

MODIFICATION PROPOSAL FORM			
Proposer <i>(Company)</i>	Date of receipt <i>(assigned by System Operator)</i>	Type of Proposal <i>(delete as appropriate)</i>	Modification Proposal ID <i>(assigned by System Operator)</i>
DRAI	6 th May 2021	Standard	CMC_10_21
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Lisa Foley		Lisa.foley@gridbeyond.com	
Modification Proposal Title			
Modification to the provisions for Market Registration of Demand Side Units			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of CMC used in Drafting	
Capacity Market Code	Proposal 1: Section E7.6 Proposal 2: Section I1.3.2 & Section G3.1 potentially	Version 4 July 2020	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p><i>For clarity this modification uses the following definitions:</i></p> <ol style="list-style-type: none"> <i>Demand side unit (DSUs) is the actual candidate unit / Capacity Market Unit as applicable</i> <i>DSU Aggregator is a demand side unit provider.</i> <p>Within the SEM, Demand Side Unit providers aggregate passive electrical loads of individual consumers, into substantial load portfolios, to create predictable, reliable, and controllable assets, which provide a valuable source of Demand Side Flexibility (DSF) that can be actively utilised by system operators to meet the near time needs of the power system.</p> <p>Typically, a DSU aggregator's portfolio includes one or more Demand side units (DSU) which are comprised of individual demand sites (IDS). Each IDS has a distinct set of characteristics which determine how a DSU participates in different markets.</p> <p>The current joint registration system for the capacity market and the system services markets creates several difficulties for aggregators, as these markets are technically and commercially very different, and include a number of conflicting requirements - for instance.</p> <ul style="list-style-type: none"> Capacity Market: each IDS is grouped according to de-rating factor and also location. Balancing Market: IDSs are grouped in similar PQ pairs & shutdown costs. DS3 markets: IDS need to be grouped by similar speed and duration of service response. <p>The range of requirements mean that it is not possible for an aggregator to define a DSU (and its associated IDS sites) in a way that meets all the technical and commercial requirements of the different markets.</p> <p>The main reason for this is that the rules within the existing Capacity Market Code include several administrative limitations, which make it very difficult DSUs to change their composition, and effectively limit the flexibility that the DSUs can provide. However, if these limitations were modified to allow DSU aggregators to respond to the signals from the capacity market and system services market separately, it would allow aggregators the flexibility to configure DSUs to better align with the unique requirements of the in the individual markets, and therefore deliver real benefits to the system – for instance:</p>			

- As Capacity Market requirements evolve, if DSU aggregators can modify their DSU make up to create Dublin only or outside Dublin units for example they can contribute to locational constraints.
- As System Services requirements evolve, if DSU aggregators can modify their DSU make up to deliver faster or longer services on specific units then can provide more appropriate services as required.

The following case example highlights how the current process of market registration creates difficulties for DSU Aggregators:

- A DSU aggregator has Reliability Obligations awarded at T-4 auctions on two DSUs for all delivery years up to and including 2024/25.
- The DSU aggregator wants to move one IDS from one DSU to another of its DSUs.
- This might be so the DSU aggregator can align technical capability of IDS' & deliver faster frequency response services to the System Operator and/or align IDSs in similar locations to assist with locational constraints in the Capacity Market.
- The movement of the IDS from one DSU to the other, will reduce the Operational Certificate of the first DSU which means that the first DSU cannot deliver on its Reliability Obligation even though overall the capability of the DSU aggregator's portfolio has not reduced.
- If the DSU aggregator seeks to modify the qualification of their DSUs, the first time they can do this (starting today) is during the 1 qualification process for T-4 2025/26 held in 202.1 This is four years away.
- To modify the qualification of their DSUs, the existing capacity that is being moved is deemed to be 'new capacity' again and the DSU aggregator must post performance securities for this 'new capacity'.
- In order to ensure that the newly qualified DSUs will continue delivery capacity each year, the DSU aggregator must qualify new capacity each year until the T-4 2028/29 auction is held in 2025 at which point the new DSUs can be deemed substantially complete, and the capacity will revert to being treated as existing capacity. This requires the DSU aggregator to post performance security totalling €90k/MW as performance securities are cumulative per auction and they increase at different stages from €10k - €30k - €40k/MW.
- In summary a DSU aggregator cannot move existing capacity from one DSU to another DSU within its portfolio without (a) Waiting 4 years and (b) Posting €90k/MW of performance securities for what is actually existing capacity.

