSC</b> .

<b>Reactive Despatch Network Restriction</b>	A restriction placed upon an <b>Embedded Power Generating Module</b> , <b>Embedded Generating Unit</b> , <b>Embedded Power Park Module</b> or <b>DC Converter</b> at an <b>Embedded DC Converter Station</b> or <b>HVDC Converter</b> at an <b>Embedded HVDC Converter Station</b> by the <b>Network Operator</b> that prevents the <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> in question (as applicable) from complying with any <b>Reactive Despatch Instruction</b> with respect to that <b>Power Generating Module</b> , <b>Generating Unit</b> , <b>Power Park Module</b> or <b>DC Converter</b> at a <b>DC Converter Station</b> or <b>HVDC Converter</b> at a <b>HVDC Converter Station</b> , whether to provide MVAr over the range referred to in CC 6.3.2, ECC.6.3.2 or otherwise.
<b>Reactive Despatch to Zero Mvar Network Restriction</b>	A <b>Reactive Despatch Network Restriction</b> which prevents an <b>Embedded Power Generating Module</b> , an <b>Embedded Generating Unit</b> , <b>Embedded Power Park Module</b> , <b>Embedded HVDC System</b> , <b>HVDC Converter</b> at an <b>Embedded HVDC Converter Station</b> or <b>DC Converter</b> at an <b>Embedded DC Converter Station</b> from supplying power at zero MVAr at all <b>Active Power</b> output levels up to and including <b>Rated MW</b> at the <b>Grid Entry Point</b> (or <b>User System Entry Point</b> if <b>Embedded</b> ).
<b>Reactive Energy</b>	The integral with respect to time of the <b>Reactive Power</b> .
<b>Reactive Power</b>	The product of voltage and current and the sine of the phase angle between them measured in units of voltamperes reactive and standard multiples thereof, ie:  1000 VAr = 1 kVAr  1000 kVAr = 1 MVAr
<b>Record of Inter-System Safety Precautions or RISSP</b>	A written record of inter-system <b>Safety Precautions</b> to be compiled in accordance with the provisions of <b>OC8</b> .
<b>Regenerative Braking</b>	A method of braking in which energy is extracted from the parts braked, which may be returned directly to the <b>System</b> and the purpose of the braking is motion control.

Registered Capacity	<p>(a) In the case of a <b>Generating Unit</b> other than that forming part of a <b>CCGT Module</b> or <b>Power Park Module</b> or <b>Power Generating Module</b>, the normal full load capacity of a <b>Generating Unit</b> as declared by the <b>Generator</b>, less the MW consumed by the <b>Generating Unit</b> through the <b>Generating Unit's Unit Transformer</b> when producing the same (the resultant figure being expressed in whole MW, or in MW to one decimal place).</p> <p>(b) In the case of a <b>CCGT Module</b> or <b>Power Park Module</b> owned or operated by a <b>GB Generator</b>, the normal full load capacity of the <b>CCGT Module</b> or <b>Power Park Module</b> (as the case may be) as declared by the <b>GB Generator</b>, being the <b>Active Power</b> declared by the <b>GB Generator</b> as being deliverable by the <b>CCGT Module</b> or <b>Power Park Module</b> at the <b>Grid Entry Point</b> (or in the case of an <b>Embedded CCGT Module</b> or <b>Power Park Module</b>, at the <b>User System Entry Point</b>), expressed in whole MW, or in MW to one decimal place. For the avoidance of doubt <b>Maximum Capacity</b> would apply to <b>Power Generating Modules</b> which form part of a <b>Large, Medium</b> or <b>Small Power Station</b>.</p> <p>(c) In the case of a <b>Power Station</b>, the maximum amount of <b>Active Power</b> deliverable by the <b>Power Station</b> at the <b>Grid Entry Point</b> (or in the case of an <b>Embedded Power Station</b> at the <b>User System Entry Point</b>), as declared by the <b>Generator</b>, expressed in whole MW, or in MW to one decimal place. The maximum <b>Active Power</b> deliverable is the maximum amount deliverable simultaneously by the <b>Power Generating Modules</b> and/or <b>Generating Units</b> and/or <b>CCGT Modules</b> and/or <b>Power Park Modules</b> less the MW consumed by the <b>Power Generating Modules</b> and/or <b>Generating Units</b> and/or <b>CCGT Modules</b> in producing that <b>Active Power</b> and forming part of a <b>Power Station</b>.</p> <p>(d) In the case of a <b>DC Converter</b> at a <b>DC Converter Station</b> or <b>HVDC Converter</b> at an <b>HVDC Converter Station</b>, the normal full load amount of <b>Active Power</b> transferable from a <b>DC Converter</b> or <b>HVDC Converter</b> at the <b>Onshore Grid Entry Point</b> (or in the case of an <b>Embedded DC Converter Station</b> or an <b>Embedded HVDC Converter Station</b> at the <b>User System Entry Point</b>), as declared by the <b>DC Converter Station</b> owner or <b>HVDC System Owner</b>, expressed in whole MW, or in MW to one decimal place.</p> <p>(e) In the case of a <b>DC Converter Station</b> or <b>HVDC Converter Station</b>, the maximum amount of <b>Active Power</b> transferable from a <b>DC Converter Station</b> or <b>HVDC Converter Station</b> at the <b>Onshore Grid Entry Point</b> (or in the case of an <b>Embedded DC Converter Station</b> or <b>Embedded HVDC Converter Station</b> at the <b>User System Entry Point</b>), as declared by the <b>DC Converter Station</b> owner or <b>HVDC System Owner</b>, expressed in whole MW, or in MW to one decimal place.</p> <p>(f) In the case of an <b>Electricity Storage Module</b>, the normal full load amount of <b>Active Power</b> transferable from an <b>Electricity Storage Module</b> at the <b>Grid Entry Point</b> (or in the case of an <b>Embedded Electricity Storage Module</b> at the <b>User System Entry Point</b>), as declared by the <b>Generator</b>, expressed in whole MW, or in MW to one decimal place.</p>
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<b>Registered Data</b>	Those items of <b>Standard Planning Data</b> and <b>Detailed Planning Data</b> which upon connection become fixed (subject to any subsequent changes).
<b>Registered Import Capability</b>	<p>In the case of a <b>DC Converter Station</b> or <b>HVDC Converter Station</b> containing <b>DC Converters</b> or <b>HVDC Converters</b> connected to an <b>External System</b>, the maximum amount of <b>Active Power</b> transferable into a <b>DC Converter Station</b> or <b>HVDC Converter Station</b> at the <b>Onshore Grid Entry Point</b> (or in the case of an <b>Embedded DC Converter Station</b> or <b>Embedded HVDC Converter Station</b> at the <b>User System Entry Point</b>), as declared by the <b>DC Converter Station</b> owner or <b>HVDC System Owner</b>, expressed in whole MW.</p> <p>In the case of a <b>DC Converter</b> or <b>HVDC Converter</b> connected to an <b>External System</b> and in a <b>DC Converter Station</b> or <b>HVDC Converter Station</b>, the normal full load amount of <b>Active Power</b> transferable into a <b>DC Converter</b> or <b>HVDC Converter</b> at the <b>Onshore Grid Entry Point</b> (or in the case of an <b>Embedded DC Converter Station</b> or <b>Embedded HVDC Converter Station</b> at the <b>User System Entry Point</b>), as declared by the <b>DC Converter</b> owner or <b>HVDC System Owner</b>, expressed in whole MW.</p> <p>In the case of an <b>Electricity Storage Module</b>, the maximum amount of <b>Active Power</b> transferable into an <b>Electricity Storage Module</b> at the <b>Grid Entry Point</b> (or in the case of an <b>Embedded Electricity Storage Module</b> at the <b>User System Entry Point</b>), as declared by the <b>Generator</b>, expressed in whole MW.</p>
<b>Regulations</b>	The Utilities Contracts Regulations 1996, as amended from time to time.
<b>Regulated Sections</b>	Parts of the Grid Code that are referenced in <b>Governance Rules</b> Annex GR.B as amended from time to time with the approval of the <b>Authority</b> .
<b>Reheater Time Constant</b>	Determined at <b>Registered Capacity</b> , the reheater time constant will be construed in accordance with the principles of the IEEE Committee Report "Dynamic Models for Steam and Hydro Turbines in Power System Studies" published in 1973 which apply to such phrase.
<b>Rejected Grid Code Modification Proposal</b>	A <b>Grid Code Modification Proposal</b> in respect of which the <b>Authority</b> has decided not to direct <b>The Company</b> to modify the <b>Grid Code</b> pursuant to the <b>ESO Licence</b> in the manner set out herein or, in the case of a <b>Grid Code Self Governance Proposals</b> , in respect of which the <b>Grid Code Review Panel</b> has voted not to approve.
<b>Related Person</b>	Means, in relation to an individual, any member of their immediate family, their employer (and any former employer of theirs within the previous 12 months), any partner with whom they are in partnership, and any company or <b>Affiliate</b> of a company in which they or any member of their immediate family controls more than 20% of the voting rights in respect of the shares of the company;
<b>Relevant E&amp;W Transmission Licensee</b>	As the context requires <b>NGET</b> , and/or a <b>Competitively Appointed Transmission Licensee</b> with <b>Plant</b> and <b>Apparatus</b> located in <b>NGET's Transmission Area</b> and/or an <b>E&amp;W Offshore Transmission Licensee</b> .
<b>Relevant Party</b>	Has the meaning given in GR15.10(a).

<b>Relevant Scottish Transmission Licensee</b>	As the context requires <b>SPT</b> and/or <b>SHETL</b> , and/or a <b>Competitively Appointed Transmission Licensee</b> with <b>Plant</b> and <b>Apparatus</b> located in either <b>SPT's</b> or <b>SHETL's Transmission Area</b> and/or a <b>Scottish Offshore Transmission Licensee</b> .
<b>Relevant Transmission Licensee</b>	Means National Grid Electricity Transmission plc ( <b>NGET</b> ) in its <b>Transmission Area</b> or SP Transmission plc ( <b>SPT</b> ) in its <b>Transmission Area</b> or Scottish Hydro-Electric Transmission Ltd ( <b>SHETL</b> ) in its <b>Transmission Area</b> or any <b>Offshore Transmission Licensee</b> in its <b>Transmission Area</b> or any <b>Competitively Appointed Transmission Licensee</b> with <b>Plant</b> and <b>Apparatus</b> located in <b>NGET's</b> , <b>SPT's</b> or <b>SHETL's Transmission Area</b> as appropriate.
<b>Relevant Unit</b>	As defined in the <b>STC</b> , Schedule 3.
<b>Remote End HVDC Converter Station</b>	An <b>HVDC Converter Station</b> which forms part of an <b>HVDC System</b> and is not directly connected to the AC part of the <b>GB Synchronous Area</b> .
<b>Remote Transmission Assets</b>	Any <b>Plant</b> and <b>Apparatus</b> or meters owned by <b>NGET</b> which: (a) are <b>Embedded</b> in a <b>User System</b> and which are not directly connected by <b>Plant</b> and/or <b>Apparatus</b> owned by <b>NGET</b> to a sub-station owned by <b>NGET</b> ; and (b) are by agreement between <b>NGET</b> and such <b>User</b> operated under the direction and control of such <b>User</b> .
<b>Replacement Reserves (RR)</b>	Means, in the context of <b>Balancing Services</b> , the <b>Active Power</b> reserves available to restore or support the required level of FRR to be prepared for additional system imbalances, including generation reserves;
<b>Requesting Safety Co-ordinator</b>	The <b>Safety Co-ordinator</b> requesting <b>Safety Precautions</b> .
<b>Responsible Engineer/Operator</b>	A person nominated by a <b>User</b> to be responsible for <b>System</b> control.
<b>Responsible Manager</b>	A manager who has been duly authorised by a <b>User</b> or a <b>Relevant Transmission Licensee</b> to sign <b>Site Responsibility Schedules</b> on behalf of that <b>User</b> or <b>Relevant Transmission Licensee</b> as the case may be.
<b>Restoration Contractor</b>	An <b>Anchor Restoration Contractor</b> or a <b>Top Up Restoration Contractor</b> .
<b>Restoration Plan</b>	Either a <b>Local Joint Restoration Plan</b> , a <b>Distribution Restoration Zone Plan</b> or an <b>Offshore Local Joint Restoration Plan</b> as the context requires.
<b>Restoration Service Provider</b>	A <b>User</b> or a party with a legal or contractual obligation to provide a service contributing to one or several measures of the <b>System Restoration Plan</b> .
<b>Restoration Service Test</b>	A test carried out on a <b>Plant</b> to confirm it has an <b>Anchor Plant Capability</b> or <b>Top Up Restoration Capability</b> .



<b>Re-synchronisation</b>	The bringing of parts of the <b>System</b> which have become <b>Out of Synchronism</b> with any other <b>System</b> back into <b>Synchronism</b> , and like terms shall be construed accordingly.
<b>RR Acceptance</b>	The results of the <b>TERRE</b> auction for each <b>BM Participant</b> .
<b>Restricted</b>	Applies to a <b>TERRE Bid</b> which has been marked so that it will be passed to the <b>TERRE Central Platform</b> but will not be used in the auction.
<b>ROCOF</b>	<b>Rate of Change of Frequency</b>
<b>RR Instruction</b>	<b>Replacement Reserve</b> Instruction – used for instructing <b>BM Participants</b> after the results of the <b>TERRE</b> auction. An <b>RR Instruction</b> has the same format as a <b>Bid-Offer Acceptance</b> but has type field indicating it is for <b>TERRE</b> .
<b>Safety Co-ordinator</b>	A person or persons nominated by a <b>Relevant E&amp;W Transmission Licensee</b> and each <b>E&amp;W User</b> in relation to <b>Connection Points</b> (or in the case of <b>OTSUA</b> operational prior to the <b>OTSUA Transfer Time, Transmission Interface Points</b> ) on an <b>E&amp;W Transmission System</b> and/or by the <b>Relevant Scottish Transmission Licensee</b> and each <b>Scottish User</b> in relation to <b>Connection Points</b> (or in the case of <b>OTSUA</b> operational prior to the <b>OTSUA Transfer Time, Transmission Interface Points</b> ) on a <b>Scottish Transmission System</b> to be responsible for the co-ordination of <b>Safety Precautions</b> at each <b>Connection Point</b> (or in the case of <b>OTSUA</b> operational prior to the <b>OTSUA Transfer Time, Transmission Interface Points</b> ) when work (which includes testing) is to be carried out on a <b>System</b> which necessitates the provision of <b>Safety Precautions</b> on <b>HV Apparatus</b> (as defined in OC8A.1.6.2 and OC8B.1.7.2), pursuant to <b>OC8</b> .
<b>Safety From The System</b>	That condition which safeguards persons when work is to be carried out on or near a <b>System</b> from the dangers which are inherent in the <b>System</b> .
<b>Safety Key</b>	A key unique at the <b>Location</b> capable of operating a lock which will cause an <b>Isolating Device</b> and/or <b>Earthing Device</b> to be <b>Locked</b> .
<b>Safety Log</b>	A chronological record of messages relating to safety co-ordination sent and received by each <b>Safety Co-ordinator</b> under <b>OC8</b> .
<b>Safety Precautions</b>	<b>Isolation</b> and/or <b>Earthing</b> .
<b>Safety Rules</b>	The rules of the <b>Relevant Transmission Licensee</b> or a <b>User</b> that seek to ensure that persons working on <b>Plant</b> and/or <b>Apparatus</b> to which the rules apply are safeguarded from hazards arising from the <b>System</b> .
<b>Scottish Offshore Transmission System</b>	An <b>Offshore Transmission System</b> with an <b>Interface Point</b> in Scotland.
<b>Scottish Offshore Transmission Licensee</b>	A person who owns or operates a <b>Scottish Offshore Transmission System</b> pursuant to a <b>Transmission Licence</b> .

<b>Scottish Transmission System</b>	Collectively <b>SPT's Transmission System</b> and <b>SHETL's Transmission System</b> , any <b>Competitively Appointed Transmission Licensee's Transmission System</b> with <b>Plant</b> and <b>Apparatus</b> located in <b>SPT's</b> or <b>SHETL's Transmission Area</b> and any <b>Scottish Offshore Transmission Systems</b> .
<b>Scottish User</b>	A <b>User</b> in Scotland or any <b>Offshore User</b> who owns or operates <b>Plant</b> and/or <b>Apparatus</b> connected (or which will at the <b>OTSUA Transfer Time</b> be connected) to a <b>Scottish Offshore Transmission System</b> .
<b>Secondary BM Unit</b>	Has the same meaning set out in the <b>BSC</b> .
<b>Secondary Response</b>	The automatic increase in <b>Active Power</b> output of a <b>Genset</b> or, as the case may be, the decrease in <b>Active Power Demand</b> in response to a <b>System Frequency</b> fall. This increase in <b>Active Power</b> output or, as the case may be, the decrease in <b>Active Power Demand</b> must be in accordance with the provisions of the relevant <b>Ancillary Services Agreement</b> which will provide that it will be fully available by 30 seconds from the time of the start of the <b>Frequency</b> fall and be sustainable for at least a further 30 minutes. The interpretation of the <b>Secondary Response</b> to a -0.5 Hz frequency change is shown diagrammatically in Figure CC.A.3.2 or Figure ECC.A.3.2.
<b>Secretary of State</b>	Has the same meaning as in the <b>Act</b> .
<b>Secured Event</b>	Has the meaning set out in the <b>Security and Quality of Supply Standard</b> .
<b>Security and Quality of Supply Standard (SQSS)</b>	The version of the document entitled 'Security and Quality of Supply Standard' established pursuant to the <b>Transmission Licence</b> and the <b>ESO Licence</b> in force at the time of entering into the relevant <b>Bilateral Agreement</b> .
<b>Self-Governance Criteria</b>	<p>A proposed <b>Modification</b> that, if implemented,</p> <p>(a) is unlikely to have a material effect on:</p> <ul style="list-style-type: none"> <li>(i) existing or future electricity consumers; and</li> <li>(ii) competition in the generation, storage, distribution, or supply of electricity or any commercial activities connected with the generation, storage, distribution or supply of electricity; and</li> <li>(iii) the operation of the <b>National Electricity Transmission System</b>; and</li> <li>(iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and</li> <li>(v) the <b>Grid Code's</b> governance procedures or the <b>Grid Code's</b> modification procedures, and</li> </ul> <p>(b) is unlikely to discriminate between different classes of Users.</p> <p>(c) other than where the modification meets the <b>Fast Track Criteria</b>, will not constitute an amendment to the <b>Regulated Sections</b> of the Grid Code.</p>

<b>Self-Governance Modifications</b>	A <b>Grid Code Modification Proposal</b> that does not fall within the scope of a <b>Significant Code Review</b> and that meets the <b>Self-Governance Criteria</b> or which the <b>Authority</b> directs is to be treated as such any direction under GR.24.4.
<b>Self-Governance Statement</b>	<p>The statement made by the <b>Grid Code Review Panel</b> and submitted to the <b>Authority</b>:</p> <p>(a) confirming that, in its opinion, the <b>Self-Governance Criteria</b> are met and the proposed <b>Grid Code Modification Proposal</b> is suitable for the Self-Governance route; and</p> <p>(b) providing a detailed explanation of the <b>Grid Code Review Panel's</b> reasons for that opinion.</p>
<b>Setpoint Voltage</b>	The value of voltage at the <b>Grid Entry Point</b> , or <b>User System Entry Point</b> if <b>Embedded</b> , on the automatic control system steady state operating characteristic, as a percentage of the nominal voltage, at which the transfer of <b>Reactive Power</b> between a <b>Power Park Module</b> , <b>DC Converter</b> , <b>HVDC Converter</b> or <b>Non-Synchronous Generating Unit</b> and the <b>Transmission System</b> , or <b>Network Operator's</b> system if <b>Embedded</b> , is zero.
<b>Settlement Period</b>	A period of 30 minutes ending on the hour and half-hour in each hour during a day.
<b>SF<sub>6</sub> Gas Zone</b>	A segregated zone surrounding electrical conductors within a casing containing SF <sub>6</sub> gas.
<b>SHETL</b>	Scottish Hydro-Electric Transmission Limited.
<b>Shutdown</b>	<p>In the case of a <b>Generating Unit</b> is the condition of a <b>Generating Unit</b> where the generator rotor is at rest or on barring or equivalent.</p> <p>In the case of an <b>HVDC System</b> or <b>DC Converter Station</b>, is the condition of an <b>HVDC System</b> or <b>DC Converter Station</b> where the <b>HVDC System</b> or <b>DC Converter Station</b> is de-energised and therefore not importing or exporting <b>Apparent Power</b> to or from the <b>Total System</b>.</p> <p>In the case of <b>Auxiliaries</b>, the state where they are de-energised and not capable of fulfilling their function until restarted or resupplied.</p>
<b>Significant Code Review</b>	Means the period commencing on the start date of a <b>Significant Code Review</b> as stated in the notice issued by the <b>Authority</b> , and ending in the circumstances described in GR.16.6 or GR.16.7, as appropriate.
<b>Significant Code Review Phase</b>	Means the period commencing on the start date of a <b>Significant Code Review</b> as stated in the notice issued by the <b>Authority</b> , and ending in the circumstances described in GR.16.6 or GR.16.7, as appropriate.
<b>Significant Event</b>	An <b>Event</b> , as defined in OC3.4.1.

<b>Significant Incident</b>	<p>An <b>Event</b> which either:</p> <p>(a) was notified by a <b>User</b> to <b>The Company</b> under <b>OC7</b>, and which <b>The Company</b> considers has had or may have had a significant effect on the <b>National Electricity Transmission System</b>, and <b>The Company</b> requires the <b>User</b> to report that <b>Event</b> in writing in accordance with <b>OC10</b> and notifies the <b>User</b> accordingly; or</p> <p>(b) was notified by <b>The Company</b> to a <b>User</b> under <b>OC7</b>, and which that <b>User</b> considers has had or may have had a significant effect on that <b>User's System</b>, and that <b>User</b> requires <b>The Company</b> to report that <b>Event</b> in writing in accordance with the provisions of <b>OC10</b> and notifies <b>The Company</b> accordingly.</p>
<b>Simultaneous Tap Change</b>	A tap change implemented on the generator step-up transformers of <b>Synchronised Gensets</b> , effected by <b>Generators</b> in response to an instruction from <b>The Company</b> issued simultaneously to the relevant <b>Power Stations</b> . The instruction, preceded by advance notice, must be effected as soon as possible, and in any event within one minute of receipt from <b>The Company</b> of the instruction.
<b>Single Intraday Coupling</b>	The continuous process where collected orders are matched and cross-zonal capacity is allocated simultaneously for different bidding zones in the intraday market.
<b>Single Line Diagram</b>	A schematic representation of a three-phase network in which the three phases are represented by single lines. The diagram shall include (but not necessarily be limited to) busbars, overhead lines, underground cables, power transformers and reactive compensation equipment. It shall also show where <b>Large Power Stations</b> are connected, and the points at which <b>Demand</b> is supplied.
<b>Single Point of Connection</b>	A single <b>Point of Connection</b> , with no interconnection through the <b>User's System</b> to another <b>Point of Connection</b> .
<b>Site Common Drawings</b>	Drawings prepared for each <b>Connection Site</b> (and in the case of <b>OTSDUW, Transmission Interface Site</b> ) which incorporate <b>Connection Site</b> (and in the case of <b>OTSDUW, Transmission Interface Site</b> ) layout drawings, electrical layout drawings, common protection/ control drawings and common services drawings.
<b>Site Responsibility Schedule</b>	A schedule containing the information and prepared on the basis of the provisions set out in Appendix 1 of the <b>CC</b> and Appendix E1 of the <b>ECC</b> .
<b>Slope</b>	The ratio of the steady state change in voltage, as a percentage of the nominal voltage, to the steady state change in <b>Reactive Power</b> output, in per unit of <b>Reactive Power</b> capability. For the avoidance of doubt, the value indicates the percentage voltage reduction that will result in a 1 per unit increase in <b>Reactive Power</b> generation.
<b>Small Participant</b>	Has the meaning given in the <b>CUSC</b> .

<b>Small Power Station</b>	<p>A <b>Power Station</b> which is</p> <p>(a) directly connected to:</p> <ul style="list-style-type: none"> <li>(i) <b>NGET's Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 50MW; or</li> <li>(ii) <b>SPT's Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 30MW; or</li> <li>(iii) <b>SHETL's Transmission System</b> where such a <b>Power Station</b> has a <b>Registered Capacity</b> of less than 10 MW; or</li> <li>(iv) an <b>Offshore Transmission System</b> where such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 10MW;</li> </ul> <p>or,</p> <p>(b) <b>Embedded</b> within a <b>User System</b> (or part thereof) where such <b>User System</b> (or part thereof) is connected under normal operating conditions to:</p> <ul style="list-style-type: none"> <li>(i) <b>NGET's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 50MW; or</li> <li>(ii) <b>SPT's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 30MW; or</li> <li>(iii) <b>SHETL's Transmission System</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 10MW;</li> </ul> <p>or,</p> <p>(c) <b>Embedded</b> within a <b>User System</b> (or part thereof) where the <b>User System</b> (or part thereof) is not connected to the <b>National Electricity Transmission System</b>, although such <b>Power Station</b> is in:</p> <ul style="list-style-type: none"> <li>(i) <b>NGET's Transmission Area</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 50MW; or</li> <li>(ii) <b>SPT's Transmission Area</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 30MW; or</li> <li>(iii) <b>SHETL's Transmission Area</b> and such <b>Power Station</b> has a <b>Registered Capacity</b> of less than 10MW;</li> </ul> <p>For the avoidance of doubt, a <b>Small Power Station</b> could comprise of <b>Type A, Type B, Type C</b> or <b>Type D Power Generating Modules</b>.</p>
<b>Space Weather Advisory Statement</b>	A statement issued by <b>The Company</b> to advise of a space weather related matter for information and further consideration.
<b>Space Weather Cancellation Notification</b>	A notification issued by <b>The Company</b> following Met Office guidance signalling that a space weather situation has concluded.
<b>Space Weather Cessation Notification</b>	A notification issued by <b>The Company</b> following Met Office guidance signalling a return to a <b>Space Weather Prepare Notification</b> level.
<b>Space Weather Experienced Notification</b>	A notification issued by <b>The Company</b> following Met Office guidance that impacts (consistent with a space weather event) have been seen or experienced in <b>GB</b> . This triggers the preparation and issuing of <b>Space Weather Outcome Statements</b> .

<b>Space Weather Imminent Notification</b>	A notification issued by <b>The Company</b> following Met Office guidance of imminent space weather of a nature and anticipated level of G5 (using the Met Office ranking). A <b>Space Weather Imminent Notification</b> is likely to be issued 20 to 60 minutes ahead of a space weather event being forecast to impact the <b>NETS</b> .
<b>Space Weather Outcome Statement</b>	A statement that is issued by a <b>User</b> to <b>The Company</b> where, following the issuing of a <b>Space Weather Experienced Notification</b> , their <b>Plant</b> or <b>Apparatus</b> has seen or experienced impacts that they believe, at the time, are or may be of a nature consistent with a space weather event.
<b>Space Weather Output Usable Declaration</b>	A declaration of the <b>Output Usable</b> that would apply to a <b>Generator</b> in respect of their <b>Generating Unit</b> and/or <b>Power-Generating Module</b> and/or <b>Power Park Module</b> , or <b>Interconnector Owner</b> in respect of their <b>External Interconnection Circuits</b> or <b>Restoration Contractor</b> in respect of their <b>Plant</b> and <b>Apparatus</b> following the issue of a <b>Space Weather Imminent Notification</b> until such time as specified by the <b>Generator</b> , <b>Interconnector Owner</b> or <b>Restoration Contractor</b> after either a <b>Space Weather Cessation Notification</b> or a <b>Space Weather Cancellation Notification</b> being issued by <b>The Company</b> .
<b>Space Weather Prepare Notification</b>	A notification issued by <b>The Company</b> following Met Office guidance of space weather related activity that is of a nature and anticipated level of G5 (using the Met Office ranking). A <b>Space Weather Prepare Notification</b> is likely to be issued 12 to 36 hours ahead of a space weather event being forecast to impact the <b>NETS</b> .
<b>Speeder Motor Setting Range</b>	The minimum and maximum no-load speeds (expressed as a percentage of rated speed) to which the turbine is capable of being controlled, by the speeder motor or equivalent, when the <b>Generating Unit</b> terminals are on open circuit.
<b>SPT</b>	SP Transmission Limited plc
<b>Standard Contract Terms</b>	The standard terms and conditions applicable to <b>Ancillary Services</b> provided by <b>Demand Response Providers</b> and published on the <b>Website</b> from time to time.
<b>Standard Modifications</b>	A <b>Grid Code Modification Proposal</b> that does not fall within the scope of a <b>Significant Code Review</b> subject to any direction by the <b>Authority</b> pursuant to GR.16.3 and GR.16.4, nor meets the <b>Self-Governance Criteria</b> subject to any direction by the <b>Authority</b> pursuant to GR.24.4 and in accordance with any direction under GR.24.2. A <b>Grid Code Modification Proposal</b> that constitutes an amendment to the <b>Regulated Sections</b> of the Grid Code shall be a <b>Standard Modification</b> except where it is an <b>Urgent Modification</b> or where it meets the <b>Fast Track Criteria</b> .
<b>Standard Planning Data</b>	The general data required by <b>The Company</b> under the <b>PC</b> . It is generally also the data which <b>The Company</b> requires from a <b>User</b> in an application for a <b>CUSC Contract</b> , as reflected in the <b>PC</b> .
<b>Standard Product</b>	Means a harmonised balancing product defined by all EU TSOs for the exchange of balance services.
<b>Specific Product</b>	Means in the context of Balancing Services a product that is not a standard product.

<b>Start Time</b>	The time named as such in an instruction issued by <b>The Company</b> pursuant to the <b>BC</b> .
<b>Start-Up</b>	<p>In the case of a <b>Generating Unit</b> is the action of bringing a <b>Generating Unit</b> from <b>Shutdown</b> to <b>Synchronous Speed</b>.</p> <p>In the case of an <b>HVDC System</b> or <b>DC Converter Station</b>, is the action of bringing the <b>HVDC System</b> or <b>DC Converter Station</b> from <b>Shutdown</b> to a state where it is energised.</p>
<b>Statement of Readiness</b>	Has the meaning set out in the <b>Bilateral Agreement</b> and/or <b>Construction Agreement</b> .
<b>Station Board</b>	A switchboard through which electrical power is supplied to the <b>Auxiliaries</b> of a <b>Power Station</b> , and which is supplied by a <b>Station Transformer</b> . It may be interconnected with a <b>Unit Board</b> .
<b>Station Transformer</b>	<p>A transformer supplying electrical power to the <b>Auxiliaries</b> of</p> <p>(a) a <b>Power Station</b>, which is not directly connected to the <b>Generating Unit</b> terminals (typical voltage ratios being 132/11kV or 275/11kV), or</p> <p>(b) a <b>DC Converter Station</b> or <b>HVDC Converter Station</b>.</p>
<b>STC Committee</b>	The committee established under the <b>STC</b> .
<b>Steam Unit</b>	A <b>Generating Unit</b> whose prime mover converts the heat-energy in steam to mechanical energy.
<b>Storage User</b>	<p>A <b>Generator</b> who owns or operates one or more <b>Electricity Storage Modules</b>. For the avoidance of doubt:</p> <p>(a) <b>Assimilated Law</b> (Commission Regulation (EU) 2016/631, Commission Regulation (EU) 2016/1388 and Commission Regulation (EU) 2016/1485) shall not apply to <b>Storage Users</b>; and</p> <p>(b) the <b>European Connection Conditions (ECC's)</b> shall apply to <b>Storage Users</b> on the basis set out in Paragraph ECC1.1(d).</p>
<b>Subtransmission System</b>	The part of a <b>User's System</b> which operates at a single transformation below the voltage of the relevant <b>Transmission System</b> .
<b>Substantial Modification</b>	A <b>Modification</b> in relation to modernisation or replacement of the <b>User's Main Plant and Apparatus</b> which impacts its technical capabilities, which, following notification by the relevant <b>User</b> to <b>The Company</b> , results in substantial amendment to the <b>Bilateral Agreement</b> .
<b>Supergrid Voltage</b>	Any voltage greater than 200kV.
<b>Supplier</b>	<p>(a) A person supplying electricity under an <b>Electricity Supply Licence</b>; or</p> <p>(b) A person supplying electricity under exemption under the <b>Act</b>; in each case acting in its capacity as a supplier of electricity to <b>Customers</b> in <b>Great Britain</b>.</p>

<b>Surplus</b>	<p>A MW figure equal to the total <b>Output Usable</b>:</p> <p>(a) minus the forecast of <b>Active Power Demand</b>, and</p> <p>(b) minus the <b>Operational Planning Margin</b>.</p>
<b>Synchronised</b>	<p>(a) The condition where an incoming <b>Power Generating Module</b>, <b>Generating Unit</b> or <b>Power Park Module</b> or <b>DC Converter</b> or <b>HVDC Converter</b> or <b>System</b> is connected to the busbars of another <b>System</b> so that the <b>Frequencies</b> and phase relationships of that <b>Power Generating Module</b>, <b>Generating Unit</b>, <b>Power Park Module</b>, <b>DC Converter</b>, <b>HVDC Converter</b> or <b>System</b>, as the case may be, and the <b>System</b> to which it is connected are identical, like terms shall be construed accordingly e.g. "<b>Synchronism</b>".</p> <p>(b) The condition where an importing <b>BM Unit</b> is consuming electricity.</p>
<b>Synchronous Electricity Storage Module</b>	A <b>Synchronous Power Generating Module</b> which can convert or re-convert electrical energy from another source of energy such that the frequency of the generated voltage, the rotor speed and the frequency of network voltage are in a constant ratio and thus in synchronism. For the avoidance of doubt a <b>Synchronous Electricity Storage Module</b> could comprise of one or more <b>Synchronous Electricity Storage Units</b> .
<b>Synchronous Electricity Storage Unit</b>	A <b>Synchronous Generating Unit</b> which can supply or absorb electrical energy such that the frequency of the generated voltage, the rotor speed and the frequency of the equipment are in constant ratio and thus in synchronism with the network.
<b>Synchronising Generation</b>	The amount of MW (in whole MW) produced at the moment of synchronising.
<b>Synchronising Group</b>	A group of two or more <b>Gensets</b> ) which require a minimum time interval between their <b>Synchronising</b> or <b>De-Synchronising</b> times.
<b>Synchronous Area</b>	An area covered by synchronously interconnected <b>Transmission Licensees</b> , such as the <b>Synchronous Areas</b> of Continental Europe, Great Britain, Ireland-Northern Ireland and Nordic and the power systems of Lithuania, Latvia and Estonia, together referred to as 'Baltic' which are part of a wider <b>Synchronous Area</b> ;
<b>Synchronous Compensation</b>	The operation of rotating synchronous <b>Apparatus</b> for the specific purpose of either the generation or absorption of <b>Reactive Power</b> .
<b>Synchronous Compensation Equipment</b>	<b>Apparatus</b> which has the function of providing <b>Synchronous Compensation</b> . For the avoidance of doubt, one or more <b>Synchronous Compensation</b> units would not constitute an <b>Electricity Storage Module</b> unless it could be operated in a controllable manner.
<b>Synchronous Electricity Storage Module</b>	A <b>Synchronous Power Generating Module</b> which can convert and reconvert electrical energy from another source of energy such that the frequency of the generated voltage, the rotor speed and the frequency of network voltage are in a constant ratio and thus in synchronism. For the avoidance of doubt a <b>Synchronous Electricity Storage Module</b> could comprise of one or more <b>Synchronous Electricity Storage Units</b> .



