

## Glossary & Definitions Section:

<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</b> units connected to their <b>System</b> .
<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>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>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>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>Embedded Generation De-energisation</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>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 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 - 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 – 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.



**Other relevant sections of code:**

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; Issue 5 Revision 40 BC1 05 March 2020 12 of 26

(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.**

BC2.6.3 Communication With Network Operators In Emergency Circumstances

**The Company** will issue **Emergency Instructions** direct to the **Network Operator** at each **Control Centre** in relation to actions including special actions as set out in BC1.7, actions in the categories set out under BC2.9.3.3, **Embedded Generation Control** and **Demand Control** actions. **Emergency Instructions** to a **Network Operator** will normally be given by telephone (and will include an exchange of operator names). OC6 contains further provisions relating to **Demand Control** instructions; **OC6B contains further provisions relating to Embedded Generation Control instructions.**

#### BC2.9.1 Emergency Actions

BC2.9.1.1 In certain circumstances (as determined by **The Company** in its reasonable opinion) it will be necessary, in order to preserve the integrity of the **National Electricity Transmission System** and any synchronously connected **External System**, for **The Company** to issue **Emergency Instructions**. In such circumstances, it may be necessary to depart from normal **Balancing Mechanism** operation in accordance with BC2.7 in issuing **Bid-Offer Acceptances**. **BM Participants** must also comply with the requirements of BC3.

BC2.9.1.2 Examples of circumstances that may require the issue of **Emergency Instructions** include:-

- (a) **Events** on the **National Electricity Transmission System** or the **System** of another **User**; or
- (b) the need to maintain adequate **System** and **Localised NRAPM** in accordance with BC2.9.4 below; or
- (c) the need to maintain adequate frequency sensitive **Gensets** in accordance with BC2.9.5 below; or
- (d) the need to implement **Demand Control** in accordance with OC6; or
- (e) (i) the need to invoke the **Black Start** process or the **Re-Synchronisation of De-Synchronised Island** process in accordance with OC9; or
- (ii) the need to request provision of a **Maximum Generation Service**; or
- (iii) the need to issue an **Emergency Deenergisation Instruction** in circumstances where the condition or manner of operation of any **Transmission Plant** and/or **Apparatus** is such that it may cause damage or injury to any person or to the **National Electricity Transmission System**; or
- (f) the need to implement **Embedded Generation Control** in accordance with OC6B.

BC2.9.1.4 In the case of a **Network Operator** or an **Externally Interconnected System Operator**, **Emergency Instructions** will be issued to its **Control Centre**.

BC2.9.2.3 In all cases under this BC2.9 except BC2.9.1.2 (e) where **The Company** issues an **Emergency Instruction** to a **BM Participant** which is not rejected under BC2.9.2.1, the **Emergency Instruction** shall be treated as a **Bid-Offer Acceptance**. For the avoidance of doubt, any **Emergency Instruction** issued to a **Network Operator** or to an **Externally Interconnected System Operator** or in respect of a **Generating Unit** that does not form part of a **BM Unit**, will not be treated as a **Bid-Offer Acceptance**.

BC2.9.2.4 In the case of BC2.9.1.2 (e) (ii) where **The Company** issues an **Emergency Instruction** pursuant to a **Maximum Generation Service Agreement** payment will be dealt with in accordance with the **CUSC** and the **Maximum Generation Service Agreement**.

BC2.9.2.5 In the case of BC2.9.1.2 (e) (iii) where **The Company** issues an **Emergency Deenergisation Instruction** payment will be dealt with in accordance with the **CUSC**, Section 5.

BC2.9.2.6 In the **case** of BC2.9.1.2 (e) (i) upon receipt of an **Emergency Instruction** by a **Generator** during a **Black Start** the provisions of Section G of the **BSC** relating to compensation shall apply.

BC2.9.3.3 Instructions to **Network Operators** relating to the **Operational Day** may include:

- (a) a requirement for **Demand** reduction and disconnection or restoration pursuant to OC6;
- (b) an instruction to effect a load transfer between **Grid Supply Points**;
- (c) an instruction to switch in a **System to Demand Intertrip Scheme**;
- (d) an instruction to split a network;
- (e) an instruction to disconnect an item of **Plant** or **Apparatus** from the **System**.
- (f) a requirement for **Embedded Generation Control** or restoration pursuant to OC6B for until October 25 2020, an instruction requiring a **Network Operator** to disconnect **Embedded Power Stations** from their **System**. For the avoidance of doubt, this includes the disconnection of **Embedded Power Station(s)** connected to the **Network Operator's System** which are owned or operated by generators that are not **BM Participants**. Such an instruction may:
  - i) ~~be specific and require the **Network Operator** to disconnect specified **Embedded Power Station(s)**;~~
  - ii) ~~be for the **Network Operator** to disconnect **Embedded Power Stations** supplied via one or more specified **Grid Supply Point(s)** with an aggregate **Registered Capacity** of a specified value; or~~
  - iii) ~~be for the **Network Operator** to disconnect **Embedded Power Stations** supplied via one or more specified **Grid Supply Point(s)** such that a specified proportion of the aggregate **Registered Capacity** is disconnected.~~

~~In any such case the **Network Operator** will not be required to disconnect **Embedded Power Stations** with an aggregated **Registered Capacity** greater than that of the **Embedded Power Stations** supplied via the specified **Grid Supply Point(s)**. An instruction from **The Company** to the **Network Operator** will be given to commence reconnection. Reconnection shall not take place until such an instruction has been received and be carried out in accordance with the instruction.~~

BC2.9.4.1:

Where **The Company** is unable to satisfy the required **System NRAPM** or **Localised NRAPM** by following the process described in BC1.5.5, **The Company** will issue an **Emergency Instruction** to exporting **BM Units** for **De-Synchronising** on the basis of **Bid-Offer Data** submitted to **The Company** in accordance with BC1.4.2(d). If **The Company** is still unable to satisfy the required **System NRAPM** or **Localised NRAPM** then **The Company** may issue **Emergency Instructions** to **Network Operator(s)** as set out under **OC6B BC2.9.3.3(f)** to carry out **Embedded Generation Control**.