Proposal for a Capacity Market Rules Change

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Reference number *(to be completed by Ofgem)*: **CP242**

Name of Organisation(s) / individual(s):	**Date Submitted:**
The Association for Decentralised Energy	17/10/2017

Type of Change:	**If applicable, whether you are aware of an alternative proposal already submitted which this proposal relates to:**
☒ **Amendment** ☒ **Addition** ☐ **Revoke** ☐ **Substitution**	Click here to enter text.

Proposal summary *(short summary, suitable for published description on our website)*

This proposal seeks to enable small CHP generators, especially non-exporting units, to qualify for the Capacity Market as DSR, by providing an alternative to the standard DSR baseline which can be applied to small, high load factor CHP generators using bespoke metering located at the generator terminals.

A number of CMUs have not entered Prequalification in recent years because under Regulation 4 non-CMRS, distribution connected generators must *export* onto the public system to be eligible for aggregation under the regulations, and if they are smaller than 2MW then aggregation is their only allowable route to participation. As many small CHPs deliver all of their electricity to site load and do not export, this Regulation eliminates them from the Capacity Market. This proposal will enable these non-exporting generators to enter the Capacity Market.

In addition, on-site CHP generators qualify as "permitted on-site generating units" (Regulation 2) as their electricity is intended for on-site consumption. This makes them eligible to participate in DSR CMUs (also Regulation 2). However, the DSR baseline method makes this impossible in practice. This proposal corrects this contradiction.

What the proposal relates to and if applicable, what current provision of Rules the proposal relates to *(please state provision number)***:**

The proposal relates to prequalification of non-exporting CHP into the Capacity Market within aggregated DSR portfolios. The proposal is necessary because the combination of definitions within Regulation 2 and Rules relating to baselining (Schedule 2) create a class of permitted on-site generating units which cannot prequalify.

Description of the issue that the change proposal seeks to address:

A small generator (under 2MW in capacity) entering the Capacity Market is dependent on a definition in Part 1, Regulation 4 (8) of The Electricity Capacity Regulations 2014, namely: "non-CMRS distribution unit means a distribution unit which exports electricity to a distribution network, which is not a CMRS distribution unit." Further defined terms within that definition show that the generator must have permission under its connection agreement to export electricity into a licensed distribution network in order to fall within that definition. If it does not, a small generator cannot be aggregated under Regulation 4 (7) and, as it falls below the minimum capacity threshold, cannot participate.

The above is the interpretation of the Regulations provided by the Delivery Body to potential participants. We are aware that a number of CHP operators have not submitted prequalification applications as a result of this interpretation. We understand that others have not taken this interpretation, and have successfully prequalified. This contradictory situation arises because there is no check on export permissions at prequalification.

Additionally, many potential participants have a mixture of small CHP and electricity-consuming assets. This is very common in commercial buildings. Given that on-site CHP constitutes a permitted on-site generating unit, such organisations may legitimately wish to combine their CHP and load reduction capabilities within their own aggregated DSR portfolio, thus meeting the minimum capacity threshold without using a third party. The solution we propose to the regulatory barrier also addresses this aggregation barrier.

The outcome harms the Capacity Market in several ways. First, clarity is essential to ensure fair and even competition between Providers. Second, non-exporting, distribution-connected generators are in place to meet the on-site electricity demand. These users remain connected to the distribution network because they will require electricity demand from the public system when the on-site generator is not running, as will often be the case in warmer seasons when on-site heat demand can be met with reduced CHP operating hours. Third, capacity auctions are less competitive if specific resource types are artificially excluded.

The impact to security of supply from an on-site 1 MW generator is no different from the impact of a directly-connected 1 MW generator which exports onto the distribution network. In both cases, if the generators were not operating, system demand would increase 1 MW. Even high load factor CHP generators do not run continuously; they are not in any sense a "permanent reduction in electricity use" (Regulation 2) but are instead a highly efficient, highly utilised alternative source of electricity which, when running, reduces the stress on the national electricity network. Therefore the exclusion of on-site, distribution-connected, small CHP generators is unreasonable, unfair and harms the cost-effectiveness of the Capacity Market by excluding available on-site generation capacity.

Allowing all permitted on-site generators, including small CHPs, to qualify within aggregated DSR portfolios provides a solution to this issue for most parties. In order for this solution to work, however, it is necessary to evidence negative consumption, which has proven difficult for CHP because it has a high load factor – it is more likely to be running than not. The DSR baseline in Schedule 4 is constructed on the basis that the DSR delivers load reduction or generation increase (in the case of permitted on-site generating units) very seldom. In the absence of any Capacity Market Notification, CHP generators are likely to be operating around 60-70% of the time.

This Rule change proposes a solution where CHP operators choose to use sub-metering (bespoke metering) installed at the generation terminals which, after adjusting for auxiliary load, shows the MW of export generated when the CHP is running. If the CHP is not running, the sub-metering will show zero, as no electricity is being produced. In this solution, the CHP operator elects to have the output of this DSR Component assessed against zero instead of against the existing baseline. The deviation from zero is the metered generation output, which evidences the volume of electricity demand which the CHP is removing from the national electricity system. This method therefore demonstrates that, during a Capacity Market stress event, the obligation has been delivered.

If applicable, please state the proposed revised drafting *(please highlight the change)***:**

We propose to insert the following to Schedule 2:

2.2 A Capacity Provider in relation to a DSR CMU Component which is a permitted on-site generating unit using the Bespoke Metering Configuration Solution or Balancing Services Metering Configuration Solution may, at the time of completion of a Metering Assessment in respect of the DSR CMU which contains that DSR CMU Component, state that it wishes to apply the alternative baseline method set out in Rule 2.3 in respect of that DSR CMU Component.

2.3 Where the Delivery Body has been informed in terms of Rule 2.2 that the Capacity Provider wishes to apply the alternative baseline method in respect of a DSR CMU Component, then the relevant data points for determining the baseline Demand under Rule 2.1 must be set to zero for all time periods.

Analysis and evidence on the impact on industry and/or consumers including any risks to note when making the revision - including, any potential implications for industry codes:

According to DUKES, there are 1,862 CHP schemes which are below 2 MW, and therefore at risk of having no export. These schemes make up 541 MW, with about half that capacity between 1 and 2 MW in size. This is likely a significant underrepresentation of this sector. This is because many smaller CHP customers tend to see little value in registering their CHP plant. Using surveys, the ADE has tracked more than 400 MW in new sub-2 MW CHP installations since 2009. Importantly, many of these small schemes are owned and/or operated by ESCos (Energy Supply Companies), which means that in addition to aggregators, there are opportunities for the ESCos to step in (and they will know where all these sites are, have existing commercial arrangements with customers, etc) and provide 'virtual power plant' services. Such organisations would be in a position to aggregate their own portfolios without third-party help, though they could choose to use a third party if they wished.

Details of Proposer *(please include name, telephone number, email and organisation)***:**

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