<b>Synchronous Electricity Storage Unit</b>	A <b>Synchronous Generating Unit</b> which can supply and absorb electrical energy such that the frequency of the generated voltage, the rotor speed and the frequency of the equipment are in constant ratio and thus in synchronism with the network.
<b>Synchronous Flywheel</b>	An item of synchronously rotating <b>Plant</b> for the specific purpose of contributing inertia to the <b>System</b> . One or more <b>Synchronous Flywheels</b> would not be considered to form an <b>Electricity Storage Module</b> unless it could be operated in a controllable manner for its AC input and output power.
<b>Synchronous Generating Unit</b>	Any <b>Onshore Synchronous Generating Unit</b> or <b>Offshore Synchronous Generating Unit</b> .
<b>Synchronous Generating Unit Performance Chart</b>	A diagram showing the <b>Active Power</b> (MW) and <b>Reactive Power</b> (MVar) capability limits within which a <b>Synchronous Generating Unit</b> at its stator terminals (which is part of a <b>Synchronous Power Generating Module</b> ) will be expected to operate under steady state conditions.
<b>Synchronous Power-Generating Module</b>	An indivisible set of installations which can convert or re-convert electrical energy from another source of energy such that the frequency of the supplied voltage, the rotor speed and the frequency of network voltage are in a constant ratio and thus in synchronism. For the avoidance of doubt, a <b>Synchronous Power Generating Module</b> could comprise of one or more <b>Synchronous Generating Units</b> or one or more <b>Synchronous Electricity Storage Units</b> .
<b>Synchronous Power Generating Module Matrix</b>	The matrix described in Appendix 1 to BC1 under the heading <b>Synchronous Power Generating Module Matrix</b> .
<b>Synchronous Power Generating Module Planning Matrix</b>	A matrix in the form set out in Appendix 5 of OC2 showing the combination of <b>Synchronous Generating Units</b> within a <b>Synchronous Power Generating Module</b> which would be running in relation to any given MW output.
<b>Synchronous Power Generating Unit</b>	Has the same meaning as a <b>Synchronous Generating Unit</b> and would be considered to be part of a <b>Power Generating Module</b> .
<b>Synchronous Speed</b>	That speed required by a <b>Generating Unit</b> to enable it to be <b>Synchronised</b> to a <b>System</b> .
<b>System</b>	Any <b>User System</b> and/or the <b>National Electricity Transmission System</b> , as the case may be.
<b>System Ancillary Services</b>	Collectively <b>Part 1 System Ancillary Services</b> and <b>Part 2 System Ancillary Services</b> .
<b>System Constraint</b>	A limitation on the use of a <b>System</b> due to lack of transmission capacity or other <b>System</b> conditions.
<b>System Constrained Capacity</b>	That portion of <b>Registered Capacity</b> or <b>Registered Import Capacity</b> not available due to a <b>System Constraint</b> .
<b>System Constraint Group</b>	A part of the <b>National Electricity Transmission System</b> which, because of <b>System Constraints</b> , is subject to limits of <b>Active Power</b> which can flow into or out of (as the case may be) that part.

<b>System Defence Plan</b>	A document prepared by <b>The Company</b> , as published on its <b>Website</b> , outlining how the requirements of the “defence plan”, as provided for by <b>Assimilated Law</b> (Commission Regulation (EU) 2017/2196), has been implemented within the <b>GB Synchronous Area</b> .
<b>System Fault Dependability Index or Dp</b>	<p>A measure of the ability of <b>Protection</b> to initiate successful tripping of circuit-breakers which are associated with a faulty item of <b>Apparatus</b>. It is calculated using the formula:</p> $Dp = 1 - F_1/A$ <p>Where:</p> <p>A = Total number of <b>System</b> faults</p> <p>F<sub>1</sub> = Number of <b>System</b> faults where there was a failure to trip a circuit-breaker.</p>
<b>System Incidents Report</b>	A report submitted to the GCRP on a monthly basis, containing, but not limited to, a list of <b>Significant Events</b> , as detailed in OC3.4.1.
<b>System Margin</b>	<p>The margin in any period between</p> <p>(a) the sum of Maximum Export Limits and</p> <p>(b) forecast <b>Demand</b> and the <b>Operating Margin</b>,</p> <p>for that period.</p>
<b>System Negative Reserve Active Power Margin or System NRAPM</b>	That margin of <b>Active Power</b> sufficient to allow the largest loss of <b>Load</b> at any time.
<b>System Operator - Transmission Owner Code or STC</b>	Has the meaning set out in the <b>ESO Licence</b> .
<b>System Restoration</b>	The procedure necessary for a recovery from a <b>Total Shutdown</b> or <b>Partial Shutdown</b> .
<b>System Restoration Region</b>	Those regions of the <b>Total System</b> as defined in Appendix 1 of OC9.
<b>System Restoration Plan</b>	A document prepared by <b>The Company</b> , as published on its <b>Website</b> , outlining how the requirements of the “restoration plan”, as defined in <b>Assimilated Law</b> (Commission Regulation (EU) 2017/2196), has been implemented within the <b>GB Synchronous Area</b> .
<b>System Telephony</b>	An alternative method by which a <b>User’s Responsible Engineer/Operator</b> , the relevant <b>Transmission Licensees’ Control Engineers</b> and <b>The Company’s Control Engineer(s)</b> speak to one and another for the purposes of control of the <b>Total System</b> in both normal operating conditions and where practicable, emergency operating conditions.
<b>System Tests</b>	Tests which involve simulating conditions, or the controlled application of irregular, unusual or extreme conditions, on the <b>Total System</b> , or any part of the <b>Total System</b> , but which do not include commissioning or recommissioning tests or any other tests of a minor nature.
<b>System to Demand Intertrip Scheme</b>	An intertrip scheme which disconnects <b>Demand</b> when a <b>System</b> fault has arisen to prevent abnormal conditions occurring on the <b>System</b> .

<b>System to Generator Operational Intertripping</b>	A <b>Balancing Service</b> involving the initiation by a <b>System to Generator Operational Intertripping Scheme</b> of automatic tripping of the <b>User's</b> circuit breaker(s), or <b>Relevant Transmission Licensee's</b> circuit breaker(s) where agreed by <b>The Company</b> , the <b>User</b> and the <b>Relevant Transmission Licensee</b> , resulting in the tripping of <b>BM Unit(s)</b> or (where relevant) <b>Generating Unit(s)</b> comprised in a <b>BM Unit</b> to prevent abnormal system conditions occurring, such as over voltage, overload, <b>System</b> instability, etc, after the tripping of other circuit-breakers following power <b>System</b> fault(s).
<b>System to Generator Operational Intertripping Scheme</b>	A <b>System to Generating Unit</b> or <b>System to CCGT Module</b> or <b>System to Power Park Module</b> or <b>System to Power Generating Module</b> or <b>System to Electricity Storage Module Intertripping Scheme</b> forming a condition of connection and specified in Appendix F3 of the relevant <b>Bilateral Agreement</b> , being either a <b>Category 1 Intertripping Scheme</b> , <b>Category 2 Intertripping Scheme</b> , <b>Category 3 Intertripping Scheme</b> or <b>Category 4 Intertripping Scheme</b> .
<b>Target Frequency</b>	That <b>Frequency</b> determined by <b>The Company</b> , in its reasonable opinion, as the desired operating <b>Frequency</b> of the <b>Total System</b> or of a relevant <b>Power Island</b> . This will normally be 50.00Hz plus or minus 0.05Hz, except in exceptional circumstances as determined by <b>The Company</b> for example which may be operating the <b>System</b> during disputes affecting fuel supplies or following a <b>Total Shutdown</b> or <b>Partial Shutdown</b> where <b>Power Islands</b> are established, and each <b>Power Island</b> has its own unique <b>Frequency</b> .
<b>Technical Specification</b>	In relation to <b>Plant</b> and/or <b>Apparatus</b> , (a) the relevant <b>European Specification</b> ; or (b) if there is no relevant <b>European Specification</b> , other relevant standards which are in common use in the European Community.
<b>TERRE</b>	Trans European Replacement Reserves Exchange – a market covering the procurement of replacement reserves across Europe.
<b>TERRE Activation Period</b>	A period of time lasting 15 minutes and starting at either 0, 15, 30 or 45 minutes past the hour (e.g. 10:00 to 10:15). There are 4 <b>TERRE Activation Periods</b> in one <b>TERRE Auction Period</b> .
<b>TERRE Auction Period</b>	A period of time lasting one hour and starting and ending on the hour (e.g. from 10:00 to 11:00). Hence there are 24 <b>TERRE Auction Periods</b> in a day.
<b>TERRE Bid</b>	A submission by a <b>BM Participant</b> covering the price and MW deviation offered into the <b>TERRE</b> auction (please note – in the <b>Balancing Mechanism</b> the term bid has a different meaning – in this case a bid can be an upward or downward MW change).
<b>TERRE Central Platform</b>	An IT system which implements the <b>TERRE</b> auction.
<b>TERRE Data Validation and Consistency Rules</b>	A document produced by the central <b>TERRE</b> project detailing the correct format of submissions for <b>TERRE</b> .
<b>TERRE Gate Closure</b>	60 minutes before the start of the <b>TERRE Auction Period</b> (note still ongoing discussions if this may become 55 minutes).

<b>TERRE Instruction Guide</b>	Details specific rules for creating an <b>RR Instruction</b> from an <b>RR Acceptance</b> .
<b>Test Co-ordinator</b>	A person who co-ordinates <b>System Tests</b> .
<b>Test Panel</b>	A panel, whose composition is detailed in <b>OC12</b> , which is responsible, inter alia, for considering a proposed <b>System Test</b> , and submitting a <b>Proposal Report</b> and a <b>Test Programme</b> .
<b>Test Plan</b>	A document prepared by <b>The Company</b> , as published on its <b>Website</b> , outlining how the requirements of the “ <b>Test Plan</b> ”, as provided for by <b>Assimilated Law</b> (Commission Regulation (EU) 2017/2196), has been implemented within the <b>GB Synchronous Area</b> .
<b>Test Programme</b>	A programme submitted by the <b>Test Panel</b> to <b>The Company</b> , the <b>Test Proposer</b> , and each <b>User</b> identified by <b>The Company</b> under OC12.4.2.1, which states the switching sequence and proposed timings of the switching sequence, a list of those staff involved in carrying out the <b>System Test</b> (including those responsible for the site safety) and such other matters as the <b>Test Panel</b> deems appropriate.
<b>Test Proposer</b>	The person who submits a <b>Proposal Notice</b> .
<b>Test Signal</b>	A signal in the form of a sine wave, applied to a <b>GBGF-I</b> to demonstrate its ability to contribute to <b>Active Damping Power</b> .
<b>The Company</b>	Has the meaning given to <b>NESO</b> or <b>National Energy System Operator</b> . .
<b>The Company Control Engineer</b>	The nominated person employed by <b>The Company</b> to direct the operation of the <b>National Electricity Transmission System</b> or such person as nominated by <b>The Company</b> .
<b>The Company Operational Strategy</b>	<b>The Company's</b> operational procedures which form the guidelines for operation of the <b>National Electricity Transmission System</b> .

<b>Top Up Restoration Capability</b>	The ability of a <b>Restoration Contractor's Plant</b> to <b>Start-Up</b> from <b>Shutdown</b> and to be <b>Synchronised</b> and remain <b>Synchronised</b> to a part of the <b>Total System</b> upon instruction from <b>The Company</b> or <b>Relevant Transmission Licensee</b> (in Scotland) or relevant <b>Network Operator</b> , within a defined time period, pursuant to the terms of the <b>Top Up Restoration Contract</b> , once external electrical power supplies are restored to that <b>Restoration Contractor's site</b> . In the case of a <b>Local Joint Restoration Plan</b> , an instruction from <b>The Company</b> or <b>Transmission Licensee</b> in Scotland to a <b>Restoration Contractor</b> in respect of their <b>Top Up Restoration Plant</b> would generally be issued immediately after an instruction to an <b>Anchor Restoration Contractor</b> with the <b>Top Up Capability</b> expected to be delivered consecutively after external power supplies had been restored to the <b>Top Up Restoration Contractor's site</b> . In the case of a <b>Distribution Restoration Zone Plan</b> , an instruction from a <b>Network Operator</b> to a <b>Restoration Contractor</b> in respect of their <b>Top Up Restoration Plant</b> would generally be issued immediately after an instruction to an <b>Anchor Restoration Contractor</b> with the <b>Top Up Capability</b> expected to be delivered consecutively after external power supplies had been restored to the <b>Top Up Restoration Contractor's site</b> . For the avoidance of doubt a <b>Restoration Contractor</b> with a <b>Top Up Restoration Capability</b> shall have sufficient <b>Auxiliary Energy Supplies</b> to be capable of delivering the service they have agreed to provide as soon as their <b>Connection Point</b> or <b>User System Entry Point</b> is energised.
<b>Top Up Restoration Contract</b>	In the case of a <b>Local Joint Restoration Plan</b> or <b>Offshore Local Joint Restoration Plan</b> is a contract between <b>The Company</b> and <b>Top Up Restoration Contractor</b> for the provision of a <b>Top Up Restoration Capability</b> . In the case of a <b>Distribution Restoration Zone Plan</b> , an agreement between <b>The Company</b> and relevant <b>Network Operator</b> and <b>Top Up Restoration Contractor</b> for the provision of <b>Top Up Restoration Capability</b> .
<b>Top Up Restoration Contractor</b>	A <b>Restoration Contractor</b> with a <b>Top Up Restoration Contract</b> .
<b>Top Up Restoration Plant</b>	<b>Plant</b> owned and operated by a <b>Top Up Restoration Contractor</b> .
<b>Top Up Restoration Plant Test</b>	A test conducted on a <b>Top Up Restoration Plant</b> to confirm it is capable of meeting the requirements of a <b>Top Up Restoration Contract</b> .
<b>Total Shutdown</b>	The situation existing when all generation has ceased and there is no electricity supply from <b>External Interconnections</b> and, therefore, the <b>Total System</b> has shutdown with the result that it is not possible for the <b>Total System</b> to begin to function again without <b>The Company's</b> directions relating to <b>System Restoration</b> .
<b>Total System</b>	The <b>National Electricity Transmission System</b> and all <b>User Systems</b> in the <b>National Electricity Transmission System Operator Area</b> .
<b>Trading Point</b>	A commercial and, where so specified in the Grid Code, an operational interface between a <b>User</b> and <b>The Company</b> , which a <b>User</b> has notified to <b>The Company</b> .
<b>Transfer Date</b>	Such date as may be appointed by the <b>Secretary of State</b> by order under section 65 of the <b>Act</b> .

<b>Transmission</b>	Means, when used in conjunction with another term relating to equipment or a site, whether defined or not, that the associated term is to be read as being part of or directly associated with the <b>National Electricity Transmission System</b> , and not of or with the <b>User System</b> .
<b>Transmission Area</b>	Has the meaning set out in the <b>Transmission Licence</b> of a <b>Transmission Licensee</b> .
<b>Transmission Connected Demand Facilities</b>	A <b>Demand Facility</b> which has a <b>Grid Supply Point</b> to the <b>National Electricity Transmission System</b> .
<b>Transmission DC Converter</b>	Any <b>Transmission Licensee Apparatus</b> (or <b>OTSUA</b> that will become <b>Transmission Licensee Apparatus</b> at the <b>OTSUA Transfer Time</b> ) used to convert alternating current electricity to direct current electricity, or vice versa. A <b>Transmission Network DC Converter</b> (which could include an <b>HVDC System</b> owned by an <b>Offshore Transmission Licensee</b> or <b>Generator</b> in respect of <b>OTSUA</b> ) is a standalone operative configuration at a single site comprising one or more converter bridges, together with one or more converter transformers, converter control equipment, essential protective and switching devices and auxiliaries, if any, used for conversion.
<b>Transmission Entry Capacity</b>	Has the meaning set out in the <b>CUSC</b> .
<b>Transmission Interface Circuit</b>	<p>In <b>NGET's Transmission Area</b> or a <b>Competitively Appointed Transmission Licensee</b> with <b>Plant and Apparatus</b> located in <b>NGET's Transmission Area</b>, a <b>Transmission</b> circuit which connects a <b>System</b> operating at a voltage above 132kV to a <b>System</b> operating at a voltage of 132kV or below</p> <p>In <b>SHETL's Transmission Area</b> and <b>SPT's Transmission Area</b>, or a <b>Competitively Appointed Transmission Licensee</b> with <b>Plant and Apparatus</b> located in <b>SHETL's Transmission Area</b> and/or <b>SPT's Transmission Area</b>, a <b>Transmission</b> circuit which connects a <b>System</b> operating at a voltage of 132kV or above to a <b>System</b> operating at a voltage below 132kV.</p>
<b>Transmission Interface Point</b>	Means the electrical point of connection between the <b>Offshore Transmission System</b> and an <b>Onshore Transmission System</b> .
<b>Transmission Interface Site</b>	The site at which the <b>Transmission Interface Point</b> is located.
<b>Transmission Licence</b>	A licence granted under Section 6(1)(b) of the <b>Act</b> .
<b>Transmission Licensee</b>	Any <b>Onshore Transmission Licensee</b> or <b>Offshore Transmission Licensee</b> .
<b>Transmission Site</b>	Means a site owned (or occupied pursuant to a lease, licence or other agreement) by a <b>Relevant Transmission Licensee</b> in which there is a <b>Connection Point</b> . For the avoidance of doubt, a site owned by a <b>User</b> but occupied by the <b>Relevant Transmission Licensee</b> as aforesaid, is a <b>Transmission Site</b> .

<b>Transmission System</b>	<p>Has the same meaning as the term "licensee's transmission system" in the <b>Transmission Licence</b> of a <b>Transmission Licensee</b>.</p> <p>Where references are made in this document to <b>NGET's</b>, <b>SPT's</b>, or <b>SHETL's Transmission System</b>, such reference shall be deemed to include:</p> <ul style="list-style-type: none"> <li>• a <b>Competitively Appointed Transmission Licensee's Transmission System</b> where that <b>Competitively Appointed Transmission Licensee's Transmission System</b> has onshore interface point(s) with only one of <b>NGET's</b>, <b>SPT's</b>, or <b>SHETL's Transmission Systems</b>; or</li> <li>• elements of a <b>Competitively Appointed Transmission Licensee's Transmission System</b> located within <b>NGET's</b>, <b>SPT's</b>, or <b>SHETL's Transmission Area</b> where the <b>Competitively Appointed Transmission Licensee's Transmission System</b> has onshore interface point(s) with more than one of <b>NGET's</b>, <b>SPT's</b> and/or <b>SHETL's Transmission Systems</b>.</li> </ul>
<b>Turbine Time Constant</b>	Determined at <b>Registered Capacity</b> , the turbine time constant will be construed in accordance with the principles of the IEEE Committee Report "Dynamic Models for Steam and Hydro Turbines in Power System Studies" published in 1973 which apply to such phrase.
<b>Type A Power Generating Module</b>	A <b>Power-Generating Module</b> (including an <b>Electricity Storage Module</b> ) with a <b>Grid Entry Point</b> or <b>User System Entry Point</b> below 110 kV and a <b>Maximum Capacity</b> of 0.8 kW or greater but less than 1MW;
<b>Type B Power Generating Module</b>	A <b>Power-Generating Module</b> (including an <b>Electricity Storage Module</b> ) with a <b>Grid Entry Point</b> or <b>User System Entry Point</b> below 110 kV and a <b>Maximum Capacity</b> of 1MW or greater but less than 10MW;
<b>Type C Power Generating Module</b>	A <b>Power-Generating Module</b> (including an <b>Electricity Storage Module</b> ) with a <b>Grid Entry Point</b> or <b>User System Entry Point</b> below 110 kV and a <b>Maximum Capacity</b> of 10MW or greater but less than 50MW;
<b>Type D Power Generating Module</b>	A <b>Power-generating Module</b> : (including an <b>Electricity Storage Module</b> ): with a <b>Grid Entry Point</b> or <b>User System Entry Point</b> at, or greater than, 110 kV; or with a <b>Grid Entry Point</b> or <b>User System Entry Point</b> below 110 kV and with <b>Maximum Capacity</b> of 50MW or greater
<b>Unbalanced Load</b>	The situation where the <b>Load</b> on each phase is not equal.
<b>Under-excitation Limiter</b>	Shall have the meaning ascribed to that term in IEC 34-16-1:1991 [equivalent to <b>British Standard BS4999</b> Section 116.1: 1992].
<b>Under Frequency Relay</b>	An electrical measuring relay intended to operate when its characteristic quantity ( <b>Frequency</b> ) reaches the relay settings by a decrease in <b>Frequency</b> .
<b>Unit Board</b>	A switchboard through which electrical power is supplied to the <b>Auxiliaries</b> of a <b>Generating Unit</b> and which is supplied by a <b>Unit Transformer</b> . It may be interconnected with a <b>Station Board</b> .
<b>Unit Transformer</b>	A transformer directly connected to a <b>Generating Unit's</b> terminals, and which supplies power to the <b>Auxiliaries</b> of a <b>Generating Unit</b> . Typical voltage ratios are 23/11kV and 15/6.6kV.

<b>Unit Load Controller Response Time Constant</b>	The time constant, expressed in units of seconds, of the power output increase which occurs in the <b>Secondary Response</b> timescale in response to a step change in <b>System Frequency</b> .
<b>Unresolved Issues</b>	Any relevant Grid Code provisions or <b>Bilateral Agreement</b> requirements identified by <b>The Company</b> with which the relevant <b>User</b> has not demonstrated compliance to <b>The Company's</b> reasonable satisfaction at the date of issue of the <b>Preliminary Operational Notification</b> and/or <b>Interim Operational Notification</b> and/or <b>Limited Operational Notification</b> and which are detailed in such <b>Preliminary Operational Notification</b> and/or <b>Interim Operational Notification</b> and/or <b>Limited Operational Notification</b> .
<b>Urgent Modification</b>	A <b>Grid Code Modification Proposal</b> treated or to be treated as an <b>Urgent Modification</b> in accordance with GR.23.
<b>User</b>	A term utilised in various sections of the Grid Code to refer to the persons using the <b>National Electricity Transmission System</b> , as more particularly identified in each section of the Grid Code concerned. In the <b>Preface</b> and the <b>General Conditions</b> the term means any person to whom the Grid Code applies. The term <b>User</b> includes an <b>EU Code User</b> and a <b>GB Code User</b> .
<b>User Data File Structure</b>	The file structure given at <b>DRC 18</b> which will be specified by <b>The Company</b> which a <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> must use for the purposes of the <b>CP</b> or the <b>ECP</b> to submit <b>DRC</b> data Schedules and information demonstrating compliance with the Grid Code and, where applicable, with the <b>CUSC Contract(s)</b> , unless otherwise agreed by <b>The Company</b> .
<b>User Development</b>	In the <b>PC</b> means either <b>User's Plant</b> and/or <b>Apparatus</b> to be connected to the <b>National Electricity Transmission System</b> , or a <b>Modification</b> relating to a <b>User's Plant</b> and/or <b>Apparatus</b> already connected to the <b>National Electricity Transmission System</b> , or a proposed new connection or <b>Modification</b> to the connection within the <b>User System</b> .
<b>User Self Certification of Compliance</b>	A certificate, in the form attached at CP.A.2.(1) or ECP.A.2.(1) completed by a <b>Generator</b> or <b>DC Converter Station</b> owner or <b>HVDC System Owner</b> to which the <b>Compliance Statement</b> is attached which confirms that such <b>Plant</b> and <b>Apparatus</b> complies with the relevant Grid Code provisions and where appropriate, with the <b>CUSC Contract(s)</b> , as identified in the <b>Compliance Statement</b> and, if appropriate, identifies any <b>Unresolved Issues</b> and/or any exceptions to such compliance and details the derogation(s) granted in respect of such exceptions.
<b>User Site</b>	A site owned (or occupied pursuant to a lease, licence or other agreement) by a <b>User</b> in which there is a <b>Connection Point</b> . For the avoidance of doubt, a site owned by a <b>Relevant Transmission Licensee</b> but occupied by a <b>User</b> as aforesaid, is a <b>User Site</b> .



<b>User System</b>	<p>Any system owned or operated by a <b>User</b> comprising:-</p> <p>(a) <b>Power Generating Modules</b> or <b>Generating Units</b>; and/or</p> <p>(b) Systems consisting (wholly or mainly) of electric lines used for the distribution of electricity from <b>Grid Supply Points</b> or <b>Generating Units</b> or <b>Power Generating Modules</b> or other entry points to the point of delivery to <b>Customers</b>, or other <b>Users</b>;</p> <p>and <b>Plant</b> and/or <b>Apparatus</b> (including prior to the <b>OTSUA Transfer Time</b>, any <b>OTSUA</b>) connecting:-</p> <p>(c) The system as described above; or</p> <p>(d) <b>Non-Embedded Customers</b> equipment;</p> <p>to the <b>National Electricity Transmission System</b> or to the relevant other <b>User System</b>, as the case may be.</p> <p>The <b>User System</b> includes any <b>Remote Transmission Assets</b> operated by such <b>User</b> or other person and any <b>Plant</b> and/or <b>Apparatus</b> and meters owned or operated by the <b>User</b> or other person in connection with the distribution of electricity but does not include any part of the <b>National Electricity Transmission System</b>.</p>
<b>User System Entry Point</b>	<p>A point at which;</p> <p>a <b>Power Generating Module</b>;; or</p> <p>a <b>Generating Unit</b>, ; or,</p> <p>a <b>CCGT Module</b>;or</p> <p>a <b>CCGT Unit</b>; or</p> <p>a <b>Power Park Module</b>; or</p> <p>an <b>Electricity Storage Module</b>; or</p> <p>a <b>DC Converter</b>; or</p> <p>an <b>HVDC Converter</b>,</p> <p>and which is <b>Embedded</b> connects to the <b>User System</b>.</p>
<b>Virtual Lead Party</b>	As defined in the <b>BSC</b> .
<b>Voltage Jump Reactive Power</b>	<p>The transient <b>Reactive Power</b> injected or absorbed from a <b>Grid Forming Plant</b> to the <b>Total System</b> as a result of either a step or ramp change in the difference between the voltage magnitude and/or phase of the voltage of the <b>Internal Voltage Source</b> of the <b>Grid Forming Plant</b> and <b>Grid Entry Point</b> or <b>User System Entry Point</b>.</p> <p>In the event of a voltage magnitude and phase change at the <b>Grid Entry Point</b> or <b>User System Entry Point</b>, a <b>Grid Forming Plant</b> will instantaneously (within 5ms) supply <b>Voltage Jump Reactive Power</b> to the <b>Total System</b> as a result of the voltage magnitude change.</p>
<b>Water Time Constant</b>	Bears the meaning ascribed to the term "Water inertia time" in <b>IEC308</b> .
<b>Website</b>	The site established by <b>The Company</b> on the World-Wide Web for the exchange of information among <b>Users</b> and other interested persons in accordance with such restrictions on access as may be determined from time to time by <b>The Company</b> .

<b>Weekly ACS Conditions</b>	Means that particular combination of weather elements that gives rise to a level of peak <b>Demand</b> within a week, taken to commence on a Monday and end on a Sunday, which has a particular chance of being exceeded as a result of weather variation alone. This particular chance is determined such that the combined probabilities of <b>Demand</b> in all weeks of the year exceeding the annual peak <b>Demand</b> under <b>Annual ACS Conditions</b> is 50%, and in the week of maximum risk the weekly peak <b>Demand</b> under <b>Weekly ACS Conditions</b> is equal to the annual peak <b>Demand</b> under <b>Annual ACS Conditions</b> .
<b>WG Consultation Alternative Request</b>	Any request from an <b>Authorised Electricity Operator</b> ; the <b>Citizens Advice</b> or the <b>Citizens Advice Scotland</b> , <b>The Company</b> or a <b>Materially Affected Party</b> for a <b>Workgroup Alternative Grid Code Modification</b> to be developed by the <b>Workgroup</b> expressed as such and which contains the information referred to at GR.20.16. For the avoidance of doubt, any <b>WG Consultation Alternative Request</b> does not constitute either a <b>Grid Code Modification Proposal</b> or a <b>Workgroup Alternative Grid Code Modification</b> .
<b>Workgroup</b>	A <b>Workgroup</b> established by the <b>Grid Code Review Panel</b> pursuant to GR.20.1;
<b>Workgroup Consultation</b>	As defined in GR.20.13, and any further consultation which may be directed by the <b>Grid Code Review Panel</b> pursuant to GR.20.20;
<b>Workgroup Alternative Grid Code Modification</b>	An alternative modification to the <b>Grid Code Modification Proposal</b> developed by the <b>Workgroup</b> under the <b>Workgroup</b> terms of reference (either as a result of a <b>Workgroup Consultation</b> or otherwise) and which is believed by a majority of the members of the <b>Workgroup</b> or by the chairperson of the <b>Workgroup</b> to better facilitate the <b>Grid Code Objectives</b> than the <b>Grid Code Modification Proposal</b> or the current version of the <b>Grid Code</b> ;
<b>Zonal System Security Requirements</b>	That generation required, within the boundary circuits defining the <b>System Zone</b> , which when added to the secured transfer capability of the boundary circuits exactly matches the <b>Demand</b> within the <b>System Zone</b> .

## GD.2 Construction of References

### GD.2.1 In the Grid Code:

- (i) a table of contents, a Preface, a Revision section, headings, and the Appendix to this **Glossary and Definitions** 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 Act of Parliament or any Section of or Schedule to, or other provision of 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 under or deriving validity from the relevant Act of Parliament;
- (vi) 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 in that part of the Grid Code will prevail (unless otherwise stated) over the definition in the **Glossary & Definitions** in the event of any inconsistency;
- (vii) 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;
- (viii) nothing in the Grid Code is intended to or shall derogate from **The Company's** statutory or licence obligations;
- (ix) 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 and, if that latter section is not in force at the **Transfer Date**, as if such latter section were in force at such date;
- (x) 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 and, if that latter section is not in force at the **Transfer Date**, as if such latter section were in force at such date;
- (xi) references to time are to London time; and
- (xii) (a) Save where (b) below applies, where there is a reference to an item of data being expressed in a whole number of MW, fractions of a MW below 0.5 shall be rounded down to the nearest whole MW and fractions of a MW of 0.5 and above shall be rounded up to the nearest whole MW;  
 (b) In the case of the definition of **Registered Capacity** or **Maximum Capacity**, fractions of a MW below 0.05 shall be rounded down to one decimal place and fractions of a MW of 0.05 and above shall be rounded up to one decimal place.
- (xiii) For the purposes of the Grid Code, physical quantities such as current or voltage are not defined terms as their meaning will vary depending upon the context of the obligation. For example, voltage could mean positive phase sequence root mean square voltage, instantaneous voltage, phase to phase voltage, phase to earth voltage. The same issue equally applies to current, and therefore the terms current and voltage should remain undefined with the meaning depending upon the context of the application. **Assimilated Law** (Commission Regulation (EU) 2016/631) defines requirements of current and voltage but they have not been adopted as part of EU implementation for the reasons outlined above.
- (xiv) Except where expressly stated to the contrary, reference to Commission Regulations means the Commission Regulation (EU) as it forms part of **Assimilated Law**, as such regulation may be amended.

**< END OF GLOSSARY & DEFINITIONS >**

# OPERATING CODE NO. 2

(OC2)

## OPERATIONAL PLANNING AND DATA PROVISION

### CONTENTS

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**Operating Code No. 2 ("OC2")** is concerned with:

- (a) the co-ordination of the release of **Power Generating Modules** (including **DC Connected Power Park Modules**), **Synchronous Generating Units** and **Power Park Modules**, **External Interconnections**, **Restoration Contractors Plant** and **Apparatus**, the **National Electricity Transmission System** and **Network Operators' Systems** for construction, repair and maintenance;
- (b) provision by **The Company** of the **Surplus** for the **National Electricity Transmission System**;
- (c) the provision by **Generators** of **Generation Planning Parameters** for **Gensets**, including **Synchronous Power Generating Module Planning Matrices**, **CCGT Module Planning Matrices** and **Power Park Module Planning Matrices**, to **The Company** for planning purposes only; and
- (d) the agreement for release of **Existing Gas Cooled Reactor Plant** for outages in certain circumstances.
- (e) the co-ordination of outages on **Plant** and **Apparatus** necessary for the operation of **Restoration Plans**.

- (a) **Operational Planning** involves planning, through various timescales, the matching of generation output with forecast **National Electricity Transmission System Demand** together with a reserve of generation to provide a margin, in addition to the ability to restore the **Total System**, in accordance with the requirements of the **Electricity System Restoration Standard**, following a **Total Shutdown** or **Partial Shutdown**, taking into account outages of certain **Power Generating Modules** (including **DC Connected Power Park Modules**), **Generating Units**, **Power Park Modules**, **External Interconnections**, **HVDC Systems** and **DC Converters**, **Restoration Contractor's Plant** and **Apparatus**, and of parts of the **National Electricity Transmission System** and of parts of **Network Operators' Systems** which is carried out to achieve, so far as possible, the standards of security and the **Electricity System Restoration Standard** set out in the **ESO Licence**, each **Relevant Transmission Licensee's Transmission Licence** or **Electricity Distribution Licence** as the case may be.
- (b) In general terms, there is an "envelope of opportunity" for the release of **Power Generating Modules** (including **DC Connected Power Park Modules**), **Synchronous Generating Units**, **Power Park Modules**, **Restoration Contractor's Plant** and **Apparatus** and **External Interconnections**, and for the release of parts of the **National Electricity Transmission System** and parts of the **Network Operator's User Systems** for outages. The envelope is defined by:-
  - i) The difference between the total generation output expected from **Large Power Stations**, **Medium Power Stations** and **Demand**, the operational planning margin and taking into account **External Interconnections** and outages on the **Total System** whilst planning for the **System** operating under normal conditions; and
  - ii) The availability and location of **Plant** and **Apparatus** required to discharge the requirements of the **Electricity System Restoration Standard** following a **Total System Shutdown** or **Partial System Shutdown**.

