**Capacity Definitions**

The original proposal is to use Registered Capacity i.e. the **MW name plate rating less auxiliary demand to feed the generator alone**, not MW name plate rating less auxiliary demand and less other site demand.

NESOs view is that the Registered Capacity definitions in Grid Code and Distribution Code should effectively use the same principle. The Registered Capacity definition in Grid Code was designed to define MW send out at the connection point to the System less the demand used to run the power station or component parts of that power station or power generating module alone. A 5MW backup generator which does not intend to export power onto the distribution network would still have a registered capacity of 5MW under this definition not 0MW. However, GC0117 discussions raised concerns that this had not always been applied universally in the same way, particularly for embedded Power Stations located within Industrial sites where the Power Station feeds demand at that site to run an Industrial process.

GC0117 also proposes to update the Grid Code definition to make this point clearer, though we are still of the view that under the current definition, on site demand such as CHP or Industrial demand should not be netted off.

Below is a comparison of the definitions included in Distribution Code and Grid code as well as the benefits of using each.

|  |  |
| --- | --- |
| **Grid Code** | **Distribution Code** |
| (a) In the case of a **Generating Unit** other than that forming part of a **CCGT Module** or **Power Park Module** or **Power Generating Module**, the normal full load capacity of a **Generating Unit** as declared by the **Generator**, less the MW consumed by the **Generating Unit** through the **Generating Unit’s** **Unit Transformer** when producing the same (the resultant figure being expressed in whole MW, or in MW to one decimal place).  (b) In the case of a **CCGT Module** or **Power Park Module** owned or operated by a **GB Generator**, the normal full load capacity of the **CCGT Module** or **Power Park Module** (as the case may be) as declared by the **GB** **Generator**, being the **Active Power** declared by the **GB** **Generator** as being deliverable by the **CCGT Module** or **Power Park Module** at the **Grid Entry Point** (or in the case of an **Embedded CCGT Module** or **Power Park Module**, at the **User System Entry Point**), expressed in whole MW, or in MW to one decimal place. For the avoidance of doubt **Maximum Capacity** would apply to **Power Generating Modules** which form part of a **Large**, **Medium** or **Small Power Station**.  (c) In the case of a **Power Station**, the maximum amount of **Active Power** deliverable by the **Power Station** at the **Grid Entry Point** (or in the case of an **Embedded Power Station** at the **User System Entry Point**), as declared by the **Generator**, expressed in whole MW, or in MW to one decimal place. The maximum **Active Power** deliverable is the maximum amount deliverable simultaneously by the **Power Generating Modules** and/or **Generating Units** and/or **CCGT Modules** and/or **Power Park Modules** less the MW consumed by the **Power Generating Modules** and/or **Generating Units** and/or **CCGT Modules** in producing that **Active Power** and forming part of a **Power Station**.  (d) In the case of a **DC Converter** at a **DC Converter Station** or **HVDC Converter** at an **HVDC Converter Station**, the normal full load amount of **Active Power** transferable from a **DC Converter** or **HVDC Converter** at the **Onshore** **Grid Entry Point** (or in the case of an **Embedded DC Converter Station** or an **Embedded HVDC Converter Station** at the **User System Entry Point**), as declared by the **DC Converter Station** owner or **HVDC System Owner**, expressed in whole MW, or in MW to one decimal place.  (e) In the case of a **DC Converter Station** or **HVDC Converter Station**, the maximum amount of **Active Power** transferable from a **DC Converter Station** or **HVDC Converter Station** at the **Onshore** **Grid Entry Point** (or in the case of an **Embedded DC Converter Station** or **Embedded HVDC Converter Station** at the **User System Entry Point**), as declared by the **DC Converter Station** owner or **HVDC System Owner**, expressed in whole MW, or in MW to one decimal place.  (f) In the case of an **Electricity Storage Module**, the normal full load amount of **Active Power** transferable from an **Electricity Storage Module** at the **Grid Entry Point** (or in the case of an **Embedded Electricity Storage Module** at the **User System Entry Point**), as declared by the **Generator**, expressed in whole MW, or in MW to one decimal place. | The normal full load capacity of **a Power Generating Module** as declared by the **Generator** less the MW consumed when producing the same; ie for all **Generators**, including **Customer With Own Generation**, this will relate to the maximum level **of Active Power** deliverable to the **DNO’s Distribution System**.  For **Power Generating Modules** connected to the **DNO’s Distribution System** via an inverter, the inverter rating is deemed to be the **Power Generating Module’s** rating. |
| **Grid Code:**  Advantages   * Used in SQSS Chapter 2 * Refers specifically to Power Station * Aligns with definitions used for small/medium/large * Clear that the figure should be given to one decimal place * Can use CUSC definition as Grid Code definition is already referenced in section 11   Disadvantages   * Raised in GC0117 that this has not always been universally applied in the same way for embedded – though it has been proposed to update the definition. This could be done through GC0117 or another modification if GC0117 is not approved | **Distribution Code:**  Advantages   * Potentially clearer that demand which isn’t used to run the power station isn’t netted off   Disadvantages   * Uses a different definition to the one referenced in section 11 of CUSC * Only refers to Power Generating Module rather than a Power Station |

**Comparison of legal text additions under each option**

**Grid Code definition (Grid Code definition already referenced as a CUSC definition so legal text does not need to clarify):**

(f) In England and Wales, it is acknowledged that only an **Embedded Small Power Station** which has a **Registered Capacity** of 5MW or above or (if there is less than 1kA of fault level headroom as set out in the Appendix G for the relevant **Grid Supply Point** at the time of the submission of an **Evaluation of Transmission Impact**) 1MW or above is a **Relevant Embedded Small Power Station** requiring the submission of an **Evaluation of Transmission Impact** to **The Company** in accordance with Paragraph 5.1(a) above.”

