

CUSC Alternative Form – Non Charging

CMP434 WACM1: Clarification of Embedded Definition

Overview: Clarifying the definition of embedded schemes that will follow the Primary Process (Elements 3 and 5)

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☒ I/We confirm that this Alternative Request proposes to modify the non - charging section of the CUSC only



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What is the proposed alternative solution?

In line with the Original Proposal, except for the following:

To change the definition of embedded schemes that are covered by the Primary Process, as defined in Element 3, and subsequently Element 5, to be clearly defined by capacity rather than referencing Small, Medium and Large scale generators.

Replace “Relevant Small and Medium Embedded” with Category 1 Embedded and replace “Large” with Category 2 Embedded.

Define Category 1 and Category 2 within Element 3 of the CUSC modification as such.

	Category 1 Embedded Generator	Category 2 Embedded Generator
England and Wales	1MW up to 100MW	100MW and larger
Southern Scotland	200kW up to 30MW	30MW and larger
Northern Scotland	200kW up to 10MW	10MW and larger

What is the difference between this and the Original Proposal?

The scope of inclusion within the Primary Process is set out in Element 3 and, for embedded generators connecting to a DNO or iDNO network, refers to “Relevant Small and Medium Embedded Generators” and “Large Embedded Generators”.

These terms are not simply defined but are constructs of more than one definition and ultimately are defined outside of the CUSC, within the Grid Code.

These threshold limits, which define how TMO4+ will work and will operate across the different customer segments, could therefore be changed without modification of this CUSC process and without the due review and governance that such a change should follow.

The use of such terminology, especially where it is subject to regional differences, could also cause potential confusion and lack of understanding of the process.

This proposal would insert clearly defined threshold values (rather than referencing the definitions of Small, Medium and Large), making the position clearer, adding clarity to the process and ensuring long-term governance of the scope and inclusion of the reform.

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For example,

"Relevant Embedded Small Power Station" is an **Embedded Small Power Station** that the **User** who owns or operates the **Distribution System** to which the **Embedded Small Power Station** intends to connect reasonably believes may have a significant system effect on the **National Electricity Transmission System**.

An **Embedded Small Power Station** is not a defined term but is the combination of two defined terms, namely 'Embedded' and 'Small Power Station':

- **Embedded** is a direct connection to a **Distribution System** or the **System** of any other **User** to which **Customers** and/or **Power Stations** are connected.
- **Small Power Station** is as defined in the **Grid Code**.

In the Grid Code, the definition of Small Power Station is defined as the Register Capacity being less than 10/30/50 MW depending on the Transmission Network. Note: there is no specified lower threshold and the definition clarifies that it can be made up of Type A Power Generating Modules which are 0.8kW.

Small Power Station	A Power Station which is
	<p>(a) directly connected to:</p> <ul style="list-style-type: none"> (i) NGET's Transmission System where such Power Station has a Registered Capacity of less than 50MW; or (ii) SPT's Transmission System where such Power Station has a Registered Capacity of less than 30MW; or (iii) SHETL's Transmission System where such a Power Station has a Registered Capacity of less than 10 MW; or (iv) an Offshore Transmission System where such Power Station has a Registered Capacity of less than 10MW; <p>or,</p> <p>(b) Embedded within a User System (or part thereof) where such User System (or part thereof) is connected under normal operating conditions to:</p> <ul style="list-style-type: none"> (i) NGET's Transmission System and such Power Station has a Registered Capacity of less than 50MW; or (ii) SPT's Transmission System and such Power Station has a Registered Capacity of less than 30MW; or (iii) SHETL's Transmission System and such Power Station has a Registered Capacity of less than 10MW; <p>or,</p> <p>(c) Embedded within a User System (or part thereof) where the User System (or part thereof) is not connected to the National Electricity Transmission System, although such Power Station is in:</p> <ul style="list-style-type: none"> (i) NGET's Transmission Area and such Power Station has a Registered Capacity of less than 50MW; or (ii) SPT's Transmission Area and such Power Station has a Registered Capacity of less than 30MW; or (iii) SHETL's Transmission Area and such Power Station has a Registered Capacity of less than 10MW; <p>For the avoidance of doubt, a Small Power Station could comprise of Type A, Type B, Type C or Type D Power Generating Modules.</p>

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Type A Power Generating Module	A Power-Generating Module (including an Electricity Storage Module) with a Grid Entry Point or User System Entry Point below 110 kV and a Maximum Capacity of 0.8 kW or greater but less than 1MW;
Type B Power Generating Module	A Power-Generating Module (including an Electricity Storage Module) with a Grid Entry Point or User System Entry Point below 110 kV and a Maximum Capacity of 1MW or greater but less than 10MW;
Type C Power Generating Module	A Power-Generating Module (including an Electricity Storage Module) with a Grid Entry Point or User System Entry Point below 110 kV and a Maximum Capacity of 10MW or greater but less than 50MW;
Type D Power Generating Module	A Power-generating Module : (including an Electricity Storage Module): with a Grid Entry Point or User System Entry Point at, or greater than, 110 kV; or with a Grid Entry Point or User System Entry Point below 110 kV and with Maximum Capacity of 50MW or greater

The 1MW lower threshold used in England in Wales is codified in Appendix G Schedule 2:

3. For the purposes of the **Evaluation of Transmission Impact** and unless otherwise indicated by **The Company** under **CUSC 6.5.1(b)**, **Embedded Power Stations** of **1MW** and above will be deemed to have an impact on the **National Electricity Transmission System** and must be included in Appendix G Schedule 1.

6.5.1(b) of CUSC sets the requirement for Users to notify NESO. Note: the “significant impact” label is determined by if the generator is over any of the power criteria set by NESO.

- (b) Should the **User** be uncertain as to whether an **Embedded Power Station** (either singularly or as part of a group) has a significant impact on the **NETS** and should be classed as a **Relevant Embedded Power Station**, the **User** shall submit a request to **The Company** for an **Evaluation of Transmission Impact** on behalf of the **Embedded Power Station** as per Paragraph 6.5.1(c). For avoidance of doubt, such significant impact will be deemed if the **Embedded Power Station** involves an **Active Power**, **Apparent Power**, **Reactive Power**, kiloamp or kilovolt value larger than as advised by **The Company** to the **User**.



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What is the impact of this change?

Proposer's Assessment against CUSC Non-Charging Objectives	
Relevant Objective	Identified impact
(a) The efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence;	Positive: Defining by capacity will ensure easier administration, implementation and more importantly longer-term structure / understanding and governance for the wider stakeholder group.
(b) Facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity;	Positive: simplicity in the understanding of scope should widen understanding / appreciation across the wider stakeholder group.
(c) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *.	None
(d) Promoting efficiency in the implementation and administration of the CUSC arrangements.	Positive: simpler definition that allows for greater understanding, reducing the risk of challenge or complaint.
<p>*The Electricity Regulation referred to in objective (c) is Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) as it has effect immediately before IP completion day as read with the modifications set out in the SI 2020/1006.</p>	

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When will this change take place?

Implementation date:

Aligned with the Original Proposal (CMP434)

Implementation approach:

Aligned with the Original Proposal (CMP434)

Acronyms, key terms and reference material

Acronym / key term	Meaning
CUSC	Connection and Use of System Code
DNO	Distribution Network Operator
iDNO	Transmission Connected Independent Distribution Network Operator
NESO	National Energy System Operator
TMO4+	NESO's (Transmission) Connection Reform Proposal as covered by CMP434