In this **OC2**, for the purpose of **Generator** and **Interconnector Owner** and **Restoration Contractor** outage co-ordination, Year 0 means the current calendar year at any time, Year 1 means the next calendar year at any time, Year 2 means the calendar year after Year 1, etc. For the purpose of **Transmission** outage planning, Year 0 means the current **Financial Year** at any time, Year 1 means the next **Financial Year** at any time, Year 2 means the **Financial Year** after Year 1, etc. References to 'weeks' in **OC2** are to calendar weeks as defined in ISO 8601.

- OC2.1.4 References in **OC2** to a **Generator's** and **Interconnector Owner's** and **Restoration Contractor's** "best estimate" shall be that **Generator's** or **Interconnector Owner's** or **Restoration Contractor's** best estimate acting as a reasonable and prudent **Generator** or **Interconnector Owner** in all the circumstances.
- OC2.1.5 References to **The Company** planning the **National Electricity Transmission System** outage programme on the basis of the **Final Generation Outage Programme**, are to **The Company** planning against the **Final Generation Outage Programme** current at the time it so plans.
- OC2.1.6 Where in **OC2**, data is required to be submitted or information is to be given on a particular weekday, that data does not need to be submitted and that information does not need to be given on that day if it is not a **Business Day** or it falls within a holiday period (the occurrence and length of which shall be determined by **The Company**, in its reasonable discretion, and notified to **Users**). Instead, that data shall be submitted and/or that information shall be given on such other **Business Day** as **The Company** shall, in its reasonable discretion, determine. However, **The Company** may determine that that data and/or information need not be submitted or given at all, in which case it shall notify each **User** as appropriate.
- OC2.1.7 In Scotland, it may be possible with the agreement of **The Company** to reduce the administrative burden for **Users** in producing planning information where either the output or demand is small.
- OC2.1.8 **Generators** and **Interconnector Owners** who have a **CUSC Contract** and who are also **Restoration Contractors**, need only submit the data once in respect of their **Plant** and **Apparatus**. **Generators** and **Interconnector Owners** who are also **Restoration Contractors** are required to state for which **Plant** they have a **Restoration Contract**. **Network Operators** who have a **Distribution Restoration Zone** in place, shall notify **The Company** whenever an outage of a **Restoration Contractor's Plant** or **Apparatus** which contributes to a **Distribution Restoration Zone Plan** is unavailable or a circuit forming part of that **Distribution Restoration Zone Plan** is unavailable making the operation of that **Distribution Restoration Zone Plan** unviable.
- OC2.2 OBJECTIVE
- OC2.2.1 (a) The objective of **OC2** is to seek to enable **The Company** to harmonise outages of **Power Generating Modules** (including **DC Connected Power Park Modules**), **Generating Units**, **Power Park Modules** and **External Interconnections** in order that such outages are co-ordinated (taking account of **Embedded Medium Power Stations**) between **Generators** and **Network Operators**, and that such outages are co-ordinated taking into account **National Electricity Transmission System** outages and other **System** outages, so far as possible to minimise the number and effect of constraints on the **National Electricity Transmission System** or any other **System** and ensure sufficient provisions are in place to restore the **Total System** in the event of a **Total Shutdown** or **Partial Shutdown**.
- (b) In the case of **Network Operator' User Systems** directly connected to the **National Electricity Transmission System**, this means in particular that there will also need to be harmonisation of outages of **Embedded Power Generating Modules**, **Embedded Synchronous Generating Units** and **Embedded Power Park Modules**, and **National Electricity Transmission System** outages, with **Network Operators** in respect of their outages on those **Systems**. Outages of **Plant** and **Apparatus** of **Restoration Contractor's** and **Plant** and **Apparatus** of a **Network Operator's System** associated with a **Distribution Restoration Zone Plan** also need to be co-ordinated with outages on the **National Electricity Transmission System**.
- OC2.2.2 The objective of **OC2** is also to enable the provision by **The Company** of the **Surplus** for the **National Electricity Transmission System** and the means necessary to restore the **System** following a **Total System Shutdown** or **Partial System Shutdown**.
- OC2.2.3 A further objective of **OC2** is to provide for the agreement for outages for **Existing Gas Cooled Reactor Plant** in certain circumstances and to enable a process to be followed in order to provide for that.

## OC2.3 SCOPE

OC2.3.1 **OC2** applies to **The Company**, and to **Users** which in **OC2** means:

- (a) **Generators**, only in respect of their **Large Power Stations** or their **Power Stations** which are directly connected to **National Electricity Transmission System** (and the term **Generator** in this **OC2** shall be construed accordingly);
- (b) **Network Operators**; and
- (c) **Non-Embedded Customers**; and
- (d) **HVDC System Owners** and **DC Converter Station** owners; and
- (e) **Interconnector Owners** in respect of their **External Interconnections**.
- (f) **Restoration Contractors** who are party to a **Local Joint Restoration Zone Plan** and who have a **CUSC Contract** where such data has not already been provided in OC2.3.1(a), (c), (d) or (e).

OC2.3.2 **The Company** may provide to the **Relevant Transmission Licensees** any data which has been submitted to **The Company** by any **Users** in respect of **Relevant Units** pursuant to the following paragraphs of the **OC2**.

OC2.4.1.2.1

OC2.4.1.3.2 (a)

OC2.4.1.3.2 (b)

OC2.4.1.3.3

OC2.4.2.1 (a)

OC2.3.3 For the purpose of **OC2** only, the term **Output Usable** shall include the terms **Interconnector Export Capacity** and **Interconnector Import Capacity** where the term **Output Usable** is being applied to an **External Interconnection**.

## OC2.4 PROCEDURE

### OC2.4.1 Co-ordination of Outages

OC2.4.1.1 Under **OC2** the interaction between **The Company** and **Users** will be as follows:

- |   |  |
|---|--|
| (a) Each <b>Generator</b> , and each <b>Interconnector Owner</b> and <b>The Company</b>       | In respect of outages of <b>Power Generating Modules</b> (including <b>DC Connected Power Park Modules</b> ), <b>Synchronous Generating Units</b> , <b>Power Park Modules</b> and <b>External Interconnection Circuits</b> and in respect of outages of other <b>Plant</b> and/or <b>Apparatus</b> directly connected to the <b>National Electricity Transmission System</b> ; |
| (b) <b>The Company</b> and each <b>Generator</b> and each <b>Interconnector Owner</b>         | in respect of <b>National Electricity Transmission System</b> outages relevant to each <b>Generator</b> (other than in respect of <b>Embedded Small Power Stations</b> or <b>Embedded Medium Power Stations</b> ) and <b>Interconnector Owner</b> ;  |
| (c) <b>The Company</b> and each <b>Network Operator</b>                                       | in respect of outages of all <b>Embedded Large Power Stations</b> and in respect of outages of other <b>Plant</b> and/or <b>Apparatus</b> relating to such <b>Embedded Large Power Stations</b> ;  |
| (d) <b>The Company</b> and each <b>Network Operator</b> and each <b>Non-Embedded Customer</b> | in respect of <b>National Electricity Transmission System</b> outages relevant to the particular <b>Network Operator</b> or <b>Non-Embedded Customers</b> ;  |

- (e) Each **Network Operator** and each **Non-Embedded Customer** and **The Company** in respect of **User System** outages relevant to **The Company**; and in respect of **Network Operators** only, outages of the **Network Operator's User System** that may affect:
- an **Offshore Transmission System** connected to that **Network Operator's User System**;
  - that **Network Operator's** ability to operate a **Local Joint Restoration Plan** or **Distribution Restoration Zone Plan**.

OC2.4.1.2 Data Provision of **Output Usable** of **Power Generating Modules, Generating Units, External Interconnection Circuits** and **Power Park Modules** and the Publication of National Surplus.

OC2.4.1.2.1 In the event that:

- a **Generator** referred to in OC2.3.1(a) experiences any unplanned change to the availability of a **Generating Unit** and/or **Power-Generating Module** and/or **Power Park Module** or makes a future plan which would impact the availability of a **Generating Unit** and/or **Power-Generating Module** and/or **Power Park Module** resulting in a change of level in the **Output Usable** of that **Generating Unit** and/or **Power-Generating Module** and/or **Power Park Module** below or above its previously notified availability, which is expected to last one **Settlement Period** or longer and up to three years ahead; or
- b) an **Interconnector Owner** referred to in OC2.3.1(e) experiences any unplanned change to the availability of an **External Interconnection Circuit** or makes a future plan which would impact the availability of an **External Interconnection Circuit** resulting in any change in the **Output Usable** of that **External Interconnection Circuit** below or above its previously notified availability, which is expected to last one **Settlement Period** or longer and up to three years ahead; or
- c) a **Restoration Contractors** referred to in OC2.3.1(f) experiences any unplanned change to the availability of their **Plant** and **Apparatus** or makes a future plan which would impact the availability of their **Plant** and **Apparatus** which would affect their ability to contribute to a **Local Joint Restoration Plan**.

The **Generator, Interconnector Owner** or **Restoration Contractor** as provided for in OC2.3.1(f) shall provide **The Company** with the best estimate of the revised available **Output Usable** profile using one of **The Company's** recommended platforms.

For **Generators** subject to EU Transparency Regulations the **Generator** shall provide the data within 1 hour of the unplanned change in availability occurring, and for a planned change to the availability, the **Generator** shall provide the data within 1 hour of planning the availability change in line with EU Transparency Regulations. For **Generators** not subject to EU Transparency Regulations the **Generator** shall provide the data within 24 hours of the unplanned change in availability occurring, and for a planned change to the availability, the **Generator** shall provide the data within 24 hours of planning the availability change.

For an unplanned change in availability, the **Interconnector Owner** shall provide the data within 1 hour of the unplanned change in availability occurring, and for a planned change to the availability, the **Interconnector Owner** shall provide the data within 1 hour of planning the availability change in line with EU Transparency Regulations.

If the **Generator** referred to in OC2.3.1(a) provides information relating to multi-shaft **Generating Units** then the detail of the individual shaft availability levels, that have been summed to produce the **Output Usable** should also be defined within 24 hours.



In the case of an **External Interconnection Circuit**, the details of the individual pole-capacity levels that have been summed to produce the **Output Usable** should also be defined within 24 hours.

In the case of **Restoration Contractors**, referred to in OC2.3.1(f), **Restoration Contractors** which are subject to an unplanned change in availability shall provide the data within 1 hour of the unplanned change and for a planned change to the availability, the **Restoration Contractor** shall provide the data within 1 hour of planning the availability change.

**The Company** may, as appropriate, contact each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** referred to in OC2.3.1(f) who has supplied information to seek clarification on their **Output Usable** submissions.

OC2.4.1.2.2 At a regular time interval, at least once per day (by 1600 hours) and up to every hour:

**The Company** will:

(i) having taken into account the information notified to it by **Generators** and **Interconnector Owners** and **Restoration Contractor** as provided for in OC2.3.1(f) via the process defined in OC2.4.1.2.1 and taking into account:

- (1) **Demand** forecasts and details of proposed use of **Demand Control** received under **OC1**, and an **Operational Planning Margin** requirement set by **The Company** (the "OPMR"),
- (2) **National Electricity Transmission System** constraints and outages,
- (3) **Network Operator System** constraints and outages, known to **The Company**, and
- (4) the **Output Usable** required, in its view, to meet daily total MW requirements,

Provide each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** as provided for in OC2.3.1(f) (where required by **The Company**) in writing with any suggested amendments to the provisional **Output Usable** supplied by the **Generator** and **Interconnector Owner** and **Restoration Contractor** as provided for in OC2.3.1(f) which **The Company** believes necessary, and will advise **Generators** with **Large Power Stations** of the **Surpluses** for the **National Electricity Transmission System** and potential export limitations, which would occur without such amendments;

(ii) calculate and submit to **BMRA**:

1. total generating **Output Usable** from **Generating Units** assumed to be available to the **Total System** (**National Output Useable**);
2. generating **Output Usable** by fuel type from **Generating Units** assumed to be available to the **Total System** (**Output Useable** by fuel type);
3. generating **Output Usable** by individual **Generating Units** assumed to be available to the **Total System** (**Output Useable** by **Generating Unit**);
4. total **Generating Plant Demand Margin** assumed to be available to the **Total System** (**National Margin**);
5. total **Generating Surplus** assumed to be available to the **Total System** (**National Surplus**);

with daily resolution, for at least the peak **Demand** of each day for 2 day-ahead to 14 day-ahead time scope, and

with weekly resolution, for at least peak **Demand** of each week for 2 week-ahead up to 3 year-ahead time scope.

The calculation under (ii) will effectively define the envelope of opportunity for outages of **Power Generating Modules** (including **DC Connected Power Park Modules**), **Synchronous Generating Units** and **Power Park Modules** covering both **Embedded** and directly connected **Large Power Stations**.

**The Company** may, as appropriate, contact each **Generator** and each **Interconnector Owner** and **Restoration Contractor** (as provided for in OC2.3.1(f)) who has supplied information to seek clarification on outages and suggest amendments.

- (iii) Where a **Generator** or **Interconnector Owner** or a **Network Operator** or **Restoration Contractor** (as provided for in OC2.3.1(f)) is unhappy with the suggested amendments to its provisional outage programme (in the case of a **Generator** or **Interconnector Owner** or in the case of a **Restoration Contractor** as provided for in OC2.3.1(f)) or such potential outages (in the case of a **Network Operator**) it may contact **The Company** to explain its concerns and **The Company** and that **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.3.1(f)) or **Network Operator** will then discuss the problem and seek to resolve it.
- (iv) The possible resolution of the problem may require **The Company** or a **User** to contact other **Generators**, **Interconnector Owners**, **Restoration Contractors** (as provided for in OC2.3.1(f)) or **Network Operators**, and joint meetings of all parties may, if any **User** feels it would be helpful, be convened by **The Company**. The need for further discussions, be they on the telephone or at meetings, can only be determined at the time.

Each **Generator** will provide **The Company** with updated **Output Usable** as per OC2.4.1 resulting from the above for **Generating Unit**, **Power Generating Module**, and **Power Part Module** outage programme covering both **Embedded** and non-Embedded **Large Power Stations**.

**The Company** will then consider the updated **Output Usable** and takes this into account in the next calculation and submission to **BMRA**.

OC2.4.1.2.3 **The Company** retains the right to contact **Generators** with **Large Power Stations**, **Interconnector Owners** and **Network Operators** in reference to planned outages of their assets in timescales beyond the European Requirements (3 years) up to the 5 year ahead period to assist in the operational planning of **National Electricity Transmission System** outages.

OC2.4.1.2.4 Where **The Company** has issued a **Space Weather Prepare Notification** or a **Space Weather Imminent Notification**, the **Generator**, **Interconnector Owner**, or **Restoration Contractor** shall follow OC2.5 Space Weather Events.

OC2.4.1.3 Planning of National Electricity Transmission System Outages

OC2.4.1.3.1 Operational Planning Phase - Planning for Financial Years 2 to 5 inclusive ahead

**The Company** shall plan **National Electricity Transmission System** outages required in Years 2 to 5 inclusive required as a result of construction or refurbishment works. This contrasts with the planning of **National Electricity Transmission System** outages required in Years 0 and 1 ahead, when **The Company** also takes into account **National Electricity Transmission System** outages required as a result of maintenance.

**Users** should bear in mind that **The Company** will plan the **National Electricity Transmission System** outage programme on the basis of the previous year's **Final Generation Outage Programme** and if in the event a **Generator's**, an **Interconnector Owner's** or **Network Operator's** outages differ from those contained in the **Final Generation Outage Programme**, or in the case of **Network Operators**, those known to **The Company**, in any way conflict with the **National Electricity Transmission System** outage programme, **The Company** need not alter the **National Electricity Transmission System** outage programme.

(a) By the end of week 8

Each **Network Operator** will notify **The Company** in writing of details of proposed outages in Years 2-5 ahead in its **User System** which may affect the performance of the **Total System** (which includes but is not limited to outages of **User System Apparatus** at **Grid Supply Points** and outages which constrain the output of **Power Generating Modules** (including **DC Connected Power Park Modules**) and/or **Synchronous Generating Units** and/or **Power Park Modules Embedded** within that **User System**) and outages of its **Plant** and **Apparatus** that may affect the ability to activate and / or operate a **Distributed Restoration Zone Plan**.

Each **Network Operator** will notify **The Company** in writing of details of proposed outages in Years 2-5 ahead in its **User System** which may affect the declared values of **Maximum Export Capacity** and/or **Maximum Import Capacity** for each **Interface Point** within its **User System** together with the **Network Operator's** revised best estimate of the **Maximum Export Capacity** and/or **Maximum Import Capacity** during such outages. **Network Operators** will also notify **The Company** of any automatic and/or manual post fault actions that it intends to utilise or plans to utilise during such outages.

(b) By the end of week 13

Each **Generator** will inform **The Company** in writing of proposed outages in Years 2 - 5 ahead of **Generator** owned **Apparatus** (eg. busbar selectors) other than **Power Generating Modules** (including **DC Connected Power Park Modules**) and/or **Synchronous Generating Units**, and/or **Power Park Modules**, at each **Grid Entry Point**.

**The Company** will provide to each **Network Operator** and to each **Generator** and each **Interconnector Owner**, a copy of the information given to **The Company** under paragraph (a) above (other than the information given by that **Network Operator**). In relation to a **Network Operator**, the data must only be used by that **User** in planning and operating that **Network Operator's User System** and must not be used for any other purpose or passed on to, or used by, any other business of that **User** or to, or by, any person within any other such business or elsewhere.

(c) By the end of week 28

**The Company** will provide each **Network Operator** in writing with details of proposed outages in Years 2-5 ahead which may, in **The Company's** reasonable judgement, affect the performance of that **Network Operator's User System**.

(d) By the end of week 30

Where **The Company** or a **Network Operator** is unhappy with the proposed outages notified to it under (a), (b) or (c) above, as the case may be, equivalent provisions to those set out in OC2.4.1.2.1 (d) will apply.

(e) By the end of week 34

**The Company** will draw up a draft **National Electricity Transmission System** outage plan covering the period Years 2 to 5 ahead and **The Company** will notify each **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.3.1(f)) and **Network Operator** in writing of those aspects of the plan which may operationally affect such **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations**) unless they are **Restoration Contractors** (as provided for in OC2.3.1(f)), **Interconnector Owner** or **Network Operator**. **The Company** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an **Operational Intertripping** scheme) or **Emergency Instructions** to **Users** in accordance with **BC2** to allow the security of the **National Electricity Transmission System** to be maintained within the **Licence Standards**.

#### OC2.4.1.3.3 Operational Planning Phase - Planning for Financial Year 1 ahead

Each calendar year, **The Company** shall update the draft **National Electricity Transmission System** outage plan prepared under OC2.4.1.3.2 above and shall in addition take into account outages required as a result of maintenance work.

In each calendar year:

(a) By the end of week 13

**Generators** and **Non-Embedded Customers** will inform **The Company** in writing of proposed outages for Year 1 of **Generator** owned **Apparatus** at each **Grid Entry Point** (e.g. busbar selectors) other than **Power Generating Modules** (including **DC Connected Power Park Modules**), **Synchronous Generating Units** and/or **Power Park Modules** or **Non-Embedded Customer** owned **Apparatus**, as the case may be, at each **Grid Supply Point**.

(b) By the end of week 28

**The Company** will provide each **Network Operator** and each **Non-Embedded Customer** in writing with details of proposed outages in Year 1 ahead which may, in **The Company's** reasonable judgement, affect the performance of its **User System** or the **Non-Embedded Customer Apparatus** at the **Grid Supply Point**.

(c) By the end of week 32

Each **Network Operator** will notify **The Company** in writing with details of proposed outages in Year 1 in its **User System** which may affect the performance of the **Total System** (which includes but is not limited to outages of **User System Apparatus** at **Grid Supply Points** and outages which constrain the output of **Power Generating Modules** (including **DC Connected Power Park Modules**), **Synchronous Generating Units** and/or **Power Park Modules Embedded** within that **User System**) and outages of its **Plant** and **Apparatus** that may affect the ability to activate and/or operate a **Distribution Restoration Zone Plan**.

Each **Network Operator** will notify **The Company** in writing of details of proposed outages in Year 1 in its **User System** which may affect the declared values of **Maximum Export Capacity** and/or **Maximum Import Capacity** for each **Interface Point** within its **User System** together with the **Network Operator's** revised best estimate of the **Maximum Export Capacity** and/or **Maximum Import Capacity** during such outages. **Network Operators** will also notify **The Company** of any automatic and/or manual post fault actions that it intends to utilise or plans to utilise during such outages.

Each **Network Operator** will also notify **The Company** in writing of any revisions to **Interface Point Target Voltage/Power Factor** data submitted pursuant to PC.A.2.5.4.2.

(d) Between the end of week 32 and the end of week 34

**The Company** will draw up a revised **National Electricity Transmission System** outage plan (which for the avoidance of doubt includes **Transmission Apparatus** at the **Connection Points**).

(e) By the end of week 34

**The Company** will notify each **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.3.1(f)) and **Network Operator**, in writing, of those aspects of the **National Electricity Transmission System** outage programme which may, in **The Company's** reasonable opinion, operationally affect that **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations** unless they are owned and/or operated by a **Restoration Contractor**), **Interconnector Owner**, or **Network Operator** including in particular proposed start dates and end dates of relevant **National Electricity Transmission System** outages.

**The Company** will provide to each **Network Operator** and to each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** (as provided for in OC2.3.1(f)) a copy of the information given to **The Company** under paragraph (c) above (other than the information given by that **Network Operator**). In relation to a **Network Operator**, the data must only be used by that **User** in planning and operating that **Network Operator's User System** and must not be used for any other purpose or passed on to, or used by, any other business of that **User** or to, or by, any person within any other such business or elsewhere.

(f) By the end of week 36

Where a **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.3.1(f)) or **Network Operator** is unhappy with the proposed aspects notified to it under (e) above, equivalent provisions to those set out in OC2.4.1.2.1 (d) will apply.

(g) Between the end of week 34 and 49

**The Company** will draw up a final **National Electricity Transmission System** outage plan covering Year 1.

(h) By the end of week 49

(i) **The Company** will complete the final **National Electricity Transmission System** outage plan for Year 1. The plan for Year 1 becomes the final plan for Year 0 when by expiry of time Year 1 becomes Year 0.

(ii) **The Company** will notify each **Generator**, each **Interconnector Owner**, each **Restoration Contractor** (as provided for in OC2.3.1(f)) and each **Network Operator** in writing of those aspects of the plan which may operationally affect such **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations** unless they are owned and/or operated by a **Restoration Contractor** (as provided for in OC2.3.1(f))s), **Interconnector Owner** or **Network Operator** including in particular proposed start dates and end dates of relevant **National Electricity Transmission System** outages. **The Company** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an **Operational Intertipping** scheme) or **Emergency Instructions** to **Users** in accordance with **BC2** to allow the security of the **National Electricity Transmission System** to be maintained within the **Licence Standards**. **The Company** will also inform each relevant **Non-Embedded Customer** of the aspects of the plan which may affect it.

(iii) In addition, in relation to the final **National Electricity Transmission System** outage plan for Year 1, **The Company** will provide to each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** (as provided for in OC2.3.1(f)) a copy of the final **National Electricity Transmission System** outage plan for that year. OC2.4.1.3.4 contains provisions whereby updates of the final **National Electricity Transmission System** outage plan are provided. The plan and the updates will be provided in writing. It should be noted that the final **National Electricity Transmission System** outage plan for Year 1 and the updates will not give a complete understanding of how the **National Electricity Transmission System** will operate in real time, where the **National Electricity Transmission System** operation may be affected by other factors which may not be known at the time of the plan and the updates. Therefore, **Users** should place no reliance on the plan or the updates showing a set of conditions which will actually arise in real time.

(i) Information Release Or Exchange

This paragraph (i) contains alternative requirements on **The Company**, paragraph (z) being an alternative to a combination of paragraphs (x) and (y). Paragraph (z) will only apply in relation to a particular **User** if **The Company** and that **User** agree that it should apply, in which case paragraphs (x) and (y) will not apply. In the absence of any relevant agreement between **The Company** and the **User**, **The Company** will only be required to comply with paragraphs (x) and (y).

#### Information Release To Each Network Operator And Non-Embedded Customer

Between the end of Week 34 and 49 **The Company** will upon written request:

- (x) for radial systems, provide each **Network Operator** and **Non Embedded Customer** with data to allow the calculation by the **Network Operator**, and each **Non Embedded Customer**, of symmetrical and asymmetrical fault levels; and
- (y) for interconnected **Systems**, provide to each **Network Operator** an equivalent network, sufficient to allow the identification of symmetrical and asymmetrical fault levels, and power flows across interconnecting **User Systems** directly connected to the **National Electricity Transmission System**; or

#### System Data Exchange

- (z) as part of a process to facilitate understanding of the operation of the **Total System**,
  - (1) **The Company** will make available to each **Network Operator**, the **National Electricity Transmission System Study Network Data Files** covering Year 1 which are of relevance to that **User's System**;
  - (2) where **The Company** and a **User** have agreed to the use of data links between them, the making available will be by way of allowing the **User** access to take a copy of the **National Electricity Transmission System Study Network Data Files** once during that period. The **User** may, having taken that copy, refer to the copy as often as it wishes. Such access will be in a manner agreed by **The Company** and may be subject to separate agreements governing the manner of access. In the absence of agreement, the copy of the **National Electricity Transmission System Study Network Data Files** will be given to the **User** on a disc, or in hard copy, as determined by **The Company**;
  - (3) the data contained in the **National Electricity Transmission System Study Network Data Files** represents **The Company's** view of operating conditions although the actual conditions may be different;
  - (4) **The Company** will notify each **Network Operator**, as soon as reasonably practicable after it has updated the **National Electricity Transmission System Study Network Data Files** covering Year 1 that it has done so, when this update falls before the next annual update under this OC2.4.1.3.3(i). **The Company** will then make available to each **Network Operator** who has received an earlier version (and in respect of whom the agreement still exists), the updated **National Electricity Transmission System Study Network Files** covering the balance of Years 1 and 2 which remain given the passage of time, and which are of relevance to that **User's System**. The provisions of paragraphs (2) and (3) above shall apply to the making available of these updates;
  - (5) the data from the **National Electricity Transmission System Study Network Data Files** received by each **Network Operator** must only be used by that **User** in planning and operating that **Network Operator's User System** and must not be used for any other purpose or passed on to, or used by, any other business of that **User** or to, or by, any person within any other such business or elsewhere.

#### OC2.4.1.3.4 Operational Planning Phase - Planning in Financial Year 0 down to the Programming Phase (and in The case of Load Transfer Capability, also during the Programming Phase)

- (a) The **National Electricity Transmission System** outage plan for Year 1 issued under OC2.4.1.3.3 shall become the plan for Year 0 when by expiry of time Year 1 becomes Year 0.

- (b) Each **Generator** or **Interconnector Owner** or **Restoration Contractor** (as provided for in OC2.3.1(f)) or **Network Operator** or **Non-Embedded Customer** may at any time during Year 0, request **The Company** in writing for changes to the outages requested by them under OC2.4.1.3.3. In relation to that part of Year 0, excluding the period 1-7 weeks from the date of request, **The Company** shall determine whether the changes are possible and shall notify the **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.3.1(f)), **Network Operator** or **Non-Embedded Customer** in question whether this is the case as soon as possible, and in any event within 14 days of the date of receipt by **The Company** of the written request in question.

Where **The Company** determines that any change so requested is possible and notifies the relevant **User** accordingly, **The Company** will provide to each **Network Operator**, each **Interconnector Owner**, and each **Generator** and each **Restoration Contractor** (as provided for in OC2.3.1(f)) a copy of the request to which **The Company** has agreed which relates to outages on **Systems** of **Network Operators** (other than any request made by that **Network Operator**). The information must only be used by that **Network Operator** in planning and operating that **Network Operator's User System** and must not be used for any other purpose or passed on to, or used by, any other business of that **User** or to, or by, any person within any other such business or elsewhere.

- (c) During Year 0 (including the **Programming Phase**) each **Network Operator** shall at **The Company's** request, make available to **The Company**, such details of automatic and manual load transfer capability of:
- (i) 12MW or more (averaged over any half hour) for England and Wales
  - (ii) 10MW or more (averaged over any half hour) for Scotland

between Grid Supply Points.

During Year 0 (including the **Programming Phase**) each **Network Operator** shall notify **The Company** of any revisions to the information provided pursuant to OC2.4.1.3.3 (c) for **Interface Points** as soon as reasonably practicable after the **Network Operator** becomes aware of the need to make such revisions.

- (d) When necessary during Year 0, **The Company** will notify each **Generator**, each **Interconnector Owner**, each **Restoration Contractor** (as provided for in OC2.3.1(f)) and **Network Operator** and each **Non-Embedded Customer**, in writing of those aspects of the **National Electricity Transmission System** outage programme in the period from the 8th week ahead to the 52nd week ahead, which may, in **The Company's** reasonable opinion, operationally affect that **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations** unless they are owned and/or operated by a **Restoration Contractors** (as provided for in OC2.3.1(f)) **Interconnector Owner** or **Network Operator** or **Non-Embedded Customer** including in particular proposed start dates and end dates of relevant **National Electricity Transmission System** outages.

**The Company** will also notify changes to information supplied by **The Company** pursuant to OC2.4.1.3.3(i)(x) and (y) except where in relation to a **User** information was supplied pursuant to OC2.4.1.3.3(i)(z). In that case:-

- (i) **The Company** will, by way of update of the information supplied by it pursuant to OC2.4.1.3.3(i)(z), make available at the first time in Year 0 that it updates the **National Electricity Transmission System Study Network Data Files** in respect of Year 0 (such update being an update on what was shown in respect of Year 1 which has then become Year 0) to each **Network Operator** who has received an earlier version under OC2.4.1.3.3(i)(z) (and in respect of whom the agreement still exists), the **National Electricity Transmission System Study Network Data Files** covering Year 0 which are of relevance to that **User's System**.

- (ii) **The Company** will notify each relevant **Network Operator**, as soon as reasonably practicable after it has updated the **National Electricity Transmission System Study Network Data Files** covering Year 0, that it has done so. **The Company** will then make available to each such **Network Operator**, the updated **National Electricity Transmission System Study Network Data Files** covering the balance of Year 0 which remains given the passage of time, and which are of relevance to that **User's System**.
- (iii) The provisions of OC2.4.1.3.3(i)(z)(2), (3) and (5) shall apply to the provision of data under this part of OC2.4.1.3.4(d) as if set out in full.

**The Company** will also indicate where a need may exist to issue other operational instructions or notifications (including but not limited to the requirement for the arming of an **Operational Intertripping** scheme) or **Emergency Instructions** to **Users** in accordance with **BC2** to allow the security of the **National Electricity Transmission System** to be maintained within the **Licence Standards** except in the case of a **Total Shutdown** or **Partial Shutdown** as provided for in OC9 4.3.

- (e) In addition, by the end of each month during Year 0, **The Company** will provide to each **Generator** and each **Interconnector Owner** and each **Restoration Contractor** (as provided for in OC2.3.1(f)) a notice containing any revisions to the final **National Electricity Transmission System** outage plan for Year 1, provided to the **Generator** or the **Interconnector Owner** or **Restoration Contractor** (as provided for in OC2.3.1(f)) under OC2.4.1.3.3 or previously under this provision, whichever is the more recent.

#### OC2.4.1.3.5 Programming Phase

- (a) By 1600 hours each Thursday

- (i) **The Company** shall continue to update a preliminary **National Electricity Transmission System** outage programme for the eighth week ahead, a provisional **National Electricity Transmission System** outage programme for the next week ahead and a final day ahead **National Electricity Transmission System** outage programme for the following day.
- (ii) **The Company** will notify each **Generator**, **Interconnector Owner**, **Restoration Contractor** (as provided for in OC2.3.1(f)) and **Network Operator** and each **Non-Embedded Customer**, in writing of those aspects of the preliminary **National Electricity Transmission System** outage programme which may operationally affect each **Generator** (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations** unless they are owned and/or operated by a **Restoration Contractor** (as provided for in OC2.3.1(f)) or **Interconnector Owner** or **Network Operator** and each **Non-Embedded Customer** including in particular proposed start dates and end dates of relevant **National Electricity Transmission System** outages.

**The Company** will also notify changes to information supplied by **The Company** pursuant to OC2.4.1.3.3(i)(x) and (y) except where in relation to a **User** information was supplied pursuant to OC2.4.1.3.3(i)(z). In that case:

- (1) **The Company** will, by way of update of the information supplied by it pursuant to OC2.4.1.3.3(i)(z), make available the **National Electricity Transmission System Study Network Data Files** for the next week ahead and
- (2) **The Company** will notify each relevant **Network Operator**, as soon as reasonably practicable after it has updated the **National Electricity Transmission System Study Network Data Files** covering the next week ahead that it has done so, and
- (3) The provisions of OC2.4.1.3.3(i)(z)(2), (3) and (5) shall apply to the provision of data under this part of OC2.4.1.3.5(a)(ii) as if set out in full.



**The Company** may make available, the **National Electricity Transmission System Study Network Data Files** for the next week ahead where **The Company** and a particular **User** agree, and in such case the provisions of OC2.4.1.1.3.3(i)(x) and (y) and the provisions of OC2.4.1.3.4(d) and OC2.4.1.3.5(a) which relate to OC2.4.1.1.3.3(i)(x) and (y) shall not apply. In such case, the provisions of this OC2.4.1.3.5(a)(ii)2 and 3 shall apply to the provision of the data under this part of OC2.4.1.3.5(a)(ii) as if set out in full.

**The Company** will also indicate where a need may exist to arm an **Operational Intertripping** scheme, emergency switching, emergency **Demand** management or other measures including the issuing of other operational instructions or notifications or **Emergency Instructions to Users** in accordance with **BC2** to allow the security of the **National Electricity Transmission System** to be maintained within the **Licence Standards**.

(b) By 1000 hours each Friday

**Generators, Interconnector Owners, Restoration Contractors** (as provided for in OC2.3.1(f)) and **Network Operators** will discuss with **The Company** and confirm in writing to **The Company**, acceptance or otherwise of the requirements detailed under OC2.4.1.3.5.

**Network Operators** shall confirm for the following week:

- (i) the details of any outages of its **User System** that will restrict the **Maximum Export Capacity** and/or **Maximum Import Capacity** at any **Interface Points** within its **User System** for the following week; and
- (ii) any changes to the previously declared values of the **Interface Point Target Voltage/Power Factor**.