**Distribution Code definition:**

(f) In England and Wales, it is acknowledged that only an **Embedded Small Power Station** which has a Registered Capacity (as defined in the **Distribution Code** and rounded to one decimal place) of 5MW or above or (if there is less than 1kA of fault level headroom as set out in the Appendix G for the relevant **Grid Supply Point** at the time of the submission of an **Evaluation of Transmission Impact**) 1MW or above is a **Relevant Embedded Small Power Station** requiring the submission of an **Evaluation of Transmission Impact** to **The Company** in accordance with Paragraph 5.1(a) above.”

**Additional Information: Proposed GC0117 update to Registered Capacity Definition**

In the case of a **Generating Unit** other than that forming part of a **CCGT Module** or **Power Park Module** or **Power Generating Module**, the normal full load capacity of a **Generating Unit** as declared by the **Generator**, less the MW consumed by the **Generating Unit** through the **Generating Unit’s** **Unit Transformer** when producing the same (the resultant figure being expressed in whole MW, or in MW to one decimal place).

(b) In the case of a **CCGT Module** or **Power Park Module** owned or operated by a **GB Generator**, the normal full load capacity of the **CCGT Module** or **Power Park Module** (as the case may be)as declared by the **GB** **Generator**, being the **Active Power** declared by the **GB** **Generator** as being deliverable by the **CCGT Module** or **Power Park Module** at the **Grid Entry Point** (or in the case of an **Embedded CCGT Module** or **Power Park Module**, at the **User System Entry Point**), expressed in whole MW, or in MW to one decimal place.

(c) In the case of a **Power Station** where **Purchase Contracts** for its **Main Plant** and **Apparatus** had been concluded before 1st June 2027 or a **Generator** in respect of that **Power Station** applied for a **CUSC Contract** or **Connection Agreement** before XXXXXX [XXXXXX *this being the Implementation Date,  which is ten working days after the Authority Decision date*], then the **Registered Capacity** is the maximum amount of **Active Power** deliverable by the **Power Station** at the **Grid Entry Point** (or in the case of an **Embedded Power Station** at the **User System Entry Point**), as declared by the **Generator**, expressed in whole MW, or in MW to one decimal place. The maximum **Active Power** deliverable is the maximum amount deliverable simultaneously by the **Power Generating Modules** and/or **Generating Units** and/or **CCGT Modules** and/or **Power Park Modules** less the MW consumed by the **Power Generating Modules** and/or **Generating Units** and/or **CCGT Modules** in producing that **Active Power** and forming part of a **Power Station**.

(d) In the case of a **DC Converter** at a **DC Converter Station** or **HVDC Converter** at an **HVDC Converter Station**,the normal full load amount of **Active Power** transferable from a **DC Converter** or **HVDC Converter** at the **Onshore** **Grid Entry Point** (or in the case of an **Embedded DC Converter Station** or an **Embedded HVDC Converter Station** at the **User System Entry Point**), as declared by the **DC Converter Station** owner or **HVDC System Owner**, expressed in whole MW, or in MW to one decimalI place.

(e) In the case of a **DC Converter Station** or **HVDC Converter Station**,the maximum amount of **Active Power** transferable from a **DC Converter Station** or **HVDC Converter Station** at the **Onshore** **Grid Entry Point** (or in the case of an **Embedded DC Converter Station** or **Embedded HVDC Converter Station** at the **User System Entry Point**), as declared by the **DC Converter Station** owner or **HVDC System Owner**, expressed in whole MW, or in MW to one decimal place.

(f) In the case of an **Electricity Storage Module**, the normal full load amount of **Active Power** transferable from an **Electricity Storage Module** at the **Grid Entry Point** (or in the case of an **Embedded Electricity Storage Module** at the **User System Entry Point**), as declared by the **Generator**, expressed in whole MW, or in MW to one decimal place.

(g) In the case of a **Power Station** where **Purchase Contracts** for its **Main Plant** and **Apparatus** had been concluded on or after 1st June 2027 or where **Purchase Contracts** relating to a **Substantial Modification** in respect of its **Main Plant** and **Apparatus** had been concluded on or after 1st June 2027 and a **Generator** in respect of that **Power Station** applied for a **CUSC Contract** and/or **Connection Agreement** on or after XXXXXX [XXXXXX *this being the Implementation Date,  which is ten working days after the Authority Decision date*], then the **Registered Capacity** is either,

the maximum **Active Power** deliverable simultaneously by the **Power Generating Modules** and/or **Generating Units** and/or **CCGT Modules** and/or **Power Park Modules** less the MW consumed by the **Power Generating Modules** and/or **Generating Units** and/or **CCGT Modules** in producing that **Active Power** and forming part of a **Power Station** without deductions for any other on-site **Demand**,

or

in the case of sites covered by the special provisions of ECC.6.2.2.13, the maximum amount of **Active Power** deliverable by the **Power Station** at the **Grid Entry Point** (or in the case of an **Embedded Power Station** at the **User System Entry Point**),

as declared by the **Generato**r, expressed in whole MW, or in MW to one decimal place.

For the avoidance of doubt, **Maximum Capacity** would apply to **Power Generating Modules** which form part of a **Large**, **Medium** or **Small Power Station**.