(c) By 1600 hours each Friday

- (i) **The Company** shall finalise the preliminary **National Electricity Transmission System** outage programme up to the seventh week ahead. **The Company** will endeavour to give as much notice as possible to a **Generator** with nuclear **Large Power Stations** which may be operationally affected by an outage which is to be included in such programme.
- (ii) **The Company** shall finalise the provisional **National Electricity Transmission System** outage programme for the next week ahead.
- (iii) **The Company** shall finalise the **National Electricity Transmission System** outage programme for the weekend through to the next normal working day.
- (iv) In each case, **The Company** will indicate the factors set out in (a)(ii) above (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations** unless they are owned and/or operated by a **Restoration Contractor** (as provided for in OC2.3.1(f)) to the relevant **Generators** and **Network Operators** and **Non-Embedded Customers**.
- (v) Where a **Generator** with nuclear **Large Power Stations** which may be operationally affected by the preliminary **National Electricity Transmission System** outage programme referred to in (i) above (acting as a reasonable operator) is concerned on grounds relating to safety about the effect which an outage within such outage programme might have on one or more of its nuclear **Large Power Stations**, it may contact **The Company** to explain its concerns and discuss whether there is an alternative way of taking that outage (having regard to technical feasibility). If there is such an alternative way, but **The Company** refuses to adopt that alternative way in taking that outage, that **Generator** may involve the **Disputes Resolution Procedure** to decide on the way the outage should be taken. If there is no such alternative way, then **The Company** may take the outage despite that **Generator's** concerns.

- (d) By 1600 hours each Monday, Tuesday, Wednesday and Thursday
- (i) **The Company** shall prepare a final **National Electricity Transmission System** outage programme for the following day.
  - (ii) **The Company** shall notify each **Generator** and each **Restoration Contractor** (as provided for in OC2.3.1(f)) and **Network Operator** and **Non-Embedded Customer** in writing of the factors set out in (a)(ii) above (other than those aspects which may operationally affect **Embedded Small Power Stations** or **Embedded Medium Power Stations** unless they are owned and/or operated by a **Restoration Contractor** (as provided for in OC2.3.1(f)).

#### OC2.4.2 DATA REQUIREMENTS

OC2.4.2.1 When a **Statement of Readiness** under the **Bilateral Agreement** and/or **Construction Agreement** is submitted, and thereafter in calendar week 24 in each calendar year,

- (a) each **Generator** shall (subject to OC2.4.2.1(k)) in respect of each of its:-
  - (i) **Gensets** (in the case of the **Generation Planning Parameters**); and
  - (ii) **CCGT Units** within each of its **CCGT Modules** at a **Large Power Station** (in the case of the **Generator Performance Chart**)
  - (iii) **Generating Units** within each of its **Synchronous Power Generating Modules** at a **Large Power Station** (in the case of the **Power-Generating Module Performance Chart** and **Synchronous Generating Unit Performance Chart**)

submit to **The Company** in writing the **Generation Planning Parameters** and the **Generator Performance Charts** as required.
- (b) Each shall meet the requirements of CC.6.3.2 or ECC.6.3.2 (as applicable) and shall reasonably reflect the true operating characteristics of the **Genset**.
- (c) They shall be applied (unless revised under this **OC2** or (in the case of the **Generator Performance Chart** only) **BC1** in relation to **Other Relevant Data**) from the **Completion Date**, in the case of the ones submitted with the **Statement of Readiness**, and in the case of the ones submitted in calendar week 24, from the beginning of week 25 onwards.
- (d) They shall be in the format indicated in Appendix 1 for these charts and as set out in Appendix 2 for the **Generation Planning Parameters**.
- (e) Any changes to the **Generator Performance Chart** or **Generation Planning Parameters** should be notified to **The Company** promptly.
- (f) **Generators** should note that amendments to the composition of the **Power Generating Module**, **CCGT Module** or **Power Park Module** at **Large Power Stations** may only be made in accordance with the principles set out in PC.A.3.2.3 or PC.A.3.2.4 respectively. If in accordance with PC.A.3.2.3 or PC.A.3.2.4 an amendment is made, any consequential changes to the **Generation Planning Parameters** should be notified to **The Company** promptly.
- (g) **The Generator Performance Chart** must be as described below and demonstrate the limitation on reactive capability of the **System** voltage at 3% above nominal. It must also include any limitations on output due to the prime mover (both maximum and minimum), **Generating Unit** step up transformer or **User System**.
  - (i) For a **Synchronous Generating Unit** on a **Generating Unit** specific basis at the **Generating Unit** stator terminals. It must include details of the **Generating Unit** transformer parameters.
  - (ii) For a **Non-Synchronous Generating Unit** (excluding a **Power Park Unit**) on a **Generating Unit** specific basis at the **Grid Entry Point** (or **User System Entry Point** if **Embedded**).
  - (iii) For a **Power Park Module**, on a **Power Park Module** specific basis at the **Grid Entry Point** (or **User System Entry Point** if **Embedded**).

- (iv) For a **DC Converter** on a **DC Converter** specific basis at the **Grid Entry Point** (or **User System Entry Point** if **Embedded**).
- (v) For a **Synchronous Generating Unit** within a **Synchronous Power Generating Module**, both the **Power-Generating Module Performance Chart** and **Synchronous Generating Unit Performance Chart** should be provided.
- (h) For each **CCGT Unit**, and any other **Generating Unit** or **Power Park Module** or **Power Generating Module** whose performance varies significantly with ambient temperature, the **Generator Performance Chart** (including the **Power-Generating Module Performance Chart** and **Synchronous Generating Unit Performance Chart** in the case of **Synchronous Power Generating Modules**) shall show curves for at least two values of ambient temperature so that **The Company** can assess the variation in performance over all likely ambient temperatures by a process of linear interpolation or extrapolation. One of these curves shall be for the ambient temperature at which the **Generating Unit's** output, or **CCGT Module** or **Power-Generating Module** at a **Large Power Station** output or **Power Park Module's** output, as appropriate, equals its **Registered Capacity**.
- (i) The **Generation Planning Parameters** supplied under OC2.4.2.1 shall be used by **The Company** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism** (subject as otherwise permitted in the **BC**).
- (j) Each **Generator** shall in respect of each of its **Synchronous Power Generating Modules** or **CCGT Modules** (including those which are part of a **Synchronous Power Generating Module**) at **Large Power Stations** submit to **The Company** in writing a **CCGT Module Planning Matrix** and/or a **Synchronous Power-Generating Module Planning Matrix**. It shall be prepared on a best estimate basis relating to how it is anticipated the **Synchronous Power-Generating Module** or **CCGT Module** will be running and which shall reasonably reflect the true operating characteristics of the **Power-Generating Module** or **CCGT Module**. It will be applied (unless revised under this OC2) from the **Completion Date**, in the case of the one submitted with the **Statement of Readiness**, and in the case of the one submitted in calendar week 24, from the beginning of week 31 onwards. It must show the combination of **CCGT Units** or **Synchronous Power Generating Units** which would be running in relation to any given MW output, in the format indicated in Appendix 3.

Any changes must be notified to **The Company** promptly. **Generators** should note that amendments to the composition of the **CCGT Module** or **Synchronous Power-Generating Module** at **Large Power Stations** may only be made in accordance with the principles set out in PC.A.3.2.3. If in accordance with PC.A.3.2.3 an amendment is made, an updated **CCGT Module Planning Matrix** or **Synchronous Power-Generating Module Planning Matrix** must be immediately submitted to **The Company** in accordance with this OC2.4.2.1(b).

The **CCGT Module Planning Matrix** or **Synchronous Power-Generating Module Planning Matrix** will be used by **The Company** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism**.

- (k) Each **Generator** shall in respect of each of its **Cascade Hydro Schemes** also submit the **Generation Planning Parameters** detailed at OC2.A.2.6 to OC2.A.2.10 for each **Cascade Hydro Scheme**. Such parameters need not also be submitted for the individual **Gensets** within such **Cascade Hydro Scheme**.

- (l) Each **Generator** shall in respect of each of its **Power Park Modules** at **Large Power Stations** submit to **The Company** in writing a **Power Park Module Planning Matrix**. It shall be prepared on a best estimate basis relating to how it is anticipated the **Power Park Module** will be running and which shall reasonably reflect the operating characteristics of the **Power Park Module** and the **BM Unit** of which it forms part. It will be applied (unless revised under this OC2) from the **Completion Date**, in the case of the one submitted with the **Statement of Readiness**, and in the case of the one submitted in calendar week 24, from the beginning of week 31 onwards. It must show the number of each type of **Power Park Unit** in the **Power Park Module** typically expected to be available to generate and the **BM Unit** of which it forms part, in the format indicated in Appendix 4. The **Power Park Module Planning Matrix** shall be accompanied by a graph showing the variation in MW output with **Intermittent Power Source** (e.g. MW vs wind speed) for the **Power Park Module**. The graph shall indicate the typical value of the **Intermittent Power Source** for the **Power Park Module**.

Any changes must be notified to **The Company** promptly. **Generators** should note that amendments to the composition of the **Power Park Module** at **Large Power Stations** may only be made in accordance with the principles set out in PC.A.3.2.4. If in accordance with PC.A.3.2.4 an amendment is made, an updated **Power Park Module Planning Matrix** must be immediately submitted to **The Company** in accordance with this OC2.4.2.1(a).

The **Power Park Module Planning Matrix** will be used by **The Company** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism**.

- (m) For each **Synchronous Generating Unit** (including **Synchronous Generating Units** within a **Power Generating Module**) where the **Generator** intends to adjust the **Generating Unit** terminal voltage in response to a MVAR output Instruction or a Target Voltage Level instruction in accordance with BC2.A.2.6 the **Generator Performance Chart** including the **Synchronous Generating Unit Performance Chart** shall show curves corresponding to the **Generating Unit** terminal voltage being controlled to its rated value and to its maximum value.

In the case of **Restoration Contractors** (as provided for in OC2.3.1(f)) who are **Generators**, it would be expected that the above data required in OC2.4.2.1 (a) – (m) would apply.

OC2.4.2.2 Each **Network Operator** shall by 1000 hrs on the day falling seven days before each **Operational Day** inform **The Company** in writing of any changes to the circuit details called for in PC.A.2.2.1 which it is anticipated will apply on that **Operational Day** (under **BC1** revisions can be made to this data). This requirement shall also apply to circuits associated with a **Distributed Restoration Zone Plan**.

OC2.4.2.3 Under **Assimilated EU Law** (Commission Regulation (EU) 543/2013), **Users** are required to submit certain data to the **Data Publisher** for publication. **The Company** is required to facilitate the collection, verification and processing of data from **Users** for onward transmission to the **Data Publisher**.

Each **Generator** and **Restoration Contractor** (as provided for in OC2.3.1(f)) and each **Non-Embedded Customer** connected to or using the **National Electricity Transmission System** shall provide **The Company** with such information as required by and set out in **DRC Schedule 6 (Users' Outage Data EU Transparency Availability Data)** in the timescales detailed therein.

#### OC2.4.3 NEGATIVE RESERVE ACTIVE POWER MARGINS

OC2.4.3.1 At a regular time interval, at least once each day (by 1600 hours) and up to every hour **The Company** will, taking into account the **Generation Outage Programme** and forecast of **Output Usable** supplied by each **Generator** and by each **Interconnector Owner** defined in OC2.4.1.2.1 and forecast **Demand** for the minimum **Demand** period, calculate and publish:-

- (1) the level of the **System NRAPM** each day within the period 2 to 14 days ahead (inclusive) and for each week the level of risk of **System NRAPM** within the 2-52 week ahead period; and

- (2) the level of the **Localised NRAPM** (currently for the main constraint between England and Scotland only) for each day within the period 2 to 14 days ahead (inclusive) having taken into account the appropriate limit on transfers to and from the **System Constraint Group** and for each week the level of risk of **Localised NRAPM** within the 2-52 week ahead period.

#### Outages Adjustments

- (a) Under the necessary circumstances **The Company** will then contact **Generators** in respect of their **Large Power Stations** and **Interconnector Owners** to discuss outages as set out in the following paragraphs of this OC2.4.3.1.
- (b) **The Company** will contact all **Generators** and **Interconnector Owners** in the case of low **System NRAPM** and will contact **Generators** in relation to relevant **Large Power Stations** and **Interconnector Owners** in the case of low **Localised NRAPM**. **The Company** will raise with each **Generator** and **Interconnector Owner** the problems it is anticipating due to the low **System NRAPM** or **Localised NRAPM** and will discuss:
- (1) whether any change is possible to the estimate of **Genset** inflexibility; and
- (2) whether **Genset** or **External Interconnection** outages can be taken to coincide with the periods of low **System NRAPM** or **Localised NRAPM** (as the case may be).

In relation to **Generators** with nuclear **Large Power Stations** the discussions on outages can include the issue of whether outages can be taken for re-fuelling purposes to coincide with the relevant low **System NRAPM** and/or **Localised NRAPM** periods.

- (c) If agreement is reached with a **Generator** or an **Interconnector Owner**, then such **Generator** or **Interconnector Owner** will take such outage, as agreed with **The Company**, and the **Generator** or an **Interconnector Owner** will issue updates to its **Output Usable** via the data provision process defined in OC2.4.1.2.1 and **The Company** will process the updated data which will then be included in the next published update of the **System NRAPM** and/or **Localised NRAPM**.
- (d) If on the day prior to an **Operational Day**, it is apparent from the **BM Unit Data** submitted by **Users** under **BC1** that **System NRAPM** and/or **Localised NRAPM** (as the case may be) is, in **The Company's** reasonable opinion, too low, then in accordance with the procedures and requirements set out in BC1.5.5 **The Company** may contact **Users** to discuss whether changes to **Physical Notifications** are possible, and if they are, will reflect those in the operational plans for the next following **Operational Day** or will, in accordance with BC2.9.4 instruct **Generators** to **De-Synchronise** a specified **Genset** for such period. In determining which **Genset** to so instruct, **BC2** provides that **The Company** will not (other than as referred to below) consider in such determination (and accordingly shall not instruct to **De-Synchronise**) any **Genset** within an **Existing Gas Cooled Reactor Plant**. **BC2** further provides that:-
- (i) **The Company** is permitted to instruct to **De-Synchronise** any **Gensets** within an **Existing AGR Plant** if those **Gensets** within an **Existing AGR Plant** have failed to offer to be flexible for the relevant instance at the request of **The Company** provided the request is within the **Existing AGR Plant Flexibility Limit**.
- (ii) **The Company** will only instruct to **De-Synchronise** any **Gensets** within an **Existing Magnox Reactor Plant** or within an **Existing AGR Plant** (other than under (i) above) if the level of **System NRAPM** (taken together with **System** constraints) and/or **Localised NRAPM** is such that it is not possible to avoid **De-Synchronising** such **Generating Unit** or **Power Generating Module**, and provided the power flow across each **External Interconnection** is either at zero or results in an export of power from the **Total System**. This proviso applies in all cases in the case of **System NRAPM** and in the case of **Localised NRAPM**, only when the power flow would have a relevant effect.

#### OC2.4.4 FREQUENCY SENSITIVE OPERATION

By 1600 hours each Wednesday

OC2.4.4.1 Using such information as **The Company** shall consider relevant including, if appropriate, forecast **Demand**, any estimates provided by **Generators** of **Genset** inflexibility and anticipated plant mix relating to operation in **Frequency Sensitive Mode**, **The Company** shall determine for the period 2 to 7 weeks ahead (inclusive) whether it is possible that there will be insufficient **Gensets** (other than those **Gensets** within **Existing Gas Cooled Reactor Plant** which are permitted to operate in **Limited Frequency Sensitive Mode** at all times under BC3.5.3) to operate in **Frequency Sensitive Mode** for all or any part of that period.

OC2.4.4.2 BC3.5.3 explains that **The Company** permits **Existing Gas Cooled Reactor Plant** other than **Frequency Sensitive AGR Units** to operate in a **Limited Frequency Sensitive Mode** at all times.

OC2.4.4.3 If **The Company** foresees that there will be an insufficiency in **Gensets** operating in a **Frequency Sensitive Mode**, it will contact **Generators** in order to seek to agree (as soon as reasonably practicable) that all or some of the **Gensets** (the MW amount being determined by **The Company** but the **Gensets** involved being determined by the **Generator**) will take outages to coincide with such period as **The Company** shall specify to enable replacement by other **Gensets** which can operate in a **Frequency Sensitive Mode**. If agreement is reached (which unlike the remainder of **OC2** will constitute a binding agreement) then such **Generator** will take such outage as agreed with **The Company**. If agreement is not reached, then the provisions of BC2.9.5 may apply.

OC2.4.5 If in **The Company's** reasonable opinion it is necessary for both the procedure set out in OC2.4.3 (relating to **System NRAPM** and **Localised NRAPM**) and in OC2.4.4 (relating to operation in **Frequency Sensitive Mode**) to be followed in any given situation, the procedure set out in OC2.4.3 will be followed first, and then the procedure set out in OC2.4.4. For the avoidance of doubt, nothing in this paragraph shall prevent either procedure from being followed separately and independently of the other.

#### OC2.4.6 OPERATING MARGIN DATA REQUIREMENTS

##### OC2.4.6.1 Modifications to relay settings

'Relay settings' in this OC2.4.6.1 refers to the settings of **Low Frequency Relays** in respect of **Gensets** that are available for start from standby by **Low Frequency Relay** initiation with **Fast Start Capability** agreed pursuant to the **Bilateral Agreement**.

By 1600 hours each Wednesday

A change in relay settings will be sent by **The Company** no later than 1600 hours on a Wednesday to apply from 1000 hours on the Monday following. The settings allocated to particular **Large Power Stations** may be interchanged between 49.70Hz and 49.60Hz (or such other **System Frequencies** as **The Company** may have specified) provided the overall capacity at each setting and **System** requirements can, in **The Company's** view, be met.

Between 1600 hours each Wednesday and 1200 hours each Friday

If a **Generator** wishes to discuss or interchange settings it should contact **The Company** by 1200 hours on the Friday prior to the Monday on which it would like to institute the changes to seek **The Company's** agreement. If **The Company** agrees, **The Company** will then send confirmation of the agreed new settings.

By 1500 hours each Friday

If any alterations to relay settings have been agreed, then the updated version of the current relay settings will be sent to affected **Users** by 1500 hours on the Friday prior to the Monday on which the changes will take effect. Once accepted, each **Generator** (if that **Large Power Station** is not subject to forced outage or **Planned Outage**) will abide by the terms of its latest relay settings.

In addition, **The Company** will take account of any **Large Power Station** unavailability (as notified under OC2.4.1.2 submissions) in its total **Operating Reserve** policy.

**The Company** may from time to time, for confirmation purposes only, issue the latest version of the current relay settings to each affected **Generator**

#### OC2.4.6.2 Operational Planning Margin Requirements (OPMR)

At a regular time interval, at least once each day (by 1600 hours) and up to every hour

**The Company** will provide an indication of the level of **Operating Reserve** to be utilised by **The Company** in connection with the operation of the **Balancing Mechanism** covering a 2-14 day ahead period (with a daily peak demand resolution) and the 2-52 week resolution (with a weekly resolution focusing on the peak demand of the week). This level shall be purely indicative.

This **Operational Planning Margin** requirements indication will also note the possible level of **High Frequency Response** to be utilised by **The Company** in connection with the operation of the **Balancing Mechanism** in the week beginning with the **Operational Day** commencing during the subsequent Monday, which level shall be purely indicative.

#### OC2.4.7 In the event that:

- a) a **Non-Embedded Customer** experiences the planned unavailability of its **Apparatus** resulting in the reduction of Demand of 100MW or more, or a change to the planned unavailability of its **Apparatus** resulting in a change in Demand of 100MW or more, for one Settlement Period or longer; or
- b) a **Non-Embedded Customer** experiences a change in the actual availability of its **Apparatus** resulting in a change in Demand of 100MW or greater; or
- c) a **Generator** experiences a planned unavailability of a **Generating Unit** and/or **Power-Generating Module** resulting in a change of 100MW or more in the **Output Usable** of that **Generating Unit** and/or **Power-Generating Module** below its previously notified availability, which is expected to last one **Settlement Period** or longer and up to three years ahead; or
- d) a **Generator** experiences a change of 100MW or more in the Maximum Export Limit of a **Generating Unit** which is expected to last one **Settlement Period** or longer; or
- e) a **Generator** experiences a planned unavailability resulting in a change of 100MW or more in its aggregated **Output Usable** below its previously notified availability for a **Power Station** with a **Registered Capacity** of 200MW or more and which is expected to last one **Settlement Period** or longer and up to three years ahead, save where data has been provided pursuant to OC.2.4.7(c) above; or
- f) a **Generator** experiences a change of 100MW or more in the aggregated Maximum Export Limit of a **Power Station** with a **Registered Capacity** of 200MW or more, which is expected to last one **Settlement Period** or longer, save where data has been provided pursuant to OC.2.4.7(d) above;

such **Non-Embedded Customer** or **Generator** shall provide **The Company** with the **EU Transparency Availability Data** in accordance with **DRC** Schedule 6 (Users' Outage Data) using **MODIS** and, with reference to points OC2.4.7(a) to (f), **Assimilated EU Law** (Commission Regulation (EU) 543/2013) articles 7.1(a), 7.1(b), 15.1(a), 15.1(b), 15.1(c) and 15.1(d).

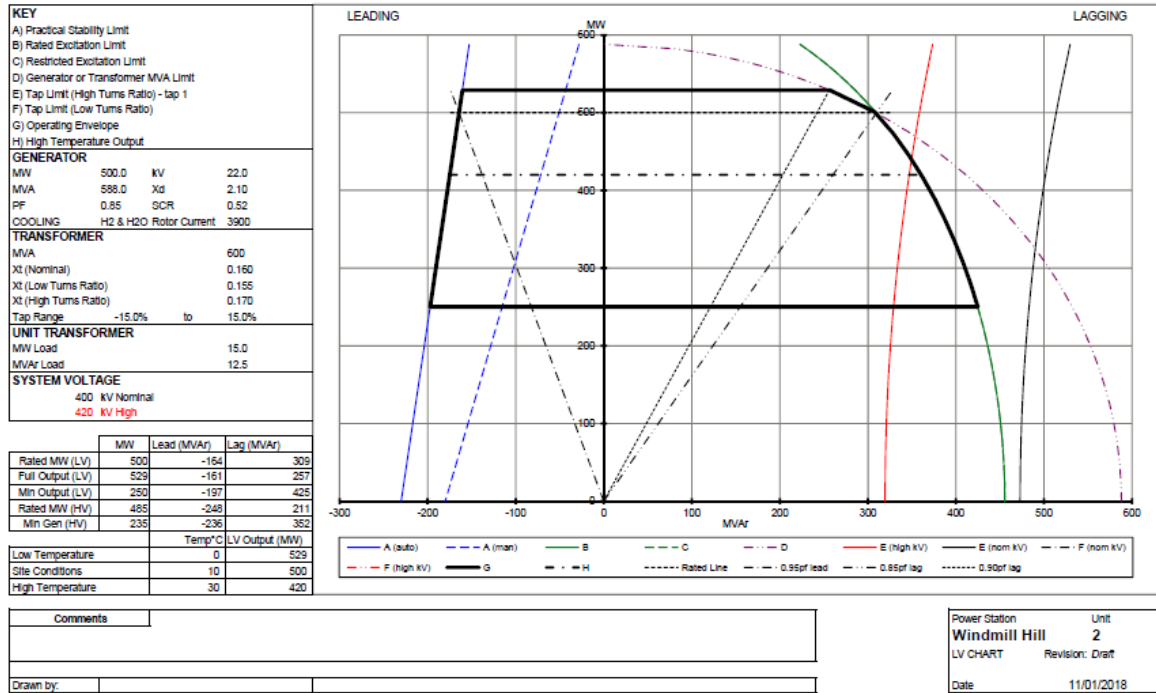
#### OC2.4.8 **The Company** will for each day publish the actual largest secured loss of generation (i.e. the loss of generation against which, as a requirement of the Licence Standards, the **National Electricity Transmission System** must be secured) or loss of import from **External Interconnections** for each settlement period on **The Company's** website.

- OC2.5 Space Weather Events
- OC2.5.1 In addition to the requirements of OC2.4, where **The Company** issues a **Space Weather Prepare Notification** in accordance with OC7.4.9, **Generators, Interconnector Owners and Restoration Contractors** shall;
- (a) within 3 hours of **The Company** issuing a **Space Weather Prepare Notification** submit a **Space Weather Output Usable Declaration** to **The Company** (for the avoidance of doubt where no **Space Weather Output Usable Declaration** is submitted, **The Company** shall assume there to have been a declaration stating no impact to availability due to space weather). In the case of **Interconnector Owners**, they may take such steps that they consider appropriate to inform any relevant parties (such as, but not limited to, any other Transmission System Operator (TSO) (as defined in **Assimilated Law**) and market participants) as they consider to be appropriate. For the avoidance of doubt, **The Company** shall be able to inform any relevant parties of any space weather related notifications it has issued in accordance with the Grid Code; and
  - (b) where a **Space Weather Imminent Notification** is issued by **The Company** in accordance with OC7.4.9, comply with their submitted **Space Weather Output Usable Declaration**, unless an **Event** prevents them from doing so.
- OC2.5.2 Where **The Company** issues a **Space Weather Imminent Notification** without first issuing a **Space Weather Prepare Notification**, **Generators, Interconnector Owners and Restoration Contractors** shall;
- (a) as soon as practicable submit a **Space Weather Output Usable Declaration** to **The Company**; and
  - (b) as soon as practicable comply with their **Space Weather Output Usable Declaration** as submitted in accordance with OC2.5.2(a), unless an **Event** prevents them from doing so.
- OC2.5.3 Where a **Space Weather Experienced Notification** is issued by **The Company** then the **User**, where relevant, shall submit a **Space Weather Outcome Statement** as soon as reasonably practicable.
- OC2.5.4 Where a **Space Weather Outcome Statement** has been submitted to **The Company**, this may be shared by **The Company** with the Met Office, the **Authority** and the **Secretary of State** (or such other person or team nominated by them to act on their behalf with respect to receiving **Space Weather Outcome Statements**). Where any other **User(s)** has neighbouring **Plant** and **Apparatus** (being in close electrical proximity to the asset(s) to which the **Space Weather Outcome Statement** relates) which might also be affected, **The Company** will seek the agreement of the **User** to share that information with the neighbouring **User(s)**. Such agreement shall not be unreasonably withheld.
- OC2.5.5 Where **The Company** issues a **Space Weather Cessation Notification** in accordance with OC7.4.9 following the issuing of a **Space Weather Imminent Notification** or a **Space Weather Experienced Notification** this will revert to a **Space Weather Prepare Notification** level. **Generators, Interconnector Owners and Restoration Contractors** shall, within 3 hours of the issuing of a **Space Weather Cessation Notification**, submit any revision to their **Space Weather Output Usable Declaration** to **The Company** (for the avoidance of doubt where such notification is not provided to **The Company**, then the **Space Weather Output Usable Declaration** as submitted under OC2.5.1(a) or OC2.5.2(a) will prevail).
- OC2.5.6 Where **The Company** issues a **Space Weather Cancellation Notification** in accordance with OC7.4.9 following the issuing of a **Space Weather Prepare Notification**, **Space Weather Imminent Notification** or a **Space Weather Experienced Notification**, then the **Space Weather Output Usable Declarations** as submitted under OC2.5.1 or OC2.5.2 shall cease to have effect and **User's Plant** and **Apparatus** availability shall return to normal service in the timescales set out in the **Space Weather Output Usable Declaration** previously submitted.

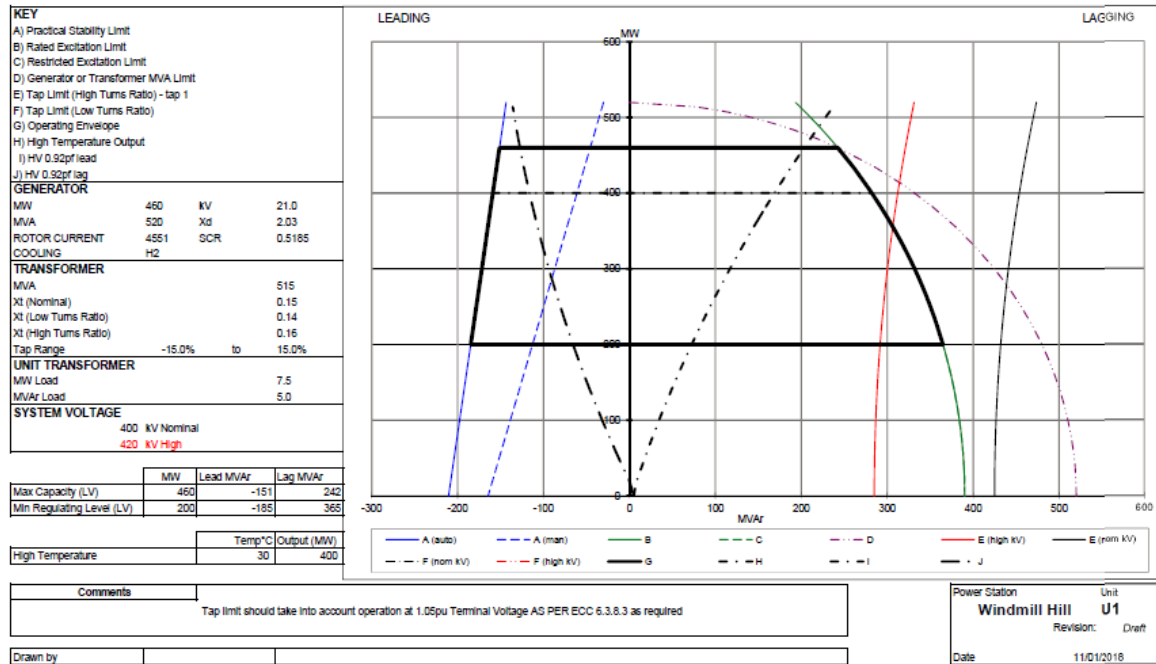


# APPENDIX 1 - PERFORMANCE CHART EXAMPLES

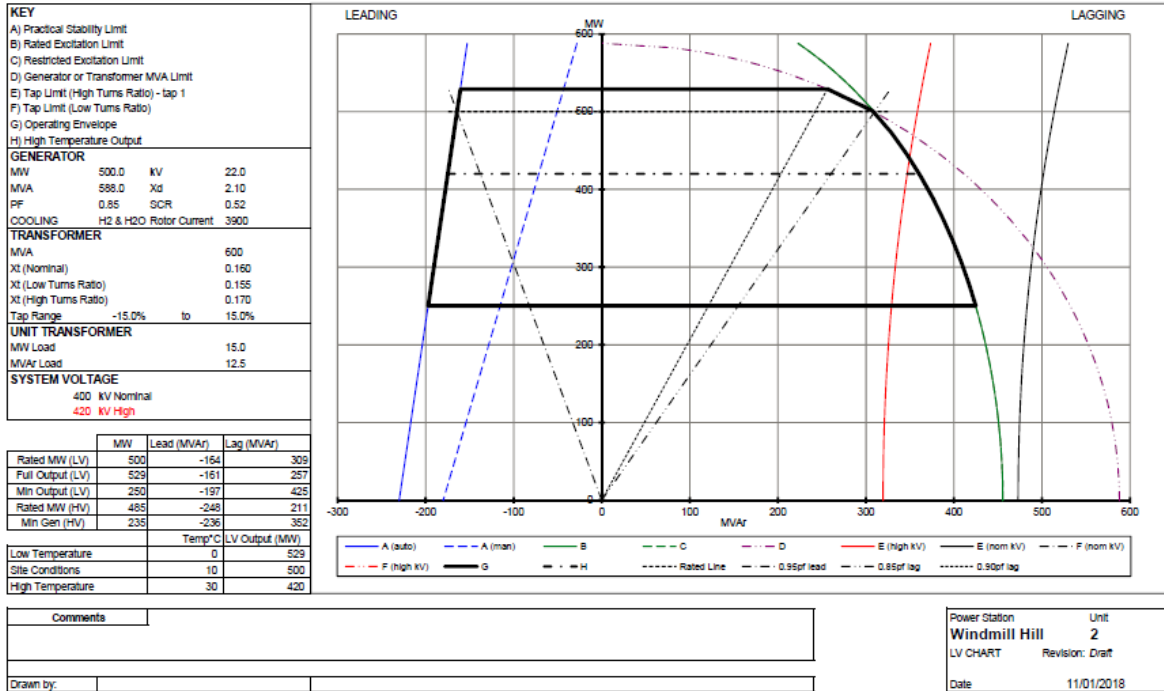
GENERATOR PERFORMANCE CHART



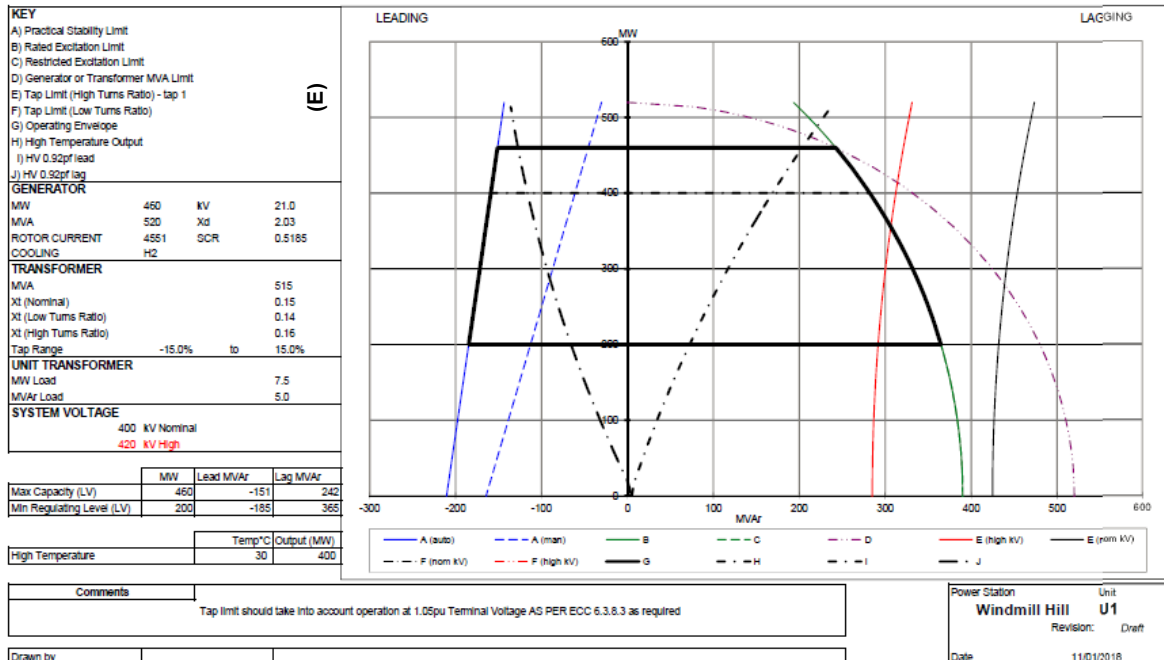
Synchronous Generating Unit Performance Chart within a Synchronous Power Generating Module



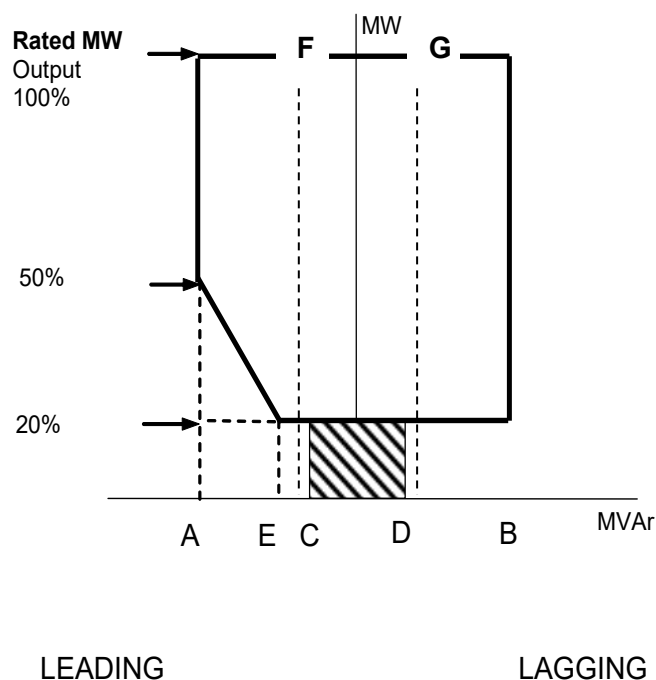
# GENERATOR PERFORMANCE CHART



## Synchronous Generating Unit Performance Chart within a Synchronous Power Generating Module



POWER PARK MODULE PERFORMANCE CHART AT THE CONNECTION POINT OR USER'S SYSTEM ENTRY POINT



Point A is equivalent (in MVar) to: 0.95 leading **Power Factor** at **Rated MW** output

Point B is equivalent (in MVar) to: 0.95 lagging **Power Factor** at **Rated MW** output

Point C is equivalent (in MVar) to: -5% of **Rated MW** output

Point D is equivalent (in MVar) to: +5% of **Rated MW** output

Point E is equivalent (in MVar) to: -12% of **Rated MW** output

Line F is equivalent (in MVar) to: Leading **Power Factor Reactive Despatch Network Restriction**

Line G is equivalent (in MVar) to: Lagging **Power Factor Reactive Despatch Network Restriction**



Where a **Reactive Despatch Network Restriction** is in place which requires following of local voltage conditions, alternatively to Line F and G, please check this box.

## APPENDIX 2 - GENERATION PLANNING PARAMETERS

### OC2.A.2 Generation Planning Parameters

The following parameters are required in respect of each **Genset**.

#### OC2.A.2.1 Regime Unavailability

Where applicable the following information must be recorded for each **Genset**.

- Earliest synchronising time:
  - Monday
  - Tuesday to Friday
  - Saturday to Sunday
- Latest de-synchronising time:
  - Monday to Thursday
  - Friday
  - Saturday to Sunday

#### OC2.A.2.2 Synchronising Intervals

- (a) The synchronising interval between **Gensets** in a **Synchronising Group** assuming all **Gensets** have been **Shutdown** for 48 hours;
- (b) The **Synchronising Group** within the **Power Station** to which each **Genset** should be allocated.

#### OC2.A.2.3 De-Synchronising Interval

A fixed value **De-Synchronising** interval between **Gensets** within a **Synchronising Group**.

#### OC2.A.2.4 Synchronising Generation

The amount of MW produced at the moment of **Synchronising** assuming the **Genset** has been **Shutdown** for 48 hours.

#### OC2.A.2.5 Minimum Non-zero time (MNZT)

The minimum period on-load between **Synchronising** and **De-Synchronising** assuming the **Genset** has been **Shutdown** for 48 hours.

#### OC2.A.2.6 Run-Up rates

A run-up characteristic consisting of up to three stages from **Synchronising Generation** to **Output Usable** with up to two intervening break points assuming the **Genset** has been **Shutdown** for 48 hours.

#### OC2.A.2.7 Run-down rates

A run down characteristic consisting of up to three stages from **Output Usable** to **De-Synchronising** with breakpoints at up to two intermediate load levels.

OC2.A.2.8 Notice to Deviate from Zero (NDZ)

The period of time normally required to **Synchronise** a **Genset** following instruction from **The Company** assuming the **Genset** has been **Shutdown** for 48 hours.

OC2.A.2.9 Minimum Zero time (MZN)

The minimum interval between **De-Synchronising** and **Synchronising** a **Genset**.

OC2.A.2.10 Not used.

OC2.A.2.11 Gas Turbine Units loading parameters

- Loading rate for fast starting
- Loading rate for slow starting

## APPENDIX 3 - CCGT MODULE PLANNING MATRIX

### CCGT Module Planning Matrix Example Form

<b>CCGT MODULE</b>	<b>CCGT GENERATING UNITS AVAILABLE</b>								
	1st GT	2nd GT	3rd GT	4th GT	5th GT	6th GT	1st ST	2nd ST	3rd ST
	<b>OUTPUT USABLE</b>								
	150	150	150				100		
<b>MW</b>									
0MW to 150MW	/								
151MW to 250MW	/						/		
251MW to 300MW	/	/							
301MW to 400MW	/	/					/		
401MW to 450MW	/	/	/						
451MW to 550MW	/	/	/				/		

## APPENDIX 4 - POWER PARK MODULE PLANNING MATRIX

Power Park Module Planning Matrix Example Form

<b>BM Unit Name</b>				
<b>Power Park Module</b> [unique identifier]				
<b>POWER PARK UNIT AVAILABILITY</b>	<b>POWER PARK UNITS</b>			
	Type A	Type B	Type C	Type D
Description (Make/Model)				
Number of units				
<b>Power Park Module</b> [unique identifier]				
<b>POWER PARK UNIT AVAILABILITY</b>	<b>POWER PARK UNITS</b>			
	Type A	Type B	Type C	Type D
Description (Make/Model)				
Number of units				

The **Power Park Module Planning Matrix** may have as many columns as are required to provide information on the different make and model for each type of **Power Park Unit** in a **Power Park Module** and as many rows as are required to provide information on the **Power Park Modules** within each **BM Unit**. The description is required to assist identification of the **Power Park Units** within the **Power Park Module** and correlation with data provided under the **Planning Code**.

## APPENDIX 5 – SYNCHRONOUS POWER GENERATING MODULE PLANNING MATRIX

### Synchronous Power Generating Module Planning Matrix Example Form

SYNCHRONOUS POWER GENERATING MODULE	SYNCHRONOUS POWER GENERATING UNITS AVAILABLE								
	1st GT	2nd GT	3rd GT	4th GT	5th GT	6th GT	1st ST	2nd ST	3rd ST
	OUTPUT USABLE								
	150	150	150				100		
OUTPUT USABLE  MW									
0MW to 150MW	/								
151MW to 250MW	/						/		
251MW to 300MW	/	/							
301MW to 400MW	/	/					/		
401MW to 450MW	/	/	/						
451MW to 550MW	/	/	/				/		

**< END OF OPERATING CODE NO. 2 >**



# **OPERATING CODE NO. 7**

**(OC7)**

## **OPERATIONAL LIAISON**

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## OC7.1 INTRODUCTION

OC7.1.1 **Operating Code No. 7** ("OC7") sets out the requirements for the exchange of information in relation to **Operations** and/or **Events** on the **Total System** which have had (or may have had) or will have (or may have) an **Operational Effect**:

- (a) on the **National Electricity Transmission System** in the case of an **Operation** and/or **Event** occurring on the **System** of a **User** or **Users**; and
- (b) on the **System** of a **User** or **Users** in the case of an **Operation** and/or **Event** occurring on the **National Electricity Transmission System**.

It also describes the types of **National Electricity Transmission System Warning** which may be issued by **The Company**.

OC7.1.2 The requirement to notify in **OC7** relates generally to notifying of what is expected to happen or what has happened and not the reasons why. However, as **OC7** provides, when an **Event** or **Operation** has occurred on the **National Electricity Transmission System** which itself has been caused by (or exacerbated by) an **Operation** or **Event** on a **User's System**, **The Company** in reporting the **Event** or **Operation** on the **National Electricity Transmission System** to another **User** can pass on what it has been told by the first **User** in relation to the **Operation** or **Event** on the first **User's System**.

OC7.1.3 Where an **Event** or **Operation** on the **National Electricity Transmission System** falls to be reported by **The Company** to an **Externally Interconnected System Operator** under an **Interconnection Agreement**, **OC7** provides that in the situation where that **Event** or **Operation** has been caused by (or exacerbated by) an **Operation** or **Event** on a **User's System**, **The Company** can pass on what it has been told by the **User** in relation to the **Operation** or **Event** on that **User's System**.

OC7.1.4 **OC7** also deals with **Integral Equipment Tests**.

OC7.1.5 To reconfigure the **National Electricity Transmission System**, **The Company** may reasonably require the assistance of a **User** to reconfigure parts of the **User System**. To reconfigure its **User System** a **User** may reasonably require the reasonable assistance of **The Company** to direct the reconfiguration of parts of the **National Electricity Transmission System**.

OC7.1.6 **OC7.6** sets down the arrangements for the exchange of information required when configuring **Connection Sites** (or in the case of **OTSUA** operational prior to the **OTSUA Transfer Time**, **Transmission Interface Sites**) and parts of the **National Electricity Transmission System** adjacent to those **Connection Sites** (or **Transmission Interface Sites**) in Scotland and **Offshore**. It also covers the setting up of a **Local Switching Procedure**. **The Company** shall procure that **Relevant Transmission Licensees** shall comply with section **OC7.6** and any relevant **Local Switching Procedure** where and to the extent that such matters apply to them.

## OC7.2 OBJECTIVE

The objectives of **OC7** are:

OC7.2.1 To provide for the exchange of information so that the implications of an **Operation** and/or **Event** can be considered, possible risks arising from it can be assessed and appropriate action taken by the relevant party in order to maintain the integrity of the **Total System**. **OC7** does not seek to deal with any actions arising from the exchange of information, but merely with that exchange.

OC7.2.2 To provide for types of **National Electricity Transmission System Warnings** which may be issued by **The Company**.

OC7.2.3 To provide the framework for the information flow and discussion between **The Company** and certain **Users** in relation to **Integral Equipment Tests**.

OC7.2.4 To provide the procedure to be followed in respect of **Operational Switching**

### OC7.3 SCOPE

OC7.3.1 **OC7** applies to **The Company** and to **Users**, which in **OC7** means:

- (a) **Generators** (other than those which only have **Embedded Small Power Stations** or **Embedded Medium Power Stations**) and including **Generators** undertaking **OTSDUW**;
- (b) **Network Operators**;
- (c) **Non-Embedded Customers**;
- (d) **Suppliers** (for the purposes of **National Electricity Transmission System Warnings**);
- (e) **Externally Interconnected System Operators** (for the purposes of **National Electricity Transmission System Warnings**);
- (f) **DC Converter Station** owners and **HVDC System Owners**;
- (g) **Interconnector Owners** (for the notification of space weather events); and
- (h) **Restoration Contractors** (for the notification of space weather events).

The procedure for operational liaison by **The Company** with **Externally Interconnected System Operators** is set out in the **Interconnection Agreement** with each **Externally Interconnected System Operator**.

OC7.6 also applies to **Relevant Transmission Licensees**.

### OC7.4 PROCEDURE

OC7.4.1 The term "**Operation**" means a scheduled or planned action relating to the operation of a **System** (including an **Embedded Power Station**).

OC7.4.2 The term "**Event**" means an unscheduled or unplanned (although it may be anticipated) occurrence on, or relating to, a **System** (including an **Embedded Power Station**) including, without limiting that general description, faults, incidents and breakdowns and adverse weather conditions being experienced.

OC7.4.3 The term "**Operational Effect**" means any effect on the operation of the relevant other **System** which causes the **National Electricity Transmission System** or the **Systems** of the other **User** or **Users**, as the case may be, to operate (or be at a materially increased risk of operating) differently to the way in which they would or may have normally operated in the absence of that effect.

OC7.4.4 References in this **OC7** to a **System** of a **User** or **User's System** shall not include **Embedded Small Power Stations** or **Embedded Medium Power Stations**, unless otherwise stated.

#### OC7.4.5 Requirement To Notify Operations

##### OC7.4.5.1 Operation On The National Electricity Transmission System

In the case of an **Operation** on the **National Electricity Transmission System**, which will have (or may have) an **Operational Effect** on the **System(s)** of a **User** or **Users**, **The Company** will notify the **User** or **Users** whose **System(s)** will, or may, in the reasonable opinion of **The Company**, be affected, in accordance with **OC7**.

##### OC7.4.5.2 Operation On a User's System

In the case of an **Operation** on the **System** of a **User** which will have (or may have) an **Operational Effect** on the **National Electricity Transmission System** (including an equivalent to an **Operation** on the equivalent of a **System** of a **User** or other person connected to that **User's System** which, via that **User System**, will or may have an **Operational Effect** on the **National Electricity Transmission System**), the **User** will notify **The Company** in accordance with **OC7**. Following notification by the **User**, **The Company** will notify any other **User** or **Users** on whose **System(s)** the **Operation** will have, or may have, in the reasonable opinion of **The Company**, an **Operational Effect**, in accordance with **OC7** and will notify any **Externally Interconnected System Operator** on whose **System** the **Operation** will have, or may have, in the reasonable opinion of **The Company**, an **Operational Effect**, if it is required to do so by the relevant **Interconnection Agreement**.

#### OC7.4.5.3 Examples Of Situations Where Notification By **The Company** Or a **User** may be Required

Whilst in no way limiting the general requirement to notify in advance set out in OC7.4.5.1 and OC7.4.5.2, the following are examples of situations where notification in accordance with OC7.4.5 will be required if they will, or may, have an **Operational Effect**:

- (a) the implementation of a planned outage of **Plant** and/or **Apparatus** which has been arranged pursuant to **OC2**;
- (b) the operation (other than, in the case of a **User**, at the instruction of **The Company**) of any circuit breaker or isolator/disconnector or any sequence or combination of the two; or
- (c) voltage control.

#### OC7.4.5.4 Operations Caused By Another Operation Or By An Event

An **Operation** may be caused by another **Operation** or an **Event** on another's **System** (including an **Embedded Power Station**) (or by the equivalent of an **Event** or **Operation** on the **System** of an **Externally Interconnected System Operator** or **Interconnector User**) and in that situation the information to be notified is different to that where the **Operation** arose independently of any other **Operation** or **Event**, as more particularly provided in OC7.4.5.6.

#### OC7.4.5.5 Form

A notification and any response to any questions asked under OC7.4.5, of an **Operation** which has arisen independently of any other **Operation** or of an **Event**, shall be of sufficient detail to describe the **Operation** (although it need not state the cause) and to enable the recipient of the notification reasonably to consider and assess the implications and risks arising (provided that, in the case of an **Operation** on a **User's System** which **The Company** is notifying to other **Users** under OC7.4.5.2, **The Company** will only pass on what it has been told by the **User** which has notified it) and will include the name of the individual reporting the **Operation** on behalf of **The Company** or the **User**, as the case may be. The recipient may ask questions to clarify the notification and the giver of the notification will, insofar as it is able, answer any questions raised, provided that, in the case of an **Operation** on a **User's System** which **The Company** is notifying to other **Users** under OC7.4.5.2, in answering any question, **The Company** will not pass on anything further than that which it has been told by the **User** which has notified it. **The Company** may pass on the information contained in the notification as provided in OC7.4.5.6.

- OC7.4.5.6 (a) A notification by **The Company** of an **Operation** under OC7.4.5.1 which has been caused by another **Operation** (the "first **Operation**") or by an **Event** on a **User's System**, will describe the **Operation** and will contain the information which **The Company** has been given in relation to the first **Operation** or that **Event** by the **User**. The notification and any response to any questions asked (other than in relation to the information which **The Company** is merely passing on from a **User**) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the **Operation** on the **National Electricity Transmission System** and will include the name of the individual reporting the **Operation** on behalf of **The Company**. The recipient may ask questions to clarify the notification and **The Company** will, insofar as it is able, answer any questions raised, provided that in relation to the information which **The Company** is merely passing on from a **User**, in answering any question **The Company** will not pass on anything further than that which it has been told by the **User** which has notified it.
- (b) Where a **User** is reporting an **Operation** or an **Event** which itself has been caused by an incident or scheduled or planned action affecting (but not on) its **System**, the notification to **The Company** will contain the information which the **User** has been given by the person connected to its **System** in relation to that incident or scheduled or planned action (which the **User** must require, contractually or otherwise, the person connected to its **System** to give to it) and **The Company** may pass on the information contained in the notification as provided in this OC7.4.5.6.
- OC7.4.5.7 Where an **Operation** on the **National Electricity Transmission System** falls to be reported by **The Company** under an **Interconnection Agreement** and the **Operation** has been caused by another **Operation** (the "first **Operation**") or by an **Event** on a **User's System**, **The Company** will include in that report the information which **The Company** has been given in relation to the first **Operation** or that **Event** by the **User** (including any information relating to an incident or scheduled or planned action, as provided in OC7.4.5.6).
- OC7.4.5.8 (a) A notification to a **User** by **The Company** of an **Operation** under OC7.4.5.1 which has been caused by the equivalent of an **Operation** or of an **Event** on the equivalent of a **System** of an **Externally Interconnected System Operator** or **Interconnector User**, will describe the **Operation** on the **National Electricity Transmission System** and will contain the information which **The Company** has been given, in relation to the equivalent of an **Operation** or of an **Event** on the equivalent of a **System** of an **Externally Interconnected System Operator** or **Interconnector User**, by that **Externally Interconnected System Operator** or **Interconnector User**.
- (b) The notification and any response to any question asked (other than in relation to the information which **The Company** is merely passing on from that **Externally Interconnected System Operator** or **Interconnector User**) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the **Operation** on the **National Electricity Transmission System** and will include the name of the individual reporting the **Operation** on behalf of **The Company**. The recipient may ask questions to clarify the notification and **The Company** will, insofar as it is able, answer any questions raised, provided that, in relation to the information which **The Company** is merely passing on from an **Externally Interconnected System Operator** or **Interconnector User**, in answering any question **The Company** will not pass on anything further than that which it has been told by the **Externally Interconnected System Operator** or **Interconnector User** which has notified it.

- OC7.4.5.9 (a) A **Network Operator** may pass on the information contained in a notification to it from **The Company** under OC7.4.5.1, to a **Generator** with a **Power Generating Module** (including a **DC Connected Power Park Module**), **Generating Unit** or a **Power Park Module** connected to its **System**, or to a **DC Converter Station** owner with a **DC Converter** or to a **HVDC System Owner** with a **HVDC System** connected to its **System**, or to the operator of another **User System** connected to its **System** (which, for the avoidance of doubt, could be another **Network Operator**), in connection with reporting the equivalent of an **Operation** under the **Distribution Code** (or the contract pursuant to which that **Power Generating Module** (including a **DC Connecting Power Generating Module**), and/or **Generating Unit** and/or **Power Park Module** or other **User System**, or to a **DC Converter Station** or to an **HVDC System** is connected to the **System** of that **Network Operator**) (if the **Operation** on the **National Electricity Transmission System** caused it).
- (b) A **Generator** may pass on the information contained in a notification to it from **The Company** under OC7.4.5.1, to another **Generator** with a **Power Generating Module** (including a **DC Connected Power Park Module**) and/or a **Generating Unit** or a **Power Park Module** connected to its **System**, or to the operator of a **User System** connected to its **System** (which, for the avoidance of doubt, could be a **Network Operator**), if it is required (by a contract pursuant to which that **Power Generating Module** (including a **DC Connected Power Park Module**) and/or **Generating Unit** and/or that **Power Park Module** or that **User System** is connected to its **System**) to do so in connection with the equivalent of an **Operation** on its **System** (if the **Operation** on the **National Electricity Transmission System** caused it).
- OC7.4.5.10 (a) Other than as provided in OC7.4.5.9, a **Network Operator** or a **Generator** may not pass on any information contained in a notification to it from **The Company** under OC7.4.5.1 (and an operator of a **User System** or **Generator** receiving information which was contained in a notification to a **Generator** or a **Network Operator**, as the case may be, from **The Company** under OC7.4.5.1, as envisaged in OC7.4.5.9 may not pass on this information) to any other person, but may inform persons connected to its **System** (or in the case of a **Generator** which is also a **Supplier**, inform persons to which it supplies electricity which may be affected) that there has been an incident on the **Total System**, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected) an estimated time of return to service.
- (b) In the case of a **Generator** which has an **Affiliate** which is a **Supplier**, the **Generator** may inform it that there has been an incident on the **Total System**, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected in a particular area) an estimated time of return to service in that area, and that **Supplier** may pass this on to persons to which it supplies electricity which may be affected).
- (c) Each **Network Operator** and **Generator** shall use its reasonable endeavours to procure that any **Generator** or operator of a **User System** receiving information which was contained in a notification to a **Generator** or **Network Operator**, as the case may be, from **The Company** under OC7.4.5.1, which is not bound by the **Grid Code**, does not pass on any information other than as provided above.
- OC7.4.5.11 The notification will, if either party requests, be recorded by the sender and dictated to the recipient, who shall record and repeat each phrase as it is received and on completion of the dictation shall repeat back the notification in full to the sender who shall confirm that it has been accurately recorded.
- OC7.4.5.12 Timing
- A notification under OC7.4.5 will be given as far in advance as possible and in any event shall be given in sufficient time as will reasonably allow the recipient to consider and assess the implications and risks arising.

## OC7.4.6 Requirements To Notify Events

### OC7.4.6.1 Events On The National Electricity Transmission System

In the case of an **Event** on the **National Electricity Transmission System** which has had (or may have had) an **Operational Effect** on the **System(s)** of a **User** or **Users**, **The Company** will notify the **User** or **Users** whose **System(s)** have been, or may have been, in the reasonable opinion of **The Company**, affected, in accordance with **OC7**.

OC7.4.6.2 Events On A User's System

In the case of an **Event** on the **System** of a **User** which has had (or may have had) an **Operational Effect** on the **National Electricity Transmission System**, the **User** will notify **The Company** in accordance with **OC7**.

OC7.4.6.3 Events Caused By Another Event Or By An Operation

An **Event** may be caused (or exacerbated by) another **Event** or by an **Operation** on another's **System** (including on an **Embedded Power Station**) (or by the equivalent of an **Event** or **Operation** on the equivalent of a **System** of an **Externally Interconnected System Operator** or **Interconnector User**) and in that situation the information to be notified is different to that where the **Event** arose independently of any other **Event** or **Operation**, as more particularly provided in OC7.4.6.7.

OC7.4.6.4 **The Company** or a **User**, as the case may be, may enquire of the other whether an **Event** has occurred on the other's **System**. If it has, and the party on whose **System** the **Event** has occurred is of the opinion that it may have had an **Operational Effect** on the **System** of the party making the enquiry, it shall notify the enquirer in accordance with **OC7**.

OC7.4.6.5 Examples Of Situations Where Notification By The Company or a User may be Required

Whilst in no way limiting the general requirement to notify set out in OC7.4.6.1, OC7.4.6.2 and OC7.4.6.3, the following are examples of situations where notification in accordance with OC7.4.6 will be required if they have an **Operational Effect**:

- (a) where **Plant** and/or **Apparatus** is being operated in excess of its capability or may present a hazard to personnel;
- (b) the activation of any alarm or indication of any abnormal operating condition;
- (c) adverse weather conditions being experienced;
- (d) breakdown of, or faults on, or temporary changes in the capabilities of, **Plant** and/or **Apparatus**;
- (e) breakdown of, or faults on, control, communication and metering equipment; or
- (f) increased risk of inadvertent protection operation.

Form

OC7.4.6.6 A notification and any response to any questions asked under OC7.4.6.1 and OC7.4.6.2 of an **Event** which has arisen independently of any other **Event** or of an **Operation**, will describe the **Event**, although it need not state the cause of the **Event**, and, subject to that, will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising and will include the name of the individual reporting the **Event** on behalf of **The Company** or the **User**, as the case may be. The recipient may ask questions to clarify the notification and the giver of the notification will, insofar as it is able (although it need not state the cause of the **Event**) answer any questions raised. **The Company** may pass on the information contained in the notification as provided in OC7.4.6.7.

- OC7.4.6.7 (a) A notification (and any response to any questions asked under OC7.4.6.1) by **The Company** of (or relating to) an **Event** under OC7.4.6.1 which has been caused by (or exacerbated by) another **Event** (the "first **Event**") or by an **Operation** on a **User's System** will describe the **Event** and will contain the information which **The Company** has been given in relation to the first **Event** or that **Operation** by the **User** (but otherwise need not state the cause of the **Event**). The notification and any response to any questions asked (other than in relation to the information which **The Company** is merely passing on from a **User**) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the **Event** on the **National Electricity Transmission System** and will include the name of the individual reporting the **Event** on behalf of **The Company**. The recipient may ask questions to clarify the notification and **The Company** will, insofar as it is able, answer any questions raised, provided that in relation to the information which **The Company** is merely passing on from a **User**, in answering any question **The Company** will not pass on anything further than that which it has been told by the **User** which has notified it.
- (b) Where a **User** is reporting an **Event** or an **Operation** which itself has been caused by (or exacerbated by) an incident or scheduled or planned action affecting (but not on) its **System** the notification to **The Company** will contain the information which the **User** has been given by the person connected to its **System** in relation to that incident or scheduled or planned action (which the **User** must require, contractually or otherwise, the person connected to its **System** to give to it) and **The Company** may pass on the information contained in the notification as provided in this OC7.4.6.7.
- OC7.4.6.8 Where an **Event** on the **National Electricity Transmission System** falls to be reported by **The Company** under an **Interconnection Agreement** and the **Event** has been caused by (or exacerbated by) another **Event** (the "first **Event**") or by an **Operation** on a **User's System**, **The Company** will include in that report the information which **The Company** has been given in relation to the first **Event** or that **Operation** by the **User** (including any information relating to an incident or scheduled or planned action on that **User's System**, as provided in OC7.4.6.7).
- OC7.4.6.9 (a) A notification to a **User** (and any response to any questions asked under OC7.4.6.1) by **The Company** of (or relating to) an **Event** under OC7.4.6.1 which has been caused by (or exacerbated by) the equivalent of an **Event** or of an **Operation** on the equivalent of a **System** of an **Externally Interconnected System Operator** or **Interconnector User**, will describe the **Event** on the **National Electricity Transmission System** and will contain the information which **The Company** has been given, in relation to the equivalent of an **Event** or of an **Operation** on the equivalent of a **System** of an **Externally Interconnected System Operator** or **Interconnector User**, by that **Externally Interconnected System Operator** or **Interconnector User** (but otherwise need not state the cause of the **Event**).
- (b) The notification and any response to any questions asked (other than in relation to the information which **The Company** is merely passing on from that **Externally Interconnected System Operator** or **Interconnector User**) will be of sufficient detail to enable the recipient of the notification reasonably to consider and assess the implications and risks arising from the **Event** on the **National Electricity Transmission System** and will include the name of the individual reporting the **Event** on behalf of **The Company**. The recipient may ask questions to clarify the notification and **The Company** will, insofar as it is able (although it need not state the cause of the **Event**) answer any questions raised, provided that, in relation to the information which **The Company** is merely passing on from an **Externally Interconnected System Operator** or **Interconnector User**, in answering any question **The Company** will not pass on anything further than that which it has been told by the **Externally Interconnected System Operator** or **Interconnector User** which has notified it.



- OC7.4.6.10 (a) A **Network Operator** may pass on the information contained in a notification to it from **The Company** under OC7.4.6.1, to a **Generator** with a **Power Generating Module** (including a **DC Connected Power Park Module**) and/or **Generating Unit** and/or a **Power Park Module** connected to its **System** or to a **DC Converter Station** owner with a **DC Converter** or to an **HVDC System Owner** with an **HVDC System** connected to its **System** or to the operator of another **User System** connected to its **System** (which, for the avoidance of doubt, could be a **Network Operator**), in connection with reporting the equivalent of an **Event** under the **Distribution Code** (or the contract pursuant to which that **Power Generating Module** and/or **Generating Unit** and/or **Power Park Module** or **DC Converter** or **HVDC System** or other **User System** is connected to the **System** of that **Network Operator**) (if the **Event** on the **National Electricity Transmission System** caused or exacerbated it).
- (b) A **Generator** may pass on the information contained in a notification to it from **The Company** under OC7.4.6.1, to another **Generator** with a **Power Generating Module** and/or **Generating Unit** and/or a **Power Park Module** connected to its **System** or to the operator of a **User System** connected to its **System** (which, for the avoidance of doubt, could be a **Network Operator**), if it is required (by a contract pursuant to which that **Power Generating Module** (including a **DC Connected Power Park Module**) and/or **Generating Unit** and/or that **Power Park Module** or that **User System** is connected to its **System**) to do so in connection with the equivalent of an **Event** on its **System** (if the **Event** on the **National Electricity Transmission System** caused or exacerbated it).
- OC7.4.6.11 (a) Other than as provided in OC7.4.6.10, a **Network Operator** or a **Generator**, may not pass on any information contained in a notification to it from **The Company** under OC7.4.6.1 (and an operator of a **User System** or **Generator** receiving information which was contained in a notification to a **Generator** or a **Network Operator**, as the case may be, from **The Company** under OC7.4.6.1, as envisaged in OC7.4.6.10 may not pass on this information) to any other person, but may inform persons connected to its **System** (or in the case of a **Generator** which is also a **Supplier**, inform persons to which it supplies electricity which may be affected) that there has been an incident on the **Total System**, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected) an estimated time of return to service.
- (b) In the case of a **Generator** which has an **Affiliate** which is a **Supplier**, the **Generator** may inform it that there has been an incident on the **Total System**, the general nature of the incident (but not the cause of the incident) and (if known and if power supplies have been affected in a particular area) an estimated time of return to service in that area, and that **Supplier** may pass this on to persons to which it supplies electricity which may be affected).
- (c) Each **Network Operator** and **Generator** shall use its reasonable endeavours to procure that any **Generator** or operator of a **User System** receiving information which was contained in a notification to a **Generator** or **Network Operator**, as the case may be, from **The Company** under OC7.4.6.1, which is not bound by the **Grid Code**, does not pass on any information other than as provided above.
- OC7.4.6.12 When an **Event** relating to a **Power Generating Module** and/or **Generating Unit** and/or a **Power Park Module** or a **DC Converter** or an **HVDC System** (or **OTSUA** operational prior to the **OTSUA Transfer Time**), has been reported to **The Company** by a **Generator** or **DC Converter Station** owner or **HVDC System Owner** under OC7.4.6 and it is necessary in order for the **Generator** or **DC Converter Station** owner or **HVDC System Owner** to assess the implications of the **Event** on its **System** more accurately, the **Generator** or **DC Converter Station** owner or **HVDC System Owner** may ask **The Company** for details of the fault levels from the **National Electricity Transmission System** to that **Power Generating Module** and/or **Generating Unit** and/or **Power Park Module** or **DC Converter** or **HVDC System** (or **OTSUA** operational prior to the **OTSUA Transfer Time**) at the time of the **Event**, and **The Company** will, as soon as reasonably practicable, give the **Generator** or **DC Converter Station** owner or **HVDC System Owner** that information provided that **The Company** has that information.

OC7.4.6.13 Except in an emergency situation the notification of an **Event** will, if either party requests, be recorded by the sender and dictated to the recipient, who shall record and repeat each phrase as it is received and on completion of the dictation shall repeat the notification in full to the sender who shall confirm that it has been accurately recorded.

Timing

OC7.4.6.14 A notification under OC7.4.6 shall be given as soon as possible after the occurrence of the **Event**, or time that the **Event** is known of or anticipated by the giver of the notification under **OC7**, and in any event within 15 minutes of such time.

OC7.4.7 Significant Incidents

OC7.4.7.1 Where a **User** notifies **The Company** of an **Event** under **OC7** which **The Company** considers has had or may have had a significant effect on the **National Electricity Transmission System**, **The Company** will require the **User** to report that **Event** in writing in accordance with the provisions of **OC10** and will notify that **User** accordingly.

OC7.4.7.2 Where **The Company** notifies a **User** of an **Event** under **OC7** which the **User** considers has had or may have had a significant effect on that **User's System**, that **User** will require **The Company** to report that **Event** in writing in accordance with the provisions of **OC10** and will notify **The Company** accordingly.

OC7.4.7.3 **Events** which **The Company** requires a **User** to report in writing pursuant to OC7.4.7.1, and **Events** which a **User** requires **The Company** to report in writing pursuant to OC7.4.7.2, are known as "**Significant Incidents**".

OC7.4.7.4 Without limiting the general description set out in OC7.4.7.1 and OC7.4.7.2, a **Significant Incident** will include **Events** having an **Operational Effect** which result in, or may result in, the following:

- (a) operation of **Plant** and/or **Apparatus** either manually or automatically;
- (b) voltage outside statutory limits;
- (c) **Frequency** outside statutory limits; or
- (d) **System** instability.

OC 7.4.8 National Electricity Transmission System Warnings

OC7.4.8.1 Role Of National Electricity Transmission System Warnings

**National Electricity Transmission System Warnings** as described below provide information relating to **System** conditions or **Events** and are intended to:

- (i) alert **Users** to possible or actual **Plant** shortage, **System** problems and/or **Demand** or generation **Active Power** reductions;
- (ii) inform of the applicable period;
- (iii) indicate intended consequences for **Users**; and
- (iv) enable specified **Users** to be in a state of readiness to react properly to instructions received from **The Company**.

A table of **National Electricity Transmission System Warnings**, set out in Appendix 1 to **OC7**, summarises the warnings and their usage. In the case of a conflict between the table and the provisions of the written text of **OC7**, the written text will prevail.

OC7.4.8.2 Recipients Of National Electricity Transmission System Warnings

- (a) Where **National Electricity Transmission System Warnings**, (except those relating to **Demand Control Imminent** and **Embedded Generation Control Imminent**), are applicable to **System** conditions or **Events** which have widespread effect, **The Company** will notify all **Users** under **OC7**.

- (b) Where in **The Company's** judgement **System** conditions or **Events** may only have a limited effect, the **National Electricity Transmission System Warning** will as a minimum only be issued to those **Users** who are or may in **The Company's** judgement be affected.
- (c) Where a **National Electricity Transmission System Warning - Demand Control Imminent** is issued it will as a minimum only be sent to those **Users** who are likely to receive **Demand Control** instructions from **The Company**.
- (d) Where a **National Electricity Transmission System Warning Embedded Generation Control Imminent** is issued it will as a minimum only be sent to those **Network Operators** who are likely to receive **Embedded Generation Control** instructions.

#### OC7.4.8.3 Preparatory Action

- (a) Where possible, and if required, recipients of the warnings should take such preparatory action as they deem necessary taking into account the information contained in the **National Electricity Transmission System Warning**. All warnings will be of a form determined by **The Company** and will remain in force from the stated time of commencement until the cancellation, amendment or re-issue, as the case may be, is notified by **The Company**.
- (b) Where a **National Electricity Transmission System Warning** has been issued to a **Network Operator** and is current, **Demand Control** should not (subject as provided below) be employed unless instructed by **The Company**. If **Demand Control** is, however, necessary to preserve the integrity of the **Network Operator's System**, then the impact upon the integrity of the **Total System** should be considered by the **Network Operator** and where practicable discussed with **The Company** prior to its implementation.

Where a **National Electricity Transmission System Warning** has been issued to a **Supplier**, further **Customer Demand Management** (in addition to that previously notified under **OC1 - Demand Forecasts**) must only be implemented following notification to **The Company**.

- (c) **National Electricity Transmission System Warnings** will be issued by such data transmission facilities as have been agreed between **The Company** and **Users**. In the case of **Generators** with **Gensets** this will normally be at their **Trading Points** (if they have notified **The Company** that they have a **Trading Point**).
- (d) **Users** may at times be informed by telephone of **National Electricity Transmission System Warnings** and in these circumstances confirmation will be sent to those **Users** so notified by such data transmission facilities as have been agreed between **The Company** and **Users**, as soon as possible.

#### OC7.4.8.4 Types Of National Electricity Transmission System Warnings

**National Electricity Transmission System Warnings** consist of the following types:-

- (i) **National Electricity Transmission System Warning - Electricity Margin Notice**
- (ii) **National Electricity Transmission System Warning - High Risk of Demand Reduction**
- (iii) **National Electricity Transmission System Warning - Demand Control Imminent**
- (iv) **National Electricity Transmission System Warning – System NRAPM**
- (v) **National Electricity Transmission System Warning – Localised NRAPM**
- (vi) **National Electricity Transmission System Warning – High Risk of Embedded Generation Reduction**
- (vii) **National Electricity Transmission System Warning - Embedded Generation Control Imminent**
- (viii) **National Electricity Transmission System Warning - Risk of System Disturbance**

OC7.4.8.5 National Electricity Transmission System Warning - Electricity Margin Notice

A **National Electricity Transmission System Warning - Electricity Margin Notice** may be issued to **Users** in accordance with OC7.4.8.2, at times when there is a reduced **System Margin**, as determined under BC1.5.4. It will contain the following information:

- (i) the period for which the warning is applicable; and
- (ii) the availability shortfall in MW; and
- (iii) intended consequences for **Users**, including notification that **Maximum Generation Service** may be instructed.

OC 7.4.8.6 National Electricity Transmission System Warning - High Risk of Demand Reduction

(a) A **National Electricity Transmission System Warning - High Risk of Demand Reduction** may be issued to **Users** in accordance with OC7.4.8.2 at times when there is a reduced **System Margin**, as determined under BC1.5.4 and in **The Company's** judgement there is increased risk of **Demand** reduction being implemented under OC6.5.1. It will contain the following information in addition to the required information in a **National Electricity Transmission System Warning - Electricity Margin Notice**:

- (i) the possible percentage level of **Demand** reduction required; and
- (ii) Specify those **Network Operators** and **Non Embedded Customers** who may subsequently receive instructions under OC6.5.1.

(b) A **National Electricity Transmission System Warning - High Risk of Demand Reduction** may also be issued by **The Company** to those **Network Operators** and **Non Embedded Customers** who may subsequently receive instructions under OC6.5.1 relating to a **Demand** reduction in circumstances not related to **System Margin** (for example **Demand** reduction required to manage **System** overloading).

The **National Electricity Transmission System Warning - High Risk of Demand Reduction** will specify the period during which **Demand** reduction may be required and the part of the **Total System** to which it applies and any other matters specified in OC6.5.

OC7.4.8.6.1 Protracted Periods Of Generation Shortage

- (a) Whenever **The Company** anticipates that a protracted period of generation shortage may exist a **National Electricity Transmission System Warning - Electricity Margin Notice** or **High Risk of Demand Reduction** may be issued, to give as much notice as possible to those **Network Operators** and **Non Embedded Customers** who may subsequently receive instructions under OC6.5.
- (b) A **National Electricity Transmission System Warning - High Risk of Demand Reduction** will in these instances include an estimate of the percentage of **Demand** reduction that may be required and the anticipated duration of the **Demand** reduction. It may also include information relating to estimates of any further percentage of **Demand** reduction that may be required.
- (c) The issue of the **National Electricity Transmission System Warning - Electricity Margin Notice** or **High Risk of Demand Reduction** is intended to enable recipients to plan ahead on the various aspects of **Demand** reduction.

OC7.4.8.7 National Electricity Transmission System Warning - Demand Control Imminent

- (a) A **National Electricity Transmission System Warning - Demand Control Imminent**, relating to a **Demand** reduction under OC6.5, will be issued by **The Company** to **Users** in accordance with OC7.4.8.2. It will specify those **Network Operators** who may subsequently receive instructions under OC6.5.

- (b) A **National Electricity Transmission System Warning - Demand Control Imminent**, need not be preceded by any other **National Electricity Transmission System Warning** and will be issued when a **Demand** reduction is expected within the following 30 minutes, but will not cease to have effect after 30 minutes from its issue. However, **The Company** will either reissue the **National Electricity Transmission System Warning - Demand Control Imminent** or cancel the **National Electricity Transmission System Warning - Demand Control Imminent** no later than 2 hours from first issue, or from re-issue, as the case may be.

#### OC.7.4.8.8 **National Electricity Transmission System Warning – System NRAPM**

- (a) Procedures for maintaining **System NRAPM** are defined in BC1.5.5 but where this is, in the view of **The Company** and as set out in BC1.5.5, deemed likely to be insufficient this will be communicated to all **Users** and will be treated as a **System Warning**.
- (b) Such a **System Warning** will where possible include information on the likely reduction in **Active Power** that will be required and the timing and duration of this.
- (c) A **System NRAPM** refers to the margin of **Active Power** across the whole **System**.

#### OC.7.4.8.9 **National Electricity Transmission System Warning – Localised NRAPM**

- (a) Procedures for maintaining **Localised NRAPM** are defined in BC1.5.5 but where this is, in the view of **The Company** and as set out in BC1.5.5, deemed likely to be insufficient this will be communicated to all **Users** and will be treated as a **System Warning**.
- (b) Such a **System Warning** will where possible include information on the likely reduction in **Active Power** that will be required and the timing and duration of this.
- (c) A **Localised NRAPM** refers to the management of transfers to and from a **System Constraint Group**.

#### OC 7.4.8.10 **National Electricity Transmission System Warning - High Risk of Embedded Generation Reduction**

- (a) A **National Electricity Transmission System Warning - High Risk of Embedded Generation Reduction** may be issued to **Users** in accordance with OC7.4.8.2 at times when in **The Company's** judgement there is increased risk of **Embedded Generation Control** being required as defined in OC6B.5.1.
- (b) In addition to any information communicated through a **System NRAPM** or **Localised NRAPM**, the **National Electricity Transmission System Warning - High Risk of Embedded Generation Reduction** will specify the period during which **Embedded Generation Control** may be required and the part of the **Total System** to which it applies and any other matters specified in OC6B.5.
- (c) The issue of the **National Electricity Transmission System Warning - High Risk of Embedded Generation Reduction** is intended to enable recipients to plan ahead on the various aspects of **Embedded Generation Control**.

#### OC7.4.8.11 **National Electricity Transmission System Warning – Embedded Generation Control Imminent**

- (a) A **National Electricity Transmission System Warning – Embedded Generation Control Imminent** will be issued by **The Company** to **Users** in accordance with OC7.4.8.2. It will specify those **Network Operators** who may subsequently receive instructions under OC6B.5.
- (b) A **National Electricity Transmission System Warning – Embedded Generation Control Imminent**, need not be preceded by any other **National Electricity Transmission System Warning** and will be issued when an **Embedded Generation Control** instruction is expected within the following 30 minutes, but will not cease to have

effect after 30 minutes from its issue. However, **The Company** will either reissue the **National Electricity Transmission System Warning – Embedded Generation Control Imminent** or cancel the **National Electricity Transmission System Warning – Embedded Generation Control Imminent** no later than 2 hours from first issue, or from re-issue, as the case may be.

OC7.4.8.12 National Electricity Transmission System Warning - Risk of System Disturbance

- (a) A **National Electricity Transmission System Warning - Risk of System Disturbance** will be issued by **The Company** to **Users** who may be affected when **The Company** knows there is a risk of widespread and serious disturbance to the whole or part of, the **National Electricity Transmission System**;
- (b) The **National Electricity Transmission System Warning - Risk of System Disturbance** will contain such information as **The Company** deems appropriate;
- (c) For the duration of the **National Electricity Transmission System Warning - Risk of System Disturbance**, each **User** in receipt of the **National Electricity Transmission System Warning - Risk of System Disturbance** shall take the necessary steps to warn its operational staff and to maintain its **Plant** and/or **Apparatus** in the condition in which it is best able to withstand the anticipated disturbance;
- (d) During the period that the **National Electricity Transmission System Warning - Risk of System Disturbance** is in effect, **The Company** may issue **Emergency Instructions** in accordance with **BC2** and it may be necessary to depart from normal **Balancing Mechanism** operation in accordance with **BC2** in issuing **Bid-Offer Acceptances**.

OC7.4.8.13 Cancellation of National Electricity Transmission System Warning

- (a) **The Company** will give notification of a **Cancellation of National Electricity Transmission System Warning** to all **Users** issued with the **National Electricity Transmission System Warning** when in **The Company's** judgement **System** conditions have returned to normal.
- (b) A **Cancellation of National Electricity Transmission System Warning** will identify the type of **National Electricity Transmission System Warning** being cancelled and the period for which it was issued. The **Cancellation of National Electricity Transmission System Warning** will also identify any **National Electricity Transmission System Warnings** that are still in force.

OC7.4.8.14 General Management of National Electricity Transmission System Warnings

- (a) **National Electricity Transmission System Warnings** remain in force for the period specified unless superseded or cancelled by **The Company**.
- (b) A **National Electricity Transmission System Warning** issued for a particular period may be superseded by further related warnings. This will include **National Electricity Transmission System Warning - Electricity Margin Notice** being superseded by **National Electricity Transmission System Warning - High Risk of Demand Reduction** and vice-versa, and **National Electricity Transmission System Warning – System NRAPM** being superseded by **National Electricity Transmission System Warning - High Risk of Embedded Generation Reduction**.
- (c) In circumstances where it is necessary for the period of a **National Electricity Transmission System Warning** to be changed:
  - (i) the period applicable may be extended by the issue of a **National Electricity Transmission System Warning** with a period which follows on from the original period, or
  - (ii) revised or updated **National Electricity Transmission System Warnings** will be issued where there is an overlap with the period specified in an existing **National Electricity Transmission System Warning**, but only if the revised period also includes the full period of the existing **National Electricity Transmission System**

### **Warning.**

In any other case the existing **National Electricity Transmission System Warning** will be cancelled and a new one issued.

- (c) A **National Electricity Transmission System Warning** is no longer applicable once the period has passed and to confirm this **The Company** will issue a **Cancellation of National Electricity Transmission System Warning**.

#### OC7.4.8.15 Publication of Other System Alerts and Warnings

- (a) All instructions, warnings, alerts and notifications upon being received or issued by **The Company** (whether activating or deactivating an action) as per Appendix 2 of OC7 will be published on the **BMRS**. Should the **BMRS** be unavailable, for example due to communications or systems failures, other appropriate channels including email will be utilised until the **BMRS** can be restored.
- (b) **The Company** will employ reasonable endeavours to publish such information within 15 minutes of issue or receipt, or if not possible within as short a time as is reasonably practicable.

#### OC7.4.9 Notification of Space Weather Events

- (a) All space weather notifications issued by **The Company** (whether activating or deactivating an action) as per Appendix 3 of OC7 will be published on the **BMRS**. Should the **BMRS** be unavailable, for example due to communications or systems failures, other appropriate channels, which could include email, will be utilised until the **BMRS** can be restored.
- (b) Any **Space Weather Prepare Notifications**, **Space Weather Imminent Notifications**, **Space Weather Experienced Notifications**, **Space Weather Cessation Notifications**, **Space Weather Cancellation Notifications**, or **Space Weather Advisory Statements** shall be issued by **The Company** to **Control Centres**.
- (c) **The Company** will employ reasonable endeavours to publish such information arising under (a) and (b) above as soon as is reasonably practicable in accordance with OC2.5.

#### OC7.5 PROCEDURE IN RELATION TO INTEGRAL EQUIPMENT TESTS

OC7.5.1 This section of the **Grid Code** deals with **Integral Equipment Tests**. It is designed to provide a framework for the exchange of relevant information and for discussion between **The Company** and certain **Users** in relation to **Integral Equipment Tests**.

OC7.5.2 An **Integral Equipment Test** :

- (a) is carried out in accordance with the provisions of this OC7.5 at:
- (i) a **User Site**,
  - (ii) a **Transmission Site**,
  - (iii) an **Embedded Large Power Station**, or,
  - (iv) an **Embedded DC Converter Station**; or
  - (v) an **Embedded HVDC System**
- (b) will normally be undertaken during commissioning or re-commissioning of **Plant** and/or **Apparatus**;
- (c) may, in the reasonable judgement of the person wishing to perform the test, cause, or have the potential to cause, an **Operational Effect** on a part or parts of the **Total System** but which with prior notice is unlikely to have a materially adverse effect on any part of the **Total System**; and
- (d) may form part of an agreed programme of work.

In the case of **OTSUA** operation prior to the **OTSUA Transfer Time**, a **User's Site** or **Transmission Site** shall, for the purposes of this **OC7**, include a site at which there is an **Interface Point** until the **OTSUA Transfer Time** and the provisions of this OC7.5 and references to **OTSUA** shall be construed and applied accordingly until the **OTSUA Transfer Time**.

- OC7.5.3 A set of guidance notes is available from **The Company** on request, which provide further details on suggested procedures, information flows and responsibilities.

Notification Of An IET

- OC7.5.4 In order to undertake an **Integral Equipment Test** (and subject to OC7.5.8 below), the **User** or **The Company**, as the case may be, (the proposer) must notify the other (the recipient) of a proposed **IET**. Reasonable advance notification must be given, taking into account the nature of the test and the circumstances which make the test necessary. This will allow recipients time to adequately assess the impact of the **IET** on their **System**.

- OC7.5.5 The notification of the **IET** must normally include the following information:-

- (a) the proposed date and time of the **IET**;
- (b) the name of the individual and the organisation proposing the **IET**;
- (c) a proposed programme of testing; and
- (d) such further detail as the proposer reasonably believes the recipient needs in order to assess the effect the **IET** may have on relevant **Plant** and/or **Apparatus**.

- OC7.5.6 In the case of an **IET** in connection with commissioning or re-commissioning, the test should be incorporated as part of any overall commissioning programme agreed between **The Company** and the **User**.

Response To Notification of an IET

- OC7.5.7 The recipient of notification of an **IET** must respond within a reasonable timescale prior to the start time of the **IET** and will not unreasonably withhold or delay acceptance of the **IET** proposal.

- OC7.5.8
- (a) Where **The Company** receives notification of a proposed **IET** from a **User**, **The Company** will consult those other **Users** whom it reasonably believes may be affected by the proposed **IET** to seek their views. Information relating to the proposed **IET** may be passed on by **The Company** with the prior agreement of the proposer. However it is not necessary for **The Company** to obtain the agreement of any such **User** as **IETs** should not involve the application of irregular, unusual or extreme conditions. **The Company** may however consider any comments received when deciding whether or not to agree to an **IET**.
  - (b) In the case of an **Embedded Large Power Station** or **Embedded DC Converter Station**, or **Embedded HVDC System**, the **Generator** or **DC Converter Station** owner or **HVDC System Owner** as the case may be, must liaise with both **The Company** and the relevant **Network Operator**. **The Company** will not agree to an **IET** relating to such **Plant** until the **Generator** or **DC Converter Station** owner or **HVDC System Owner** has shown that it has the agreement of the relevant **Network Operator**.
  - (c) A **Network Operator** will liaise with **The Company** as necessary in those instances where it is aware of an **Embedded Small Power Station** or an **Embedded Medium Power Station** which intends to perform tests which in the reasonable judgement of the **Network Operator** may cause an **Operational Effect** on the **National Electricity Transmission System**.

- OC7.5.9 The response from the recipient, following notification of an **IET** must be one of the following:

- (a) to accept the **IET** proposal;
- (b) to accept the **IET** proposal conditionally subject to minor modifications such as date and time;



- (c) not to agree the **IET**, but to suggest alterations to the detail and timing of the **IET** that are necessary to make the **IET** acceptable.

#### Final Confirmation Of an IET

- OC7.5.10 The date and time of an **IET** will be confirmed between **The Company** and the **User**, together with any limitations and restrictions on operation of **Plant** and/or **Apparatus**.
- OC7.5.11 The **IET** may subsequently be amended following discussion and agreement between **The Company** and the **User**.

#### Carrying Out an IET

- OC7.5.12 **IETs** may only take place when agreement has been reached and must be carried out in accordance with the agreed programme of testing.
- OC7.5.13 The implementation of an **IET** will be notified in accordance with OC7.4.5.
- OC7.5.14 Where elements of the programme of testing change during the **IET**, there must be discussion between the appropriate parties to identify whether the **IET** should continue.

#### OC7.6 PROCEDURE IN RESPECT OF OPERATIONAL SWITCHING

- OC7.6.1 This section OC7.6 of the **Grid Code** sets out the procedure to be followed for **Operational Switching**. Its provisions are supplementary to the provisions of the rest of this **OC7**.

It is designed to set down the arrangements for **The Company**, **Users** and the **Relevant Transmission Licensees** in respect of the **Operational Switching** of **Plant** and **Apparatus** at a **Connection Site** and parts of the **National Electricity Transmission System** adjacent to that **Connection Site**.

- OC7.6.2 In general:
- (i) **The Company** is responsible for directing the configuration of the **National Electricity Transmission System**
  - (ii) Each **Relevant Transmission Licensee** is responsible for the instruction and operation of its **Plant** and **Apparatus** on its **Transmission System**.
  - (iii) Each **User** is responsible for the configuration, instruction and operation of its **Plant** and **Apparatus**.

Definitive schedules of these responsibilities for each **Connection Site** are contained in the relevant **Site Responsibility Schedules**.

For the avoidance of doubt, where a **User** operates **Transmission Plant** and **Apparatus** on behalf of a **Relevant Transmission Licensee**, **The Company** cannot instruct the **User** to operate that **Plant** and **Apparatus**.

#### Planned Operational Switching

- OC7.6.3 Following the notification of an **Operation** under OC7.4.5, **The Company** and the **User** shall discuss the **Operational Switching** required. **The Company** will then discuss and agree the details of the **Operational Switching** with the **Relevant Transmission Licensee**. The **Relevant Transmission Licensee** shall then make contact with the **User** to initiate the **Operational Switching**. For the avoidance of doubt, from the time that the **Relevant Transmission Licensee** makes contact with the **User**, the **Relevant Transmission Licensee** shall then become the primary point of operational contact with the **User** in relation to **OC7** for matters which would or could affect, or would or could be affected by the **Operational Switching**.
- OC7.6.4 The **User** shall be advised by the **Relevant Transmission Licensee** on the completion of the **Operational Switching**, that **The Company** shall again become the primary point of operational contact for the **User** in relation to **OC7**.

OC7.6.5 During **Operational Switching**, either the **Relevant Transmission Licensee** or the **User** may need to unexpectedly terminate the **Operational Switching**. **The Company** may also need to terminate the **Operational Switching** during the **Operational Switching**. In the event of unexpected termination of the **Operational Switching**, **The Company** shall become the primary point of operational contact for the **User** in relation to **OC7**. Following the termination of the **Operational Switching**, it will not be permitted to restart that **Operational Switching** without the parties again following the process described in OC7.6.3.

#### Emergencies

OC7.6.6 For **Operations** and/or **Events** that present an immediate hazard to the safety of personnel, **Plant** or **Apparatus**, the **Relevant Transmission Licensee** may:

- (i) as permitted by the **STC**, carry out **Operational Switching** of **Plant** and **Apparatus** on its **Transmission System** without reference to **The Company** and the **User**, and
- (ii) request a **User** to carry out **Operational Switching** without the **User** first receiving notification from **The Company**.

In such emergency circumstances, communication between the **Relevant Transmission Licensee** and the **User** shall normally be by telephone and will include an exchange of names. The **User** shall use all reasonable endeavours to carry out **Operational Switching** on its **Plant** and **Apparatus** without delay. Following completion of the requested **Operational Switching**, the **Relevant Transmission Licensee** shall notify **The Company** of the **Operational Switching** which has taken place. In such emergency circumstances, the **User** may only refuse to carry out **Operational Switching** on safety grounds (relating to personnel or plant) and this must be notified to the **Relevant Transmission Licensee** immediately by telephone.

OC7.6.7 For **Operations** and/or **Events** that present an immediate hazard to the safety of personnel, **Plant** or **Apparatus**, and which require **Operational Switching** of **Plant** or **Apparatus** on a **Transmission System** in order to remove the hazard, the **User** should contact the **Relevant Transmission Licensee** directly to request **Operational Switching** of **Plant** or **Apparatus** on its **Transmission System**.

In such emergency circumstances, communication between the **Relevant Transmission Licensee** and the **User** shall normally be by telephone and will include an exchange of names. The **Relevant Transmission Licensee** shall use all reasonable endeavours to carry out **Operational Switching** on its **Plant** and **Apparatus** without delay. Following completion of the requested **Operational Switching**, the **User** shall notify **The Company** of the **Operational Switching** which has taken place. In such emergency circumstances, the **Relevant Transmission Licensee** may only refuse to carry out **Operational Switching** on safety grounds (relating to personnel or plant) and this must be notified to the **User** immediately by telephone.

OC7.6.8 Establishment Of A Local Switching Procedure

- (a) **The Company**, a **User** or a **Relevant Transmission Licensee** may reasonably require a **Local Switching Procedure** to be established.
- (b) Where the need for a **Local Switching Procedure** arises the following provisions shall apply:
  - (i) **The Company**, **User(s)** and the **Relevant Transmission Licensee** will discuss and agree the detail of the **Local Switching Procedure** as soon as the requirement for a **Local Switching Procedure** is identified. **The Company** will notify the **Relevant Transmission Licensee** and the affected **User(s)** and will initiate these discussions.
  - (ii) Each **Local Switching Procedure** shall be in relation to either one or more **Connection Sites** (or in the case of **OTSUA** operational prior to the **OTSUA Transfer Time, Transmission Interface Sites**) and parts of the **National Electricity Transmission System** adjacent to the **Connection Site(s)** (or in the case of **OTSUA** operational prior to the **OTSUA Transfer Time, Transmission Interface Sites**)
  - (iii) A draft **Local Switching Procedure** shall be prepared by the **Relevant**

**Transmission Licensee** to reflect the agreement reached and shall be sent to **The Company**.

- (iv) When a **Local Switching Procedure** has been prepared, it shall be sent by **The Company** to the **Relevant Transmission Licensee** and **User(s)** for confirmation of its accuracy.
- (v) The **Local Switching Procedure** shall then be signed on behalf of **The Company** and on behalf of each **User** and **Relevant Transmission Licensee** by way of written confirmation of its accuracy.
- (vi) Once agreed under this OC7.6.8, the procedure will become a **Local Switching Procedure** under the **Grid Code**, and (subject to any change pursuant to this **OC7**) will apply between **The Company**, **Relevant Transmission Licensee** and the relevant **User(s)** as if it were part of the **Grid Code**.
- (vii) Once signed, **The Company** will send a copy of the **Local Switching Procedure** to the **Relevant Transmission Licensee** and the **User(s)**.
- (viii) An agreed **Local Switching Procedure** should be referenced by relevant **Site Responsibility Schedules**.
- (ix) **The Company**, the **User(s)** and the **Relevant Transmission Licensee** must make the **Local Switching Procedure** readily available to the relevant operational staff.
- (x) If the **Relevant Transmission Licensee** or the **User(s)** become aware that a change is needed to a **Local Switching Procedure**, they must inform **The Company** immediately. Where **The Company** has been informed of a need for a change, or **The Company** proposes a change, **The Company** shall notify both the affected **User** and the **Relevant Transmission Licensee** and will initiate discussions to agree a change to the **Local Switching Procedure**. The principles applying to the establishment of a new **Local Switching Procedure** shall then apply to the discussion and agreement of any changes.

# APPENDIX 1 - NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNINGS TABLE

WARNING TYPE	GRID CODE	FORMAT	TO: FOR ACTION	TO: FOR INFORMATION	TIMESCALE	WARNING OF/OR CONSEQUENCE	RESPONSE FROM RECIPIENTS
National Electricity Transmission System Warning – System NRAPM	OC7.4.8.8	Issued via data transmission facilities and, in some cases, by telephone.	Network Operators	All Users	All timescales when at the time there is not a high risk of Embedded Generation reduction.	Insufficient margin of Active Power available to allow the largest loss of Load at any time.  Notification that if not improved Embedded Generation Control may be instructed.	Offers of reduced Active Power infeed from Generators or DC Converter Station owners, HVDC System Owners and Interconnector Users.  Generators notify The Company of any reduction in Active Power output that they will initiate.
National Electricity Transmission System Warning – Localised NRAPM	OC7.4.8.9	Issued via data transmission facilities and, in some cases, by telephone.	Network Operators	All Users	All timescales when at the time there is not a high risk of Embedded Generation reduction.	Insufficient Active Power available to allow transfers to and from a System Constraint Group.  Notification that if not improved Embedded Generation Control may be instructed.	Offers of reduced Active Power infeed in impacted System Constraint Group from Generators or DC Converter Station owners, HVDC System Owners and Interconnector Users.  Generators notify The Company of any reduction in Active Power output that they will initiate.
National Electricity Transmission System Warning – High Risk of Embedded Generation Reduction	OC7.4.8.10	Issued via data transmission facilities and, in some cases, by telephone.	Network Operators	All Users	All timescales when at the time there is not a high risk of Embedded Generation reduction.	Insufficient System NRAPM or Localised NRAPM available and/or a high risk of Embedded Generation Control being instructed.	Offers of reduced Active Power infeed from Generators or DC Converter Station owners, HVDC System Owners and Interconnector Users.  Generators notify The Company of any reduction in Active Power output that they will initiate.  Specified Network Operators to prepare for Embedded Generation Control actions as
National Electricity Transmission System Warning – Embedded Generation Control Imminent	OC7.4.8.11	Issued via data transmission facilities and, in some cases, by telephone.	Network Operators	All Users	Within 30 minutes of anticipated instruction.	Possibility of Embedded Generation Control within 30 Minutes	Network Operators specified to prepare to take action as necessary to enable them to comply with any subsequent instruction from The Company for Embedded Generation Control.

WARNING TYPE	GRID CODE	FORMAT	TO: FOR ACTION	TO: FOR INFORMATION	TIMESCALE	WARNING OF/OR CONSEQUENCE	RESPONSE FROM RECIPIENTS
NATIONAL ELECTRICITY TRANSMISSION WARNING – ELECTRICITY MARGIN NOTICE	OC7.4.8.5	Designated Information Exchange System or other electronic means	Generators, Suppliers, Externally Interconnected System Operators, DC Converter Station owners and HVDC System Owners	Network Operators, Non-Embedded Customers	All timescales when at the time there is not a high risk of Demand reduction.  Primarily 1200 hours onwards for a future period.	Insufficient generation available to meet forecast Demand plus Operating Margin.  Notification that if not improved Demand reduction may be instructed.  (Normal initial warning of insufficient System Margin	Offers of increased availability from Generators or DC Converter Station owners, HVDC System Owners and Interconnector Users.  Suppliers notify The Company of any additional Customer Demand Management that they will initiate.
NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNING – High risk of Demand Reduction	OC7.4.8.6	Designated Information Exchange System or other electronic means	Generators, Suppliers, Network Operators, Non-Embedded Customers, Externally Interconnected System Operators, DC Converter Station Owners, HVDC System Owners		All timescales where there is a high risk of Demand Reduction.  Primarily 1200 hours onwards for a future period	Insufficient generation available to meet forecast Demand plus Operating Margin and/or a high risk of Demand Reduction being instructed.  (May be issued locally as demand reduction risk only for circuit overloads)	Offers of increased availability from Generators or DC Converter Station owners or HVDC System Owners and Interconnector Users.  Suppliers notify The Company of any additional Customer Demand Management that they will initiate.  Specified Network Operators and Non-Embedded Customers to prepare their Demand Reduction arrangements and take actions as necessary to enable compliance with The Company instructions that may follow.  (Percentages of Demand Reduction above 20% may not be achieved if The Company has not issued the warning by 16:00 hours the previous day.)
NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNING – Demand Control Imminent	OC7.4.8.7	Designated Information Exchange System/ Telephone or other	Specified Users only: (to whom an instruction is to be given) Network Operators, Non-Embedded Customers	None	Within 30 minutes of anticipated instruction	Possibility of Demand Reduction within 30 minutes	Network Operators specified to prepare to take action as necessary to enable them to comply with any subsequent The Company instruction for Demand reduction.
NATIONAL ELECTRICITY TRANSMISSION SYSTEM WARNING – Risk of System Disturbance	OC7.4.8.12	Designated Information Exchange System/ Telephone or other electronic means	Generators, DC Converter Station owners, HVDC System Owners, Network Operators, Non-Embedded Customers, Externally Interconnected System Operators who may be	Suppliers	Control room time scales	Risk of, widespread system disturbance to whole or part of the National Electricity Transmission System	Recipients take steps to warn operational staff and maintain plant or apparatus such that they are best able to withstand the disturbance.

## APPENDIX 2 – Other System Alerts and Warnings per OC7.4.8.15

Alert, Instruction, Notification or Warning Type	Reference	Warning or Consequence
Demand Control by Demand Disconnection instructed by The Company	Grid Code OC6.5	Demand Disconnection applied
Demand Control by voltage reduction instructed by The Company	Grid Code OC6.5	Demand Reduction Applied
Automatic Low Frequency Demand Disconnection	Grid Code OC6.6	Automatic Demand Disconnection Applied
Demand Control (including voltage reduction and demand disconnection) - Network Operator activated	Grid Code OC6.4 and DOC6.6	Network Operator Demand Control Activated
Grid Code Emergency Instruction (to Network Operator)	Grid Code BC2.9.1.4	Emergency Instruction(s) issued.
Grid Code Emergency Instruction (to Generators & Demand – BCA, BEGA, & BELLA)	Grid Code BC2.9.1.3	May require departure from normal Balancing Market Operation in accordance with BC2
Grid Code Emergency Instruction (to Interconnectors)	Grid Code BC2.9.1.4	May require departure from normal Balancing Market Operation in accordance with BC2
System NRAPM	Grid Code BC1.5.5	Inadequate Negative Reserve Active Power Margin (nationally)
Localised NRAPM	Grid Code BC1.5.5	Inadequate Negative Reserve Active Power Margin (locally)
Cancellation of National Electricity System Warning	Grid Code OC7.4.8.9	Noted warning no longer applicable.
STC Emergency Instruction to Transmission Owner <sup>1</sup>	STC Section C Part Two (7)	Discontinue Outage within Emergency Return to Service Time
ESEC Implementation	Grid Code OC6.1.5	Commencing rota disconnection across affected Network Operators licence areas.
EMR Capacity Market Notifications	Capacity Market Rules 8.4.6	Demand Reduction Instruction/Emergency Manual Disconnection Instruction issued to Network Operator(s), or Inadequate System Margin anticipated, or Automatic Low Frequency Demand Disconnection occurred per Capacity Market Rules 8.4.6.
Emergency Assistance Requests	Grid Code BC2.9.6	Request to increase Active Energy transferred into the NETS, or reduce Active Energy transferred into its External System

<sup>1</sup>Identification of the specific equipment affected is not required to be included within the published alert.

### **APPENDIX 3 – Space Weather Notifications per OC7.4.9**

Notifications	Reference	Warning of/or Consequence
<b>Space Weather Prepare Notification</b>	Grid Code OC7.4.9	Submission of <b>Space Weather Output Usable Declaration</b>
<b>Space Weather Imminent Notification</b>	Grid Code OC7.4.9	Compliance with <b>Space Weather Output Usable Declaration</b>
<b>Space Weather Experienced Notification</b>	Grid Code OC7.4.9	Submission of <b>Space Weather Outcome Statement</b>
<b>Space Weather Cessation Notifications</b>	Grid Code OC7.4.9	Resubmission of <b>Space Weather Output Usable Declaration</b>
<b>Space Weather Cancellation Notifications</b>	Grid Code OC7.4.9	<b>Space Weather Output Usable Declarations</b> cease to have effect
<b>Space Weather Advisory Statement</b>	Grid Code OC7.4.9	No consequence, for awareness only.

**< END OF OPERATING CODE NO. 7 >**

# **BALANCING CODE NO. 1**

## **(BC1)**

### **PRE GATE CLOSURE PROCESS**

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## BC1.1

### INTRODUCTION

**Balancing Code No1 (BC1)** sets out the procedure for:

- (a) the submission of **BM Unit Data** and/or **Generating Unit Data** (which could be part of a **Power Generating Module**) by each **BM Participant**;
  - (b) the submission of **Interconnector** data by each **Interconnector Owner**;
  - (c) the submission of certain **System** data by each **Network Operator**; and
  - (d) the provision of data by **The Company**,
- in the period leading up to **Gate Closure**.

## BC1.2

### OBJECTIVE

The procedure for the submission of **BM Unit Data** and/or **Generating Unit Data** is intended to enable **The Company** to assess which **BM Units** and **Generating Units** (which could be part of a **Power Generating Module**) are expected to be operating in order that **The Company** can ensure (so far as possible) the integrity of the **National Electricity Transmission System**, and the security and quality of supply.

Where reference is made in this **BC1** to **Generating Units** and/or **Power Generating Modules** (unless otherwise stated) it only applies:

- (a) to each **Generating Unit** which forms part of the **BM Unit** of a **Cascade Hydro Scheme**; and
- (b) at an **Embedded Exemptable Large Power Station** where the relevant **Bilateral Agreement** specifies that compliance with **BC1** is required:
  - (i) to each **Generating Unit** which could be part of a **Synchronous Power Generating Module**, or
  - (ii) to each **Power Park Module** where the **Power Station** comprises **Power Park Modules**.

## BC1.3

### SCOPE

**BC1** applies to **The Company** and to **Users**, which in this **BC1** means:-

- (a) **BM Participants**;
- (b) **Externally Interconnected System Operators**; and
- (c) **Network Operators**.

## BC1.4

### SUBMISSION OF DATA

In the case of **Additional BM Units** or **Secondary BM Units** any data submitted by **Users** under this **BC1** must represent the value of the data at the relevant **GSP Group**.

In the case of all other **BM Units** or **Generating Units Embedded** in a **User System**, any data submitted by **Users** under this **BC1** must represent the value of the data at the relevant **Grid Supply Point**.

### BC1.4.1

#### Communication With Users

- (a) Submission of **BM Unit Data** and **Generating Unit Data** by **Users** to **The Company** specified in BC1.4.2 to BC1.4.4 (with the exception of BC1.4.2(f)) is to be by use of electronic data communications facilities, as provided for in CC.6.5.8 or ECC.6.5.8 (as applicable). However, data specified in BC1.4.2(c) and BC1.4.2(e) only, may be submitted by telephone or via the **Designated Information Exchange System**.

- (b) Submission of **Interconnector** data by **Interconnector Owners** to **The Company** is to be by use of electronic data communications facilities, as provided for in CC.6.5.8 or ECC.6.5.8 (as applicable).
- (c) In the event of a failure of the electronic data communication facilities, the data to apply in relation to a pre-**Gate Closure** period will be determined in accordance with the **Data Validation, Consistency and Defaulting Rules**, based on the most recent data received and acknowledged by **The Company**.
- (d) **Planned Maintenance Outages** will normally be arranged to take place during periods of low data transfer activity.
- (e) Upon any **Planned Maintenance Outage**, or following an unplanned outage described in BC1.4.1(b) (where it is termed a "failure") in relation to a pre-**Gate Closure** period:
  - (i) **BM Participants** should continue to act in relation to any period of time in accordance with the **Physical Notifications** current at the time of the start of the **Planned Maintenance Outage** or the computer system failure in relation to each such period of time subject to the provisions of BC2.5.1. Depending on when in relation to **Gate Closure** the planned or unplanned maintenance outage arises such operation will either be operation in preparation for the relevant output in real time, or will be operation in real time. No further submissions of **BM Unit Data** and/or **Generating Unit Data** (other than data specified in BC1.4.2(c) and BC1.4.2(e)) should be attempted. Plant failure or similar problems causing significant deviation from **Physical Notification** should be notified to **The Company** by the submission of a revision to **Export and Import Limits** in relation to the **BM Unit** and /or **Generating Unit** so affected;
  - (ii) **Interconnector Owners** should derive an **Interconnector Reference Programme** (as specified in BC1.A.3) based on the latest **Physical Notifications** notified by the **Interconnector Users** at the start of the **Planned Maintenance Outage**, or following an unplanned outage. The **Interconnector Owners** should communicate such latest **Interconnector Reference Programme** to **The Company** and continue to act in accordance with such latest **Interconnector Reference Programme**. No further submissions of **Interconnector Reference Programme** should be attempted until the end of the outage is declared.
  - (iii) during the outage, revisions to the data specified in BC1.4.2(c) and BC1.4.2(e) may be submitted. Communication between **Users Control Points** and **The Company** during the outage will be conducted by telephone; and
  - (iv) no data will be transferred from **The Company** to the **BMRA** until the communication facilities are re-established.

#### BC1.4.2

##### Day Ahead Submissions

Data for any **Operational Day** may be submitted to **The Company** up to several days in advance of the day to which it applies, as provided in the **Data Validation, Consistency and Defaulting Rules**. However, **Interconnector Users** must submit **Physical Notifications**, and any associated data as necessary, each day by 11:00 hours in respect of the next following **Operational Day** in order that the information used in relation to the capability of the respective **External Interconnection** is expressly provided. **The Company** shall not by the inclusion of this provision be prevented from utilising the provisions of BC1.4.5 if necessary.

The data may be modified by further data submissions at any time prior to **Gate Closure**, in accordance with the other provisions of **BC1**. The data to be used by **The Company** for operational planning will be determined from the most recent data that has been received by **The Company** by 11:00 hours on the day before the **Operational Day** to which the data applies, or from the data that has been defaulted at 11:00 hours on that day in accordance with BC1.4.5. Any subsequent revisions received by **The Company** under the Grid Code will also be utilised by **The Company**. In the case of all data items listed below, with the exception of item (e), **Dynamic Parameters** (Day Ahead), the latest submitted or defaulted data, as modified by any subsequent revisions, will be carried forward into operational timescales. The individual data items are listed below:

(a) Physical Notifications

**Physical Notifications**, being the data listed in **BC1** Appendix 1 under that heading, are required by **The Company** at 11:00 hours each day for each **Settlement Period** of the next following **Operational Day**, in respect of;

(1) **BM Units**:

- (i) with a **Demand Capacity** with a magnitude of 50MW or more in **NGET's Transmission Area** or 10MW or more in **SHETL's Transmission Area** or 30MW or more in **SPT's Transmission Area**; or
- (ii) comprising **Generating Units** (as defined in the Glossary and Definitions and not limited by BC1.2) and/or **Power Generating Modules** and/or **CCGT Modules** and/or **Power Park Modules** in each case at **Large Power Stations**, **Medium Power Stations** and **Small Power Stations** where such **Small Power Stations** are directly connected to the **Transmission System**; or
- (iii) where the **BM Participant** chooses to submit **Bid-Offer Data** in accordance with BC1.4.2(d) for **BM Units** not falling within (i) or (ii) above,

and

(2) each **Generating Unit** where applicable under BC1.2.

**Physical Notifications** may be submitted to **The Company** by **BM Participants**, for the **BM Units**, and **Generating Units**, specified in this BC1.4.2(a) at an earlier time, or **BM Participants** may rely upon the provisions of BC1.4.5 to create the **Physical Notifications** by data defaulting pursuant to the **Grid Code** utilising the rules referred to in that paragraph at 11:00 hours in any day.

**Physical Notifications** (which must comply with the limits on maximum rates of change listed in **BC1** Appendix 1) must, subject to the following operating limits, represent the **User's** best estimate of expected input or output of **Active Power**, except where a **BM Unit** is affected by a Stage 2 or higher **Network Gas Supply Emergency** load shedding event. **Physical Notifications** shall be prepared in accordance with **Good Industry Practice**. **Physical Notifications** for any **BM Unit**, and any **Generating Units**, should normally be consistent with the **Dynamic Parameters** and **Export and Import Limits** and must not reflect any **BM Unit** or any **Generating Units**, proposing to operate outside the limits of its **Demand Capacity** and (and in the case of **BM Units**) **Generation Capacity** and, in the case of a **BM Unit** comprising a **Generating Unit** (as defined in the Glossary and Definitions and not limited by BC1.2) and/or **Power Generating Module** and/or **CCGT Module** and/or **Power Park Module**, its **Registered Capacity**.

These **Physical Notifications** provide, amongst other things, indicative **Synchronising** and **De-Synchronising** times to **The Company** in respect of any **BM Unit** comprising a **Generating Unit** (as defined in the Glossary and Definitions and not limited by BC1.2) and/or **Power Generating Module** and/or **CCGT Module** and/or **Power Park Module**, and for any **Generating Units**, and provide an indication of significant **Demand** changes in respect of other **BM Units**.

In the case where a **BM Unit** is affected by a **Network Gas Supply Emergency** load shedding event, once Stage 2 or higher has been declared, then their **Physical Notifications** shall represent the **User's** best estimate of the contracted power position of the affected **BM Unit** at the time of the event, taking into account any mitigating actions to reduce the difference between the contracted power position and the volume to be shed.

(b) Not Used.

(c) Export and Import Limits

Each **BM Participant** may, in respect of each of its **BM Units** and its **Generating Units** submit to **The Company** for any part or for the whole of the next following **Operational Day** the data listed in **BC1** Appendix 1 under the heading of “**Export and Import Limits**” to amend the data already held by **The Company** in relation to **Export and Import Limits**, which would otherwise apply for those **Settlement Periods**.

**Export and Import Limits** respectively represent the maximum export to or import from the **National Electricity Transmission System** for a **BM Unit** and a **Generating Unit** and are the maximum levels that the **BM Participant** wishes to make available and must be prepared in accordance with **Good Industry Practice**.

(d) Bid-Offer Data

Each **BM Participant** may, in respect of each of its **BM Units**, but must not in respect of its **Generating Units** submit to **The Company** for any **Settlement Period** of the next following **Operational Day** the data listed in **BC1** Appendix 1 under the heading of “**Bid-Offer Data**” to amend the data already held by **The Company** in relation to **Bid-Offer Data**, which would otherwise apply to those **Settlement Periods**. The submitted **Bid-Offer Data** will be utilised by **The Company** in the preparation and analysis of its operational plans for the next following **Operational Day**. **Bid-Offer Data** may not be submitted unless an automatic logging device has been installed at the **Control Point** for the **BM Unit** in accordance with CC.6.5.8(b) or ECC.6.5.8(b) (as applicable).

(e) Dynamic Parameters (Day Ahead)

Each **BM Participant** may, in respect of each of its **BM Units**, but must not in respect of its **Generating Units** submit to **The Company** for the next following **Operational Day** the data listed in **BC1** Appendix 1 under the heading of “**Dynamic Parameters**” to amend that data already held by **The Company**.

These **Dynamic Parameters** shall reasonably reflect the expected true operating characteristics of the **BM Unit** and shall be prepared in accordance with **Good Industry Practice**.

The **Dynamic Parameters** applicable to the next following **Operational Day** will be utilised by **The Company** in the preparation and analysis of its operational plans for the next following **Operational Day** and may be used to instruct certain **Ancillary Services**. For the avoidance of doubt, the **Dynamic Parameters** to be used in the current **Operational Day** will be those submitted in accordance with BC2.5.3.1.

(f) Other Relevant Data

By 11:00 hours each day, each **BM Participant**, in respect of each of its **BM Units** and **Generating Units** for which **Physical Notifications** are being submitted, shall, if it has not already done so, submit to **The Company** (save in respect of item (vi) and (vii) where the item shall be submitted only when reasonably required by **The Company**), in respect of the next following **Operational Day** the following:

- (i) in the case of a **CCGT Module** and/or a **Synchronous Power Generating Module**, a **CCGT Module Matrix** and/or a **Synchronous Power Generating Module Matrix** as described in **BC1** Appendix 1;
- (ii) details of any special factors which in the reasonable opinion of the **BM Participant** may have a material effect or present an enhanced risk of a material effect on the likely output (or consumption) of such **BM Unit(s)**. Such factors may include risks, or potential interruptions, to **BM Unit** fuel supplies, or developing plant problems, details of tripping tests, etc. This information will normally only be used to assist in determining the appropriate level of **Operating Margin** that is required under **OC2.4.6**;
- (iii) in the case of **Generators**, any temporary changes, and their possible duration, to the **Registered Data** of such **BM Unit**;
- (iv) in the case of **Suppliers**, details of **Customer Demand Management** taken into account in the preparation of its **BM Unit Data**;
- (v) details of any other factors which **The Company** may take account of when issuing **Bid-Offer Acceptances** for a **BM Unit** (e.g., **Synchronising** or **De-Synchronising Intervals**);
- (vi) in the case of a **Cascade Hydro Scheme**, the **Cascade Hydro Scheme Matrix** as described in **BC1** Appendix 1;
- (vii) in the case of a **Power Park Module**, a **Power Park Module Availability Matrix** as described in **BC1** Appendix 1;
- (viii) in the case of an **Additional BM Unit** or a **Secondary BM Unit** an **Aggregator Impact Matrix** as described in **BC1** Appendix 1.

#### BC1.4.3

##### Data Revisions

The **BM Unit Data**, and **Generating Unit Data**, derived at 1100 hours each day under BC1.4.2 above may need to be revised by the **BM Participant** for a number of reasons, including for example, changes to expected output or input arising from revised contractual positions, plant breakdowns, changes to expected **Synchronising** or **De-Synchronising** times, etc, occurring before **Gate Closure**. **BM Participants** should use reasonable endeavours to ensure that the data held by **The Company** in relation to its **BM Units** and **Generating Units**, is accurate at all times. Revisions to **BM Unit Data**, and **Generating Unit Data** for any period of time up to **Gate Closure** should be submitted to **The Company** as soon as reasonably practicable after a change becomes apparent to the **BM Participant**. **The Company** will use reasonable endeavours to utilise the most recent data received from **Users**, subject to the application of the provisions of BC1.4.5, for its preparation and analysis of operational plans.

#### BC1.4.4

##### Receipt Of BM Unit Data Prior To Gate Closure

**BM Participants** submitting **Bid-Offer Data**, in respect of any **BM Unit** for use in the **Balancing Mechanism** for any particular **Settlement Period** in accordance with the **BSC**, must ensure that **Physical Notifications** and **Bid-Offer Data** for such **BM Units** are received in their entirety and logged into **The Company's** computer systems by the time of **Gate Closure** for that **Settlement Period**. In all cases the data received will be subject to the application under the **Grid Code** of the provisions of BC1.4.5.

For the avoidance of doubt, no changes to the **Physical Notification** or **Bid-Offer Data** for any **Settlement Period** may be submitted to **The Company** after **Gate Closure** for that **Settlement Period**.

## BC1.4.5

BM Unit Data Defaulting, Validity And Consistency Checking

In the event that no submission of any or all of the **BM Unit Data** and **Generating Unit Data** in accordance with BC1.4.2 in respect of an **Operational Day**, is received by **The Company** by 11:00 hours on the day before that **Operational Day**, **The Company** will apply the **Data Validation, Consistency and Defaulting Rules**, with the default rules applicable to **Physical Notifications** and **Export and Import Limits** data selected as follows:

- (a) for an **Interconnector Users BM Unit**, the defaulting rules will set some or all of the data for that **Operational Day** to zero, unless the relevant Interconnector arrangements, as agreed with **The Company**, state otherwise (in which case (b) applies); and
- (b) for all other **BM Units** or **Generating Units**, the defaulting rules will set some or all of the data for that **Operational Day** to the values prevailing in the current **Operational Day**.

A subsequent submission by a **User** of a data item which has been so defaulted under the **Grid Code** will operate as an amendment to that defaulted data and thereby replace it. Any such subsequent submission is itself subject to the application under the **Grid Code** of the **Data Validation, Consistency and Defaulting Rules**.

**BM Unit Data** and **Generating Unit Data** submitted in accordance with the provisions of BC1.4.2 to BC1.4.4 will be checked under the **Grid Code** for validity and consistency in accordance with the **Data Validation, Consistency and Defaulting Rules**. If any **BM Unit Data** and **Generating Unit Data** so submitted fails the data validity and consistency checking, this will result in the rejection of all data submitted for that **BM Unit** or **Generating Unit** included in the electronic data file containing that data item and that **BM Unit's** or **Generating Unit's** data items will be defaulted under the **Grid Code** in accordance with the **Data Validation, Consistency and Defaulting Rules**. Data for other **BM Units** and **Generating Units** included in the same electronic data file will not be affected by such rejection and will continue to be validated and checked for consistency prior to acceptance. In the event that rejection of any **BM Unit Data** and **Generating Unit Data** occurs, details will be made available to the relevant **BM Participant** via the electronic data communication facilities. In the event of a difference between the **BM Unit Data** for the **Cascade Hydro Scheme** and sum of the data submitted for the **Generating Units** forming part of such **Cascade Hydro Scheme**, the **BM Unit Data** shall take precedence.

## BC1.4.6

Special Provisions Relating To Interconnector Users

- (a) The total of the relevant **Physical Notifications** submitted by **Interconnector Users** in respect of any period of time should not exceed the capability (in MW) of the respective **External Interconnection** for that period of time. In the event that it does, then **The Company** shall advise the **Externally Interconnected System Operator** accordingly. In the period between such advice and **Gate Closure**, one or more of the relevant **Interconnector Users** would be expected to submit revised **Physical Notifications** to **The Company** to eliminate any such over-provision.
- (b) In any case where, as a result of a reduction in the capability (in MW) of the **External Interconnection** in any period during an **Operational Day** which is agreed between **The Company** and an **Externally Interconnected System Operator** after 0900 hours on the day before the beginning of such **Operational Day**, the total of the **Physical Notifications** in the relevant period using that **External Interconnection**, as stated in the **BM Unit Data** exceeds the reduced capability (in MW) of the respective **External Interconnection** in that period then **The Company** shall notify the **Externally Interconnected System Operator** accordingly.

## BC1.5 INFORMATION PROVIDED BY THE COMPANY

**The Company** shall provide data to the **Balancing Mechanism Reporting Agent** or **BSCCo** each day in accordance with the requirements of the **BSC** in order that the data may be made available to **Users** via the **Balancing Mechanism Reporting Service** (or by such other means) in each case as provided in the **BSC**. Where **The Company** provides such information associated with the secure operation of the **System** to the **Balancing Mechanism Reporting Agent**, the provision of that information is additionally provided for in the following sections of this BC1.5. **The Company** shall be taken to have fulfilled its obligations to provide data under BC1.5.1, BC1.5.2, and BC1.5.3 by so providing such data to the **Balancing Mechanism Reporting Agent**.

### BC1.5.1 Demand Estimates

Normally by 0900 hours each day, **The Company** will make available to **Users** a forecast of **National Demand** and the **Demand** for a number of pre-determined constraint groups (which may be updated from time to time, as agreed between **The Company** and **BSCCo**) for each **Settlement Period** of the next following **Operational Day**. Normally by 1200 hours each day, **The Company** will make available to **Users** a forecast of **National Electricity Transmission System Demand** for each **Settlement Period** of the next **Operational Day**. Further details are provided in Appendix 2.

### BC1.5.2 Indicated Margin And Indicated Imbalance

Normally by 1200 hours each day, **The Company** will make available to **Users** an **Indicated Margin** and an **Indicated Imbalance** for each **Settlement Period** of the next following **Operational Day**. **The Company** will use reasonable endeavours to utilise the most recent data received from **Users** in preparing for this release of data. Further details are provided in Appendix 2.

### BC1.5.3 Provision Of Updated Information

**The Company** will provide updated information on **Demand** and other information at various times throughout each day, as detailed in Appendix 2. **The Company** will use reasonable endeavours to utilise the most recent data received from **Users** in preparing for this release of data.

### BC1.5.4 Reserve And System Margin

#### Contingency Reserve

- (a) The amount of **Contingency Reserve** required at the day ahead stage and in subsequent timescales will be decided by **The Company** on the basis of historical trends in the reduction in availability of **Large Power Stations** and increases in forecast **Demand** up to real time operation. Where **Contingency Reserve** is to be allocated to thermal **Gensets**, **The Company** will instruct through a combination of **Ancillary Services** instructions and **Bid-Offer Acceptances**, the time at which such **Gensets** are required to synchronise, such instructions to be consistent with **Dynamic Parameters** and other contractual arrangements.



#### Operating Reserve

- (b) The amount of **Operating Reserve** required at any time will be determined by **The Company** having regard to the **Demand** levels, **Large Power Station** availability shortfalls and the greater of the largest secured loss of generation (ie, the loss of generation against which, as a requirement of the **Licence Standards**, the **National Electricity Transmission System** must be secured) or loss of import from or sudden export to **External Interconnections**. **The Company** will allocate **Operating Reserve** to the appropriate **BM Units** and **Generating Units** so as to fulfil its requirements according to the **Ancillary Services** available to it and as provided in the **BC**.

#### System Margin

- (c) In the period following 1200 hours each day and in relation to the following **Operational Day**, **The Company** will monitor the total of the Maximum Export Limit component of the **Export and Import Limits** received against forecast **National Electricity Transmission System Demand** and the **Operating Margin** and will take account of **Dynamic Parameters** to see whether the anticipated level of the **System Margin** for any period is insufficient.
- (d) Where the level of the **System Margin** for any period is, in **The Company's** reasonable opinion, anticipated to be insufficient, **The Company** will send (by such data transmission facilities as have been agreed) a **National Electricity Transmission System Warning - Electricity Margin Notice** in accordance with OC7.4.8 to each **Generator**, **Supplier**, **Externally Interconnected System Operator**, **Network Operator** and **Non-Embedded Customer**.
- (e) Where, in **The Company's** judgement the **System Margin** at any time during the current **Operational Day** is such that there is a high risk of **Demand** reduction being instructed, a **National Electricity Transmission System Warning - High Risk of Demand Reduction** will be issued, in accordance with OC7.4.8.
- (f) The monitoring will be conducted on a regular basis and a revised **National Electricity Transmission System Warning - Electricity Margin Notice** or **High Risk of Demand Reduction** may be sent out from time to time, including within the post **Gate Closure** phase. This will reflect any changes in **Physical Notifications** and **Export and Import Limits** which have been notified to **The Company**, and will reflect any **Demand Control** which has also been so notified. This will also reflect generally any changes in the forecast **Demand** and the relevant **Operating Margin**.
- (g) To reflect changing conditions, a **National Electricity Transmission System Warning - Electricity Margin Notice** may be superseded by a **National Electricity Transmission System Warning - High Risk of Demand Reduction** and vice-versa.
- (h) If the continuing monitoring identifies that the **System Margin** is anticipated, in **The Company's** reasonable opinion, to be sufficient for the period for which previously a **National Electricity Transmission System Warning** had been issued, **The Company** will send (by such data transmission facilities as have been agreed) a **Cancellation of National Electricity Transmission System Warning** to each **User** who had received a **National Electricity Transmission System Warning - Electricity Margin Notice** or **High Risk of Demand Reduction** for that period. The issue of a **Cancellation of National Electricity Transmission System Warning** is not an assurance by **The Company** that in the event, the **System Margin** will be adequate, but reflects **The Company's** reasonable opinion that the insufficiency is no longer anticipated.
- (i) If continued monitoring indicates the **System Margin** becoming reduced **The Company** may issue further **National Electricity Transmission System Warnings - Electricity Margin Notice** or **High Risk of Demand Reduction**.

- (j) **The Company** may issue a **National Electricity Transmission System Warning - Electricity Margin Notice** or **High Risk of Demand Reduction** for any period, not necessarily relating to the following **Operational Day**, where it has reason to believe there will be a reduced **System Margin** over a period (for example in periods of protracted **Plant** shortage, the provisions of OC7.4.8.6 apply).

BC1.5.5

System And Localised NRAPM (Negative Reserve Active Power Margin)

- (a) (i) System Negative Reserve Active Power Margin

**Synchronised Gensets** must at all times be capable of reducing output such that the total reduction in output of all **Synchronised Gensets** is sufficient to offset the loss of the largest secured demand on the **System** and must be capable of sustaining this response;

- (ii) Localised Negative Reserve Active Power Margin

**Synchronised Gensets** must at all times be capable of reducing output to allow transfers to and from the **System Constraint Group** (as the case may be) to be contained within such reasonable limit as **The Company** may determine and must be capable of sustaining this response.

- (b) **The Company** will monitor the total of **Physical Notifications** of exporting **BM Units** and **Generating Units** (where appropriate) received against forecast **Demand** and, where relevant, the appropriate limit on transfers to and from a **System Constraint Group** and will take account of **Dynamic Parameters** and **Export and Import Limits** received to see whether the level of **System NRAPM** or **Localised NRAPM** for any period is likely to be insufficient. In addition, **The Company** may increase the required margin of **System NRAPM** or **Localised NRAPM** to allow for variations in forecast **Demand**. In the case of **System NRAPM**, this may be by an amount (in **The Company's** reasonable discretion) not exceeding five per cent of forecast **Demand** for the period in question. In the case of **Localised NRAPM**, this may be by an amount (in **The Company's** reasonable discretion) not exceeding ten per cent of the forecast **Demand** for the period in question;
- (c) Where the level of **System NRAPM** or **Localised NRAPM** for any period is, in **The Company's** reasonable opinion, likely to be insufficient, then this will be treated as a **National Electricity Transmission System Warning** as defined in OC7.4.8. **The Company** may contact all **Generators** in the case of low **System NRAPM** and may contact **Generators** in relation to relevant **Gensets** in the case of low **Localised NRAPM**. **The Company** will raise with each **Generator** the problems it is anticipating due to low **System NRAPM** or **Localised NRAPM** and will discuss whether, in advance of **Gate Closure**:-
  - (i) any change is possible in the **Physical Notification** of a **BM Unit** which has been notified to **The Company**; or
  - (ii) any change is possible to the **Physical Notification** of a **BM Unit** within an **Existing AGR Plant** within the **Existing AGR Plant Flexibility Limit**;  
  
in relation to periods of low **System NRAPM** or (as the case may be) low **Localised NRAPM**. **The Company** will also notify each **Externally Interconnected System Operator** of the anticipated low **System NRAPM** or **Localised NRAPM** and request assistance in obtaining changes to **Physical Notifications** from **BM Units** in that **External System**.
- (d) Following **Gate Closure**, the procedure of BC2.9.4 will apply. In this case **The Company** will also endeavor, where time allows, to issue a **National Electricity Transmission System Warning – High Risk of Embedded Generation Reduction** and/or a **National Electricity Transmission System Warning Embedded Generation Control Imminent** as applicable.

User System Data From Network Operators

- (a) By 1000 hours each day each **Network Operator** will submit to **The Company** in writing, confirmation or notification of the following in respect of the next **Operational Day**:
- (i) constraints on its **User System** which **The Company** may need to take into account in operating the **National Electricity Transmission System**. In this BC1.6.1 the term "constraints" shall include restrictions on the operation of **Embedded Power Generating Modules**, and/or **Embedded CCGT Units**, and/or **Embedded Power Park Modules** as a result of the **User System** to which the **Power Generating Module** and/or **CCGT Unit** and/or **Power Park Module** is connected at the **User System Entry Point** being operated or switched in a particular way, for example, splitting the relevant busbar. It is a matter for the **Network Operator** and the **Generator** to arrange the operation or switching, and to deal with any resulting consequences. The **Generator**, after consultation with the **Network Operator**, is responsible for ensuring that no **BM Unit Data** submitted to **The Company** can result in the violation of any such constraint on the **User System**.
  - (ii) the requirements of voltage control and MVar reserves which **The Company** may need to take into account for **System** security reasons.
  - (iii) where applicable, updated best estimates of **Maximum Export Capacity** and **Maximum Import Capacity** and **Interface Point Target Voltage/Power Factor** for any **Interface Point** connected to its **User System** including any requirement for post-fault actions to be implemented on the relevant **Offshore Transmission System** by **The Company**.
  - (iv) constraints on its **User System** which **The Company** may need to take into account when issuing **Bid-Offer Acceptances** to **Additional BM units** or **Secondary BM units**.
- (b) The form of the submission will be:
- (i) that of a **BM Unit** output or consumption (for MW and for MVar, in each case a fixed value or an operating range, on the **User System** at the **User System Entry Point**, namely in the case of a **BM Unit** comprising a **Generating Unit** (as defined in the Glossary and Definitions and not limited by BC1.2) on the higher voltage side of the generator step-up transformer, and/or in the case of a **Power Generating Module**, at the point of connection and/or in the case of a **Power Park Module**, at the point of connection) required for particular **BM Units** (identified in the submission) connected to that **User System** for each **Settlement Period** of the next **Operational Day**;
  - (ii) adjusted in each case for MW by the conversion factors applicable for those **BM Units** to provide output or consumption at the relevant **Grid Supply Points**.
- (c) At any time and from time to time, between 1000 hours each day and the expiry of the next **Operational Day**, each **Network Operator** must submit to **The Company** in writing any revisions to the information submitted under this BC1.6.1.

## BC1.6.2 Notification Of Times To Network Operators

**The Company** will make available indicative **Synchronising** and **De-Synchronising** times to each **Network Operator**, but only relating to **BM Units** comprising a **Generating Unit** (as defined in the Glossary and Definitions and not limited by BC1.2) or a **Power Park Module** or a **CCGT Module** and/or a **Power Generating Module, Embedded** within that **Network Operator's User System** and those **Gensets** directly connected to the **National Electricity Transmission System** which **The Company** has identified under **OC2** as being those which may, in the reasonable opinion of **The Company**, affect the integrity of that **User System**. If in preparing for the operation of the **Balancing Mechanism**, **The Company** becomes aware that a **BM Unit** directly connected to the **National Electricity Transmission System** may, in its reasonable opinion, affect the integrity of that other **User System** which, in the case of a **BM Unit** comprising a **Generating Unit** (as defined in the Glossary and Definitions and not limited by BC1.2) and/or a **Power Generating Module** and/or a **CCGT Module** and/or a **Power Park Module**, it had not so identified under **OC2**, then **The Company** may make available details of its indicative **Synchronising** and **De-Synchronising** times to that other **User** and shall inform the relevant **BM Participant** that it has done so, identifying the **BM Unit** concerned.

## BC1.7 SPECIAL ACTIONS

BC1.7.1 **The Company** may need to identify special actions (either pre- or post-fault) that need to be taken by specific **Users** in order to maintain the integrity of the **National Electricity Transmission System** in accordance with the **Licence Standards** and **The Company Operational Strategy**.

- (a) For a **Generator** special actions will generally involve a **Load** change or a change of required Notice to Deviate from Zero NDZ, in a specific timescale on individual or groups of **Gensets**.
- (b) For **Network Operators** these special actions will generally involve **Load** transfers between **Grid Supply Points** or arrangements for **Demand** reduction by manual or automatic means.
- (c) For **Externally Interconnected System Operators** (in their co-ordinating role for **Interconnector Users** using their **External System**) these special actions will generally involve an increase or decrease of net power flows across an **External Interconnection** by either manual or automatic means.

BC1.7.2 These special actions will be discussed and agreed with the relevant **User** as appropriate. The actual implementation of these special actions may be part of an "emergency circumstances" procedure described under **BC2**. If not agreed, generation or **Demand** may be restricted or may be at risk.

BC1.7.3 **The Company** will normally issue the list of special actions to the relevant **Users** by 1700 hours on the day prior to the day to which they are to apply.

BC1.7.4 Where **The Company** has issued a **Space Weather Prepare Notification** or a **Space Weather Imminent Notification** to **Generators, Interconnector Owners, and Restoration Contractors**, OC2.5 Space Weather Events shall be followed.

## BC1.8 PROVISION OF REACTIVE POWER CAPABILITY

BC1.8.1 Under certain operating conditions **The Company** may identify through its **Operational Planning** that an area of the **National Electricity Transmission System** may have insufficient **Reactive Power** capability available to ensure that the operating voltage can be maintained in accordance with **The Company's Licence Standards**.

In respect of **Onshore Synchronous Generating Unit(s)** belonging to **GB Code Users**

- (i) that have a **Connection Entry Capacity** in excess of **Rated MW** (or the **Connection Entry Capacity** of the **CCGT Module** exceeds the sum of **Rated MW** of the **Generating Units** comprising the **CCGT Module**); and
- (ii) that are not capable of continuous operation at any point between the limits 0.85 **Power Factor** lagging and 0.95 **Power Factor** leading at the **Onshore Synchronous Generating Unit** terminals at **Active Power** output levels higher than **Rated MW**; and
- (iii) that have either a **Completion Date** on or after 1<sup>st</sup> May 2009, or where its **Connection Entry Capacity** has been increased above **Rated MW** (or the **Connection Entry Capacity** of the **CCGT Module** has increased above the sum of **Rated MW** of the **Generating Units** comprising the **CCGT Module**) such increase takes effect on or after 1<sup>st</sup> May 2009 but only in respect of **GB Generators** that are classified as **GB Code Users** ; and
- (iv) that are in an area of potentially insufficient **Reactive Power** capability as described in this clause BC1.8.1,

**The Company** may instruct the **Onshore Synchronous Generating Unit(s)** to limit its submitted **Physical Notifications** to no higher than **Rated MW** (or the **Active Power** output at which it can operate continuously between the limits 0.85 **Power Factor** lagging to 0.95 **Power Factor** leading at its terminals if this is higher) for a period specified by **The Company**. Such an instruction must be made at least 1 hour prior to **Gate Closure**, although **The Company** will endeavour to give as much notice as possible. The instruction may require that a **Physical Notification** is re-submitted. The period covered by the instruction will not exceed the expected period for which the potential deficiency has been identified. Compliance with the instruction will not incur costs to **The Company** in the **Balancing Mechanism**. The detailed provisions relating to such instructions will normally be set out in the relevant **Bilateral Agreement**.

BC1.8.2

BC1.8.1 shall not apply to **EU Code Users** where the obligations under CC.6.3.2(a) apply only to **GB Generators**. For the avoidance of doubt, **EU Code User's** are only required to satisfy the requirements of the **ECC's** and not the **CC's**.

## APPENDIX 1 - BM UNIT DATA

BC1.A.1 More detail about valid values required under the **Grid Code** for **BM Unit Data** and **Generating Unit Data** may be identified by referring to the **Data Validation, Consistency and Defaulting Rules**. In the case of **Embedded BM Units** and **Generating Units** the **BM Unit Data** and the **Generating Unit Data** shall represent the value at the relevant **Grid Supply Point**. Where data is submitted on a **Generating Unit** basis, the provisions of this Appendix 1 shall in respect of such data submission apply as if references to **BM Unit** were replaced with **Generating Unit**. Where **The Company** and the relevant **User** agree, submission on a **Generating Unit** basis (in whole or in part) may be otherwise than in accordance with the provisions of the Appendix 1.

### BC1.A.1.1 Physical Notifications

For each **BM Unit**, the **Physical Notification** is a series of MW figures and associated times, making up a profile of intended input or output of **Active Power** at the **Grid Entry Point** or **Grid Supply Point**, as appropriate, except where a **BM Unit** is affected by a Stage 2 or higher **Network Gas Supply Emergency** load shedding event. For each **Settlement Period**, the first “from time” should be at the start of the **Settlement Period** and the last “to time” should be at the end of the **Settlement Period**.

The input or output reflected in the **Physical Notification** for a single **BM Unit** (or the aggregate **Physical Notifications** for a collection of **BM Units** at a **Grid Entry Point** or **Grid Supply Point** or to be transferred across an **External Interconnection**, owned or controlled by a single **BM Participant**) must comply with the following limits regarding maximum rates of change, either for a single change or a series of related changes :

- for a change of up to 300MW no limit;
- for a change greater than 300MW and less than 1000MW 50MW per minute;
- for a change of 1000MW or more 40MW per minute,

unless prior arrangements have been discussed and agreed with **The Company**. This limitation is not intended to limit the Run-Up or Run-Down Rates provided as **Dynamic Parameters**.

In the case where a **BM Unit** is affected by a **Network Gas Supply Emergency** load shedding event, once Stage 2 or higher has been declared, then their **Physical Notifications** shall represent the **User's** best estimate of the contracted power position of the affected **BM Unit** at the time of the event, taking into account any mitigating actions to reduce the difference between the contracted power position and the volume to be shed.

An example of the format of **Physical Notification** is shown below. The convention to be applied is that where it is proposed that the **BM Unit** will be importing, the **Physical Notification** is negative.

Data Name	BMU name	Time From	From level (MW)	Time To	To Level (MW)
PN , TAGENT ,	BMUNIT01 ,	2001-11-03 06:30 ,	77 ,	2001-11-03 07:00 ,	100
PN , TAGENT ,	BMUNIT01 ,	2001-11-03 07:00 ,	100 ,	2001-11-03 07:12 ,	150
PN , TAGENT ,	BMUNIT01 ,	2001-11-03 07:12 ,	150 ,	2001-11-03 07:30 ,	175

A linear interpolation will be assumed between the **Physical Notification** From and To

levels specified for the **BM Unit** by the **BM Participant**.

BC1.A.1.2 Not Used.

BC1.A.1.3 Export And Import Limits

BC1.A.1.3.1 Maximum Export Limit (MEL)

A series of MW figures and associated times, making up a profile of the maximum level at which the **BM Unit** may be exporting (in MW) to the **National Electricity Transmission System** at the **Grid Entry Point** or **Grid Supply Point** or **GSP Group**, as appropriate.

For a **Power Park Module**, the Maximum Export Limit should reflect the maximum possible **Active Power** output from each **Power Park Module** consistent with the data submitted within the **Power Park Module Availability Matrix** as defined under BC.1.A.1.8. For the avoidance of doubt, in the case of a **Power Park Module** this would equate to the **Registered Capacity** less the unavailable **Power Park Units** within the **Power Park Module** and not include weather corrected MW output from each **Power Park Unit**.

BC1.A.1.3.2 Maximum Import Limit (MIL)

A series of MW figures and associated times, making up a profile of the maximum level at which the **BM Unit** may be importing (in MW) from the **National Electricity Transmission System** at the **Grid Entry Point** or **Grid Supply Point** or **GSP Group**, as appropriate.

An example format of data is shown below. MEL must be positive or zero, and MIL must be negative or zero.

Data Name	BMU name	Time From	From level (MW)	Time To	To level (MW)
MEL , TAGENT ,	BMUNIT01 ,	2001-11-03 05:00 ,	410 ,	2001-11-03 09:35 ,	410
MEL , TAGENT ,	BMUNIT01 ,	2001-11-03 09:35 ,	450 ,	2001-11-03 12:45 ,	450
MIL , TAGENT ,	BMUNIT04 ,	2001-11-03 06:30 ,	-200 ,	2001-11-03 07:00 ,	-220

#### BC1.A.1.4 Bid-Offer Data

For each **BM Unit** for each  
**Settlement Period**:

Up to 10 Bid-Offer Pairs as defined in the **BSC**.

An example of the format of data is shown below.

Data	Name	BMU name	Time from	Time to	Pair ID	From Level (MW)	To Level (MW)	Offer (£/MWh)	Bid (£/MWh)
BOD, TAGENT		BMUNIT01	2000-10-28 12:00	2000-10-28 13:30	4	30	30	40	35
BOD, TAGENT		BMUNIT01	2000-10-28 12:00	2000-10-28 13:30	3	20	20	35	30
BOD, TAGENT		BMUNIT01	2000-10-28 12:00	2000-10-28 13:30	2	40	40	32	27
BOD, TAGENT		BMUNIT01	2000-10-28 12:00	2000-10-28 13:30	1	50	50	30	25
BOD, TAGENT		BMUNIT01	2000-10-28 12:00	2000-10-28 13:30	-1	-40	-40	25	20
BOD, TAGENT		BMUNIT01	2000-10-28 12:00	2000-10-28 13:30	-2	-30	-30	23	17

This example of Bid-Offer data is illustrated graphically below:





The **Dynamic Parameters** comprise:

- Up to three Run-Up Rate(s) and up to three Run-Down Rate(s), expressed in MW/minute and associated Run-Up Elbow(s) and Run-Down Elbow(s), expressed in MW for output and the same for input. It should be noted that Run-Up Rate(s) are applicable to a MW figure becoming more positive;
- Notice to Deviate from Zero (NDZ) output or input, being the notification time required for a **BM Unit** to start importing or exporting energy, from a zero **Physical Notification** level as a result of a **Bid-Offer Acceptance**, expressed in minutes;
- Notice to Deliver Offers (NTO) and Notice to Deliver Bids (NTB), expressed in minutes, indicating the notification time required for a **BM Unit** to start delivering Offers and Bids respectively from the time that the **Bid-Offer Acceptance** is issued. In the case of a **BM Unit** comprising a **Genset**, NTO and NTB will be set to a maximum period of two minutes;
- Minimum Zero Time (MZT), being either the minimum time that a **BM Unit** which has been exporting must operate at zero or be importing, before returning to exporting or the minimum time that a **BM Unit** which has been importing must operate at zero or be exporting before returning to importing, as a result of a **Bid-Offer Acceptance**, expressed in minutes;
- Minimum Non-Zero Time (MNZT), expressed in minutes, being the minimum time that a **BM Unit** can operate at a non-zero level as a result of a **Bid-Offer Acceptance**;
- Stable Export Limit (SEL) expressed in MW at the **Grid Entry Point** or **Grid Supply Point** or **GSP Group**, as appropriate, being the minimum value at which the **BM Unit** can, under stable conditions, export to the **National Electricity Transmission System**;
- Stable Import Limit (SIL) expressed in MW at the **Grid Entry Point** or **Grid Supply Point** or **GSP Group**, as appropriate, being the minimum value at which the **BM Unit** can, under stable conditions, import from the **National Electricity Transmission System**;
- Last Time to Cancel Synchronisation, expressed in minutes with an upper limit of 60 minutes, being the notification time required to cancel a **BM Unit's** transition from operation at zero. This parameter is only applicable where the transition arises either from a **Physical Notification** or, in the case where the **Physical Notification** is zero, a **Bid-Offer Acceptance**. There can be up to three Last Time to Cancel Synchronisation(s) each applicable for a range of values of Notice to Deviate from Zero.
- **Maximum Delivery Offer (MDO)**, being a series of MWh figures and associated times making up the profile of the maximum volume of **Offer Acceptances** by a **BM Unit** which can be instructed by **The Company** through **Bid-Offer Acceptances (BOA)** via a **BM Participant** with respect to one or more of their **BM Units**, such that within the current **Balancing Mechanism Window Period**, the **BM Unit's Committed Level** can be adhered to, and contracted **Ancillary Services** can be delivered.
- **Maximum Delivery Bid (MDB)**, being a series of MWh figures and associated times making up the profile of the maximum volume of **Bid Acceptances** by a **BM Unit** which can be instructed by **The Company** through **Bid-Offer Acceptances (BOA)** via a **BM Participant** with respect to one or more of their **BM Units**, such that within the current **Balancing Mechanism Window Period**, the **BM Unit's Committed Level** can be adhered to, and contracted **Ancillary Services** can be delivered.

- BC1.A.1.6      CCGT Module Matrix
- BC1.A.1.6.1    **CCGT Module Matrix** showing the combination of **CCGT Units** running in relation to any given MW output, in the form of the diagram illustrated below. The **CCGT Module Matrix** is designed to achieve certainty in knowing the number of **CCGT Units** synchronised to meet the **Physical Notification** and to achieve a **Bid-Offer Acceptance**.
- BC1.A.1.6.2    In the case of a **Range CCGT Module**, and if the **Generator** so wishes, a request for the single **Grid Entry Point** at which power is provided from the **Range CCGT Module** to be changed in accordance with the provisions of BC1.A.1.6.4 below:

**CCGT Module Matrix example form**

CCGT MODULE ACTIVE POWER	CCGT GENERATING UNITS* AVAILABLE								
	1st GT	2nd GT	3rd GT	4th GT	5th GT	6th GT	1st ST	2nd ST	3rd ST
	ACTIVE POWER OUTPUT								
	MW	150	150	150				100	
0MW to 150MW	/								
151MW to 250MW	/						/		
251MW to 300MW	/	/							
301MW to 400MW	/	/					/		
401MW to 450MW	/	/	/						
451MW to 550MW	/	/	/				/		

\* as defined in the Glossary and Definitions and not limited by BC1.2

BC1.A.1.6.3 In the absence of the correct submission of a **CCGT Module Matrix** the last submitted (or deemed submitted) **CCGT Module Matrix** shall be taken to be the **CCGT Module Matrix** submitted hereunder.

BC1.A.1.6.4 The data may also include in the case of a **Range CCGT Module**, a request for the **Grid Entry Point** at which the power is provided from the **Range CCGT Module** to be changed with effect from the beginning of the following **Operational Day** to another specified single **Grid Entry Point** (there can be only one) to that being used for the current **Operational Day**. **The Company** will respond to this request by 1600 hours on the day of receipt of the request. If **The Company** agrees to the request (such agreement not to be unreasonably withheld), the **Generator** will operate the **Range CCGT Module** in accordance with the request. If **The Company** does not agree, the **Generator** will, if it produces power from that **Range CCGT Module**, continue to provide power from the **Range CCGT Module** to the **Grid Entry Point** being used at the time of the request. The request can only be made up to 1100 hours in respect of the following **Operational Day**. No subsequent request to change can be made after 1100 hours in respect of the following **Operational Day**. Nothing in this paragraph shall prevent the busbar at the **Grid Entry Point** being operated in separate sections.

BC1.A.1.6.5 The principles set out in PC.A.3.2.3 apply to the submission of a **CCGT Module Matrix** and accordingly the **CCGT Module Matrix** can only be amended as follows:

(a) Normal CCGT Module

if the **CCGT Module** is a **Normal CCGT Module**, the **CCGT Units** within that **CCGT Module** can only be amended such that the **CCGT Module** comprises different **CCGT Units** if **The Company** gives its prior consent in writing. Notice of the wish to amend the **CCGT Units** within such a **CCGT Module** must be given at least 6 months before it is wished for the amendment to take effect;

(b) Range CCGT Module

if the **CCGT Module** is a **Range CCGT Module**, the **CCGT Units** within that **CCGT Module** can only be amended such that the **CCGT Module** comprises different **CCGT Units** for a particular **Operational Day** if the relevant notification is given by 1100 hours on the day prior to the **Operational Day** in which the amendment is to take effect. No subsequent amendment may be made to the **CCGT Units** comprising the **CCGT Module** in respect of that particular **Operational Day**.

- BC1.A.1.6.6 In the case of a **CCGT Module Matrix** submitted (or deemed to be submitted) as part of the other data for **CCGT Modules**, the output of the **CCGT Module** at any given instructed MW output must reflect the details given in the **CCGT Module Matrix**. It is accepted that in cases of change in MW in response to instructions issued by **The Company** there may be a transitional variance to the conditions reflected in the **CCGT Module Matrix**. In achieving an instruction the range of number of **CCGT Units** envisaged in moving from one MW output level to the other must not be departed from. Each **Generator** shall notify **The Company** as soon as practicable after the event of any such variance. It should be noted that there is a provision above for the **Generator** to revise the **CCGT Module Matrix**, subject always to the other provisions of this **BC1**;
- BC1.A.1.6.7 Subject as provided above, **The Company** will rely on the **CCGT Units** specified in such **CCGT Module Matrix** running as indicated in the **CCGT Module Matrix** when it issues an instruction in respect of the **CCGT Module**;
- BC1.A.1.6.8 Subject as provided in BC1.A.1.6.5 above, any changes to the **CCGT Module Matrix** must be notified immediately to **The Company** in accordance with the relevant provisions of **BC1**.
- BC1.A.1.7 Cascade Hydro Scheme Matrix
- BC1.A.1.7.1 A **Cascade Hydro Scheme Matrix** showing the performance of individual **Generating Units** forming part of a **Cascade Hydro Scheme** in response to **Bid-Offer Acceptance**. An example table is shown below:

**Cascade Hydro Scheme Matrix example form**

Plant	Synchronises when offer is greater than.....
<b>Generating Unit 1</b>	.....MW
<b>Generating Unit 2</b>	.....MW
<b>Generating Unit 3</b>	.....MW
<b>Generating Unit 4</b>	.....MW
<b>Generating Unit 5</b>	.....MW

- BC1.A.1.8 Power Park Module Availability Matrix
- BC1.A.1.8.1 **Power Park Module Availability Matrix** showing the number of each type of **Power Park Units** expected to be available is illustrated in the example form below. The **Power Park Module Availability Matrix** is designed to achieve certainty in knowing the number of **Power Park Units Synchronised** to meet the **Physical Notification** and to achieve a **Bid-Offer Acceptance** by specifying which **BM Unit** each **Power Park Module** forms part of. The **Power Park Module Availability Matrix** may have as many columns as are required to provide information on the different make and model for each type of **Power Park Unit** in a **Power Park Module** and as many rows as are required to provide information on the **Power Park Modules** within each **BM Unit**. The description is required to assist identification of the **Power Park Units** within the **Power Park Module** and correlation with data provided under the **Planning Code**.

**Power Park Module Availability Matrix example form**

<b>BM Unit Name</b>				
<b>Power Park Module</b> [unique identifier]				
<b>POWER PARK UNIT AVAILABILITY</b>	<b>POWER PARK UNITS</b>			
	Type A	Type B	Type C	Type D
Description (Make/Model)				
Number of units				
<b>Power Park Module</b> [unique identifier]				
<b>POWER PARK UNIT AVAILABILITY</b>	<b>POWER PARK UNITS</b>			
	Type A	Type B	Type C	Type D
Description (Make/Model)				
Number of units				

- BC1.A.1.8.2 In the absence of the correct submission of a **Power Park Module Availability Matrix** the last submitted (or deemed submitted) **Power Park Module Availability Matrix** shall be taken to be the **Power Park Module Availability Matrix** submitted hereunder.
- BC1.A.1.8.3 **The Company** will rely on the **Power Park Units, Power Park Modules** and **BM Units** specified in such **Power Park Module Availability Matrix** running as indicated in the **Power Park Module Availability Matrix** when it issues an instruction in respect of the **BM Unit**.
- BC1.A.1.8.4 Subject as provided in PC.A.3.2.4 any changes to **Power Park Module** or **BM Unit** configuration, or availability of **Power Park Units** which affects the information set out in the **Power Park Module Availability Matrix** must be notified immediately to **The Company** in accordance with the relevant provisions of **BC1**. Initial notification may be by telephone. In some circumstances, such as a significant re-configuration of a **Power Park Module** due to an unplanned outage, a revised **Power Park Module Availability Matrix** must be supplied on **The Company's** request.
- BC1.A.1.9 **Synchronous Power Generating Module Matrix**
- BC1.A.1.9.1 **Synchronous Power Generating Module Matrix** showing the combination of **Synchronous Power Generating Units** running in relation to any given MW output, in the form of the table illustrated below. The **Synchronous Power Generating Module Matrix** is designed to achieve certainty in knowing the number of **Synchronous Power Generating Units** synchronised to meet the **Physical Notification** and to achieve a **Bid-Offer Acceptance**.
- BC1.A.1.9.2 This data need not be provided where a submission has been made in respect of BC1.A.1.6, BC1.A.1.7 or BC1.A.1.8.

### Synchronous Power Generating Module Matrix example form

SYNCHRONOUS POWER GENERATING MODULE MATRIX	SYNCHRONOUS POWER GENERATING UNITS* AVAILABLE								
	1st GT	2nd GT	3rd GT	4th GT	5th GT	6th GT	1st ST	2nd ST	3rd ST
	ACTIVE POWER OUTPUT								
	MW	150	150	150				100	
0MW to 150MW	/								
151MW to 250MW	/						/		
251MW to 300MW	/	/							
301MW to 400MW	/	/					/		
401MW to 450MW	/	/	/						
451MW to 550MW	/	/	/				/		

\* as defined in the Glossary and Definitions and not limited by BC1.2

- BC1.A.1.9.3 In the absence of the correct submission of a **Synchronous Power Generating Module Matrix** the last submitted (or deemed submitted) **Synchronous Power Generating Module Matrix** shall be taken to be the **Synchronous Power Generating Module Matrix** submitted hereunder.
- BC1.A.1.9.4 The principles set out in PC.A.3.2.5 apply to the submission of a **Synchronous Power Generating Module Matrix** and accordingly the **Synchronous Power Generating Module Matrix** can only be amended as if the **Synchronous Power Generating Units** within that **Synchronous Power Generating Module** can only be amended such that the **Synchronous Power Generating Module** comprises different **Synchronous Power Generating Units** if **The Company** gives its prior consent in writing. Notice of the wish to amend the **Synchronous Power Generating Units** within such a **Synchronous Power Generating Module** must be given at least 6 months before it is wished for the amendment to take effect.
- BC1.A.1.9.5 In the case of a **Synchronous Power Generating Module Matrix** submitted (or deemed to be submitted) as part of the other data for **Synchronous Power Generating Modules**, the output of the **Synchronous Power Generating Module** at any given instructed MW output must reflect the details given in the **Synchronous Power Generating Module Matrix**. It is accepted that in cases of change in MW in response to instructions issued by **The Company** there may be a transitional variance to the conditions reflected in the **Synchronous Power Generating Module Matrix**. In achieving an instruction the range of number of **Synchronous Power Generating Units** envisaged in moving from one MW output level to the other must not be departed from. Each **Generator** shall notify **The Company** as soon as practicable after the event of any such variance. It should be noted that there is a provision above for the **Generator** to revise the **Synchronous Power Generating Module Matrix**, subject always to the other provisions of this **BC1**.
- BC1.A.1.9.6 Subject as provided above, **The Company** will rely on the **Synchronous Power Generating Units** specified in such **Synchronous Power Generating Module Matrix** running as indicated in the **Synchronous Power Generating Module Matrix** when it issues an instruction in respect of the **Synchronous Power Generating Module**.

- BC1.A.1.9.7 Subject as provided in BC1.A.1.9.4 above, any changes to the **Synchronous Power Generating Module Matrix** must be notified immediately to **The Company** in accordance with the relevant provisions of **BC1**.
- BC1.A.1.10 Aggregator Impact Matrix
- BC1.A.1.10.1 For each **Additional BM Unit** and **Secondary BM Unit** the relevant **BM Participant** will submit data relating to the effect of a Bid-Off Acceptance on each **Grid Supply Point** within the **GSP Group** over which the **Additional BM Unit** or **Secondary BM Unit** was defined.
- BC1.A.1.10.2 For each **Additional BM Unit** and **Secondary BM Unit** the relevant **BM Participant** will also provide the post-codes and MSIDs that make up the **Additional BM Unit** or **Secondary BM Unit**.

**Aggregator Impact Matrix example form**

BMU Name			
Operational Day from which values apply			
Grid Supply Point	% Impact	Grid Supply Point	% Impact

- BC1.A.1.11 **Electricity Storage Module Future State of Energy (FSoE) Modelling**
- BC1.A.1.11.1 **BM Participants** who own and/or operate **Electricity Storage Modules** must provide asset specific relevant data when requested by **The Company** based on bilateral discussions to allow for modelling by **The Company** of **Future State of Energy (FSoE)** and the limits of operation that an **Electricity Storage Module** must obey.
- BC1.A.1.11.2 These models will be used for planning purposes beyond the end of the **Balancing Mechanism Window Period** to the end of the time when interim data is available to **The Company**. **The Company** may use such models to simulate the effect of **Bid-Off Acceptance** and a **Physical Notification** on the **Future State of Energy (FSoE)**. The requirements for **System Ancillary Services** and/or **Commercial Ancillary Services** within the model will be derived by **The Company** from auction data.

## APPENDIX 2 - DATA TO BE MADE AVAILABLE BY THE COMPANY

### BC1.A.2.1 Initial Day Ahead Demand Forecast

Normally by 09:00 hours each day, values (in MW) for each **Settlement Period** of the next following **Operational Day** of the following data items:-

- (i) Initial forecast of **National Demand**;
- (ii) Initial forecast of **Demand** for a number of predetermined constraint groups.

### BC1.A.2.2 Initial Day Ahead Market Information

Normally by 12:00 hours each day, values (in MW) for each **Settlement Period** of the next following **Operational Day** of the following data items:-

- (i) Initial National **Indicated Margin**  
This is the difference between the sum of **BM Unit** MELs and the forecast of **National Electricity Transmission System Demand**.
- (ii) Initial National **Indicated Imbalance**  
This is the difference between the sum of **Physical Notifications** for **BM Units** comprising **Generating Units** (as defined in the Glossary and Definitions and not limited by BC1.2) and/or **Power Generating Modules** and/or **CCGT Modules** and/or **Power Park Modules** and the forecast of **National Electricity Transmission System Demand**.
- (iii) Forecast of **National Electricity Transmission System Demand**.

### BC1.A.2.3 Current Day And Day Ahead Updated Market Information

Data will normally be made available by the times shown below for the associated periods of time:

Target Data Release Time	Period Start Time	Period End Time
02:00	02:00 D0	05:00 D+1
10:00	10:00 D0	05:00 D+1
16:00	05:00 D+1	05:00 D+2
16:30	16:30 D0	05:00 D+1
22:00	22:00 D0	05:00 D+2

In this table, D0 refers to the current day, D+1 refers to the next day and D+2 refers to the day following D+1.

In all cases, data will be ½ hourly average MW values calculated by **The Company**. Information to be released includes:

#### National Information

- (i) National **Indicated Margin**;
- (ii) National **Indicated Imbalance**;
- (iii) Updated forecast of **National Electricity Transmission System Demand**.

#### Constraint Boundary Information (For Each Constraint Boundary)

- (i) **Indicated Constraint Boundary Margin**;



This is the difference between the Constraint Boundary Transfer limit and the difference between the sum of **BM Unit** MELs and the forecast of local **Demand** within the constraint boundary.

(ii) Local **Indicated Imbalance**;

This is the difference between the sum of **Physical Notifications** for **BM Units** comprising **Generating Units** (as defined in the Glossary and Definitions and not limited by BC1.2) and/or **Power Generating Modules** and/or **CCGT Modules** and/or **Power Park Modules** and the forecast of local **Demand** within the constraint boundary.

(iii) Updated forecast of the local **Demand** within the constraint boundary.

## APPENDIX 3 - EXTERNAL INTERCONNECTION DATA

### BC1.A.3 Reference Programme

For each **Interconnector**, the **Interconnector Reference Programme** is a series of MW figures and associated times, making up a profile of intended input or output of **Active Power** at the **Grid Entry Point** or **User System Entry Point**, as appropriate.

The **Interconnector Reference Programme** is derived by the **Interconnector Owner** as the addition of all the **Interconnector User's Physical Notifications**.

Unless otherwise agreed with **The Company**, the input or output reflected in each **Interconnector Reference Programme** for the **Interconnector** must comply with the following limits regarding maximum rate of change, either for a single change or a series of related changes:

- Maximum operational rate of change 100MW/minute. This maximum rate of change can only be exceeded if prior arrangements have been agreed with **The Company**, for example, services contractually agreed between the **Interconnector Owner** and **The Company** relating to an **Externally Interconnected System Operator** or when required to return one of the connected **External Systems** to normal state.

An example format of MW figures supplied within the **Interconnector Reference Programme** is shown below, where *Export* is an input of **Active Power** to the GB **System** and *Import* is an output of **Active Power** from the GB **System**.

<b>Start Date &amp; Time</b> (dd/mm/yyyy hh:mm:ss)	<b>Start of Ramp Direction</b> (Export/ Import)	<b>Start of Ramp Flow</b> (MW)	<b>Ramp Rate</b> (MW/min)	<b>End Date &amp; Time</b> (dd/mm/yyyy hh:mm:ss)	<b>End of Ramp Direction</b> (Export/ Import)	<b>End of Ramp Flow</b> (MW)
23/08/2021 23:00:00	Export	100	0	24/08/2021 12:30:01	Export	100
24/08/2021 12:30:01	Export	100	50	24/08/2021 12:32:01	Export	0
24/08/2021 12:32:01	Import	0	50	24/08/2021 12:34:01	Import	100
24/08/2021 12:34:01	Import	100	0	24/08/2021 22:59:59	Import	100

< END OF BALANCING CODE NO. 1 >

## REVISIONS

(R)

(This section does not form part of the Grid Code)

- R.1      **The ESO Licence** sets out the way in which changes to the Grid Code are to be made and reference is also made to **The Company's** obligations under the General Conditions.
- R.2      All pages re-issued have the revision number on the lower left hand corner of the page and date of the revision on the lower right hand corner of the page.
- R.3      The Grid Code was introduced in March 1990 and the first issue was revised 31 times. In March 2001 the New Electricity Trading Arrangements were introduced and Issue 2 of the Grid Code was introduced which was revised 16 times. At British Electricity Trading and Transmission Arrangements (BETTA) Go-Active Issue 3 of the Grid Code was introduced and subsequently revised 35 times. At Offshore Go-active Issue 4 of the Grid Code was introduced and has been revised 13 times since its original publication. Issue 5 of the Grid Code was published to accommodate the changes made by Grid Code Modification A/10 which has incorporated the **Generator** compliance process into the Grid Code, which was revised 47 times. Issue 6 was published to incorporate all the non-material amendments as a result of modification GC0136.
- R.4      This Revisions section provides a summary of the sections of the Grid Code changed by each revision to Issue 6.
- R.5      All enquiries in relation to revisions to the Grid Code, including revisions to Issues 1, 2, 3, 4 and 5 should be addressed to the Grid Code development team at the following email address:  
[Grid.Code@neso.energy](mailto:Grid.Code@neso.energy)

Revision	Section	Related Modification	Effective Date
0	Glossary & Definitions	GC0136	05 March 2021
0	Planning Code	GC0136	05 March 2021
0	Connection Conditions	GC0136	05 March 2021
0	European Connection Conditions	GC0136	05 March 2021
0	Demand Response Services	GC0136	05 March 2021
0	Compliance Processes	GC0136	05 March 2021
0	Europeans Compliance Processes	GC0136	05 March 2021
0	Operating Code 1	GC0136	05 March 2021
0	Operating Code 2	GC0136	05 March 2021
0	Operating Code 5	GC0136	05 March 2021
0	Operating Code 6	GC0136	05 March 2021
0	Operating Code 7	GC0136	05 March 2021
0	Operating Code 8	GC0136	05 March 2021
0	Operating Code 8A	GC0136	05 March 2021
0	Operating Code 8B	GC0136	05 March 2021
0	Operating Code 9	GC0136	05 March 2021
0	Operating Code 11	GC0136	05 March 2021
0	Operating Code 12	GC0136	05 March 2021
0	Balancing Code 2	GC0136	05 March 2021

Revision	Section	Related Modification	Effective Date
0	Balancing Code 3	GC0136	05 March 2021
0	Balancing Code 4	GC0136	05 March 2021
0	Balancing Code 5	GC0136	05 March 2021
0	Data Registration Code	GC0136	05 March 2021
0	General Conditions	GC0136	05 March 2021
0	Governance Rules	GC0136	05 March 2021
1	Glossary & Definitions	GC0130	18 March 2021
1	Operating Code 2	GC0130	18 March 2021
1	Data Registration Code	GC0130	18 March 2021
1	General Conditions	GC0130	18 March 2021
2	Glossary & Definitions	GC0147	17 May 2021
2	Operating Code 6B	GC0147	17 May 2021
2	Operating Code 7	GC0147	17 May 2021
2	Balancing Code 1	GC0147	17 May 2021
2	Balancing Code 2	GC0147	17 May 2021
3	Balancing Code 2	GC0144	26 May 2021
3	Balancing Code 4	GC0144	26 May 2021
4	Preface	GC0149	03 August 2021
4	Glossary & Definitions	GC0149	03 August 2021
4	Planning Code	GC0149	03 August 2021

Revision	Section	Related Modification	Effective Date
4	European Connection Conditions	GC0149	03 August 2021
4	European Compliance Processes	GC0149	03 August 2021
4	Demand Response Services Code	GC0149	03 August 2021
4	Operating Code 2	GC0149	03 August 2021
4	Balancing Code 4	GC0149	03 August 2021
4	Data Registration Code	GC0149	03 August 2021
4	Governance Rules	GC0149	03 August 2021
5	Operating Code 7	GC0109	23 August 2021
6	Connection Conditions	GC0134	01 September 2021
6	European Connection Conditions	GC0134	01 September 2021
6	Balancing Code 2	GC0134	01 September 2021
7	Operating Code 6B	GC0150	04 October 2021
8	Operating Code 2	GC0151	08 November 2021
8	Operating Code 3	GC0151	08 November 2021
8	Operating Code 5	GC0151	08 November 2021
9	Governance Rules	GC0152	29 December 2021
10	General Conditions	Electrical Standards - EDL Instruction Interface Valid Reason Codes	20 January 2022
11	Glossary & Definitions	GC0137	14 February 2022
11	Planning Code	GC0137	14 February 2022

Revision	Section	Related Modification	Effective Date
11	Connection Conditions	GC0137	14 February 2022
11	European Connection Conditions	GC0137	14 February 2022
11	European Compliance Processes	GC0137	14 February 2022
11	Data Registration Code	GC0137	14 February 2022
12	Glossary & Definitions	GC0153	09 March 2022
12	Connection Conditions	GC0153	09 March 2022
12	European Connection Conditions	GC0153	09 March 2022
12	Operating Code 6	GC0153	09 March 2022
12	Operating Code 8A	GC0153	09 March 2022
12	Operating Code 8B	GC0153	09 March 2022
12	Operating Code 12	GC0153	09 March 2022
12	Balancing Code 2	GC0153	09 March 2022
12	Governance Rules	GC0153	09 March 2022
13	Compliance Processes	GC0138	24 June 2022
13	European Compliance Processes	GC0138	24 June 2022
13	Operating Code 5	GC0138	24 June 2022
14	Glossary & Definitions	GC0157	06 October 2022
14	European Connection Conditions	GC0157	06 October 2022
14	Operating Code 2	GC0157	06 October 2022
14	Operating Code 5	GC0157	06 October 2022

Revision	Section	Related Modification	Effective Date
14	Data Registration Code	GC0157	06 October 2022
14	No changes to published Grid Code	GC0158	06 December 2022
15	Glossary & Definitions	GC0160	07 December 2022
15	Balancing Code 1	GC0160	07 December 2022
15	Balancing Code 2	GC0160	07 December 2022
16	Planning Code	GC0141	05 January 2023
16	Connection Conditions	GC0141	05 January 2023
16	European Connection Conditions	GC0141	05 January 2023
16	Compliance Processes	GC0141	05 January 2023
16	European Compliance Processes	GC0141	05 January 2023
17	Connection Conditions	GC0148	4 September 2023
17	European Compliance Processes	GC0148	4 September 2023
17	European Connection Conditions	GC0148	4 September 2023
17	General Conditions	GC0148	4 September 2023
17	Glossary & Definitions	GC0148	4 September 2023
17	Operating Code 5	GC0148	4 September 2023
17	Operating Code 6	GC0148	4 September 2023
17	Planning Code	GC0148	4 September 2023
18	Operating Code 6	GC0161	2 October 2023
19	European Connection Conditions	GC0165	4 December 2023



Revision	Section	Related Modification	Effective Date
19	Operating Code 12	GC0165	4 December 2023
19	Data Registration Code	GC0165	4 December 2023
19	Governance Rules	GC0165	4 December 2023
20	Operating Code 6	GC0162	15 December 2023
21	Glossary & Definitions	GC0156	4 March 2024
21	Planning Code	GC0156	4 March 2024
21	Connection Conditions	GC0156	4 March 2024
21	European Connection Conditions	GC0156	4 March 2024
21	Operating Code 1	GC0156	4 March 2024
21	Operating Code 2	GC0156	4 March 2024
21	Operating Code 5	GC0156	4 March 2024
21	Operating Code 9	GC0156	4 March 2024
21	Balancing Code 2	GC0156	4 March 2024
21	Balancing Code 4	GC0156	4 March 2024
21	Data Registration Code	GC0156	4 March 2024
21	General Conditions	GC0156	4 March 2024
22	Glossary & Definitions	GC0154	2 April 2024
22	Balancing Code 1	GC0154	2 April 2024
22	Balancing Code 2	GC0154	2 April 2024
23	Glossary & Definitions	GC0170	22 April 2024

Revision	Section	Related Modification	Effective Date
23	Planning Code	GC0170	22 April 2024
23	Connection Conditions	GC0170	22 April 2024
23	European Connection Conditions	GC0170	22 April 2024
23	Operating Code 2	GC0170	22 April 2024
23	Operating Code 5	GC0170	22 April 2024
23	Operating Code 9	GC0170	22 April 2024
23	Data Registration Code	GC0170	22 April 2024
23	General Conditions	GC0170	22 April 2024
24	General Conditions	Distribution Restoration Zone Control System Standard	4 June 2024
25	Glossary & Definitions	GC0163	5 July 2024
25	European Connection Conditions	GC0163	5 July 2024
26	Glossary & Definitions	GC0171	5 September 2024
26	Compliance Processes	GC0171	5 September 2024
26	European Compliance Processes	GC0171	5 September 2024
27	Glossary & Definitions	Establishing ISOP in industry codes 2024	1 October 2024
27	Planning Code	Establishing ISOP in industry codes 2024	1 October 2024
27	Connection Conditions	Establishing ISOP in industry codes 2024	1 October 2024
27	European Connection Conditions	Establishing ISOP in industry codes	1 October 2024

Revision	Section	Related Modification	Effective Date
		2024	
27	Demand Response Services	Establishing ISOP in industry codes 2024	1 October 2024
27	Compliance Processes	Establishing ISOP in industry codes 2024	1 October 2024
27	European Compliance Processes	Establishing ISOP in industry codes 2024	1 October 2024
27	Operating Code 2	Establishing ISOP in industry codes 2024	1 October 2024
27	Data Registration Code	Establishing ISOP in industry codes 2024	1 October 2024
27	General Conditions	Establishing ISOP in industry codes 2024	1 October 2024
27	Governance Rules	Establishing ISOP in industry codes 2024	1 October 2024
28	General Conditions	Electrical Standards - EDL Instruction Interface Valid Reason Codes	7 November 2024
29	Glossary & Definitions	GC0175	28 March 2025
29	Connection Conditions	GC0175	28 March 2025
29	European Connection Conditions	GC0175	28 March 2025
29	Operating Code 7	GC0175	28 March 2025
29	Balancing Code 1	GC0175	28 March 2025

Revision	Section	Related Modification	Effective Date
29	Balancing Code 2	GC0175	28 March 2025
29	General Conditions	GC0175	28 March 2025
30	Glossary & Definitions	GC0172	3 April 2025
30	General Conditions	GC0172	3 April 2025
31	Glossary & Definitions	GC0159	8 April 2025
31	Planning Code	GC0159	8 April 2025
31	Operating Code 9	GC0159	8 April 2025
31	General Conditions	Electrical Standards - Electronic Data Transfer (EDT) Interface Specification, Communications Standards, EDL Message Interface Specification, Control Telephony Standard	8 April 2025
32	Connection Conditions	GC0177	19 May 2025
32	European Connection Conditions	GC0177	19 May 2025
32	Compliance Processes	GC0177	19 May 2025
32	European Compliance Processes	GC0177	19 May 2025
33	European Connection Conditions	GC0180	11 June 2025
33	Operating Code 6B	GC0180	11 June 2025
33	Balancing Code 1	GC0180	11 June 2025
33	Balancing Code 2	GC0180	11 June 2025
34	Glossary & Definitions	GC0166	05 November 2025

Revision	Section	Related Modification	Effective Date
34	Balancing Code 1	GC0166	05 November 2025
34	Balancing Code 2	GC0166	05 November 2025
34	General Conditions	Electrical Standards - EDL Instruction Interface Valid Reason Codes	05 November 2025
35	Glossary & Definitions	GC0183	04 December 2025
35	Operating Code 2	GC0183	04 December 2025
35	Operating Code 7	GC0183	04 December 2025
35	Balancing Code 1	GC0183	04 December 2025

< END OF REVISIONS >