The DRAI do not consider that there is any underlying rationale or purpose underpinning the restrictions identified in the example provided. We are therefore of the view that these restrictions are really an unintended consequence of the existing market rules.

To facilitate the transition to a low carbon power system, the market codes will need to evolve to enable new flexible technologies to be utilised to their full potential. European legislation such as the Clean Energy Package echoes this intent. It also suggests that flexibility should in many ways be treated similarly to variable generation, in terms of how the system and market operators seek to integrate and remove barriers to participation.

Going forward as increasingly smaller market participants seek to engage with the market, we argue that simplifying the registration process for industrial and commercial demand side response will assist in the integration of residential demand response into market structures.

For this reason, the DRAI are proposing this modification to the CMC.

PROPOSAL

There are two proposals being put forward here – Proposal 1 and Proposal 2. Both proposals are viable options for improving the registration process for DSUs and ultimately improving the level of service delivery from these types of market participants. We intend to bring both proposals to the workshop on the 20th of May 2021 for discussion and are open to other solutions that might be proposed at the workshop. We understand that the Regulatory Authorities are also bringing a proposal to this workshop that may be seen as complementary to the intent of our proposals here. We would like to encourage further discussion on both our proposals and the Regulatory Authorities proposal.

Both proposals look at how a DSU aggregators awarded Reliability Obligations are delivered.

- Proposal 1 seeks to move the Reliability Obligation to the portfolio level by allowing DSU Aggregators to create combined candidate units of their portfolio of DSUs.
- Proposal 2 seeks to move the physical backing of the Reliability Obligation to the portfolio level by allowing all IDs within a DSU aggregator's portfolio to assist in the delivery of the Reliability Obligation regardless of the DSU they are assigned to through the Operational Certificate process.

Proposal 1

This proposal looks to modify section E7.6 Combining Candidate Units.

Section E7.6 allows market providers to aggregate their candidate units into one combined candidate unit subject to certain conditions. One such condition is that all candidate units except for variable generation candidate units must be below the de-minimus threshold in order to combine. This modification proposes that DSUs be treated similarly to variable generation when it comes to combining candidate units and that they be also allowed to combine candidate units above the de-minimus threshold. This proposal aligns with the intent being presented at European level where variable generation and flexibility providers can be treated similarly to incentivise participation in markets.

The intent of the proposal, as stated above is to allow the Reliability Obligation to be awarded at portfolio level, thus ensuring that a DSU aggregator can move existing capacity around its portfolio of DSUs.

A proposal similar to this was brought previously in June 2020 CMC-06-20. The primary reason that that proposal was rejected was that SEM Committee had reservations about market power and the lumpiness that might occur in the auction if this proposal was to be approved.

These concerns can be resolved by limiting inflexible bidding to the size of the largest candidate unit within the combined candidate unit. We have proposed an additional clause to address this.

Proposal 2

This proposal looks to modify section I1.3.1 Variation in mix.

All market providers have a physical backing to deliver on their Reliability Obligation including DSU aggregators.

Provision I1.3.1 in the code allows for DSU aggregators to vary the mix of IDss within their DSU providing the physical backing that is delivering on their Reliability Obligation.

This modification proposes that DSU aggregators be allowed to vary the mix of IDss within their portfolio providing the physical backing that is delivering on their Reliability Obligation.

We believe the proposal may require changes to the process for determining substantial completion in section G.3.1 to allow DSU providers to use their portfolio of DSUs to deliver the awarded capacity to ensure the full intent of this proposal can be realised and would like to discuss options further at the committee workshop.

Legal Drafting Change

(Clearly show proposed code change using **tracked** changes, if proposer fails to identify changes, please indicate best estimate of potential changes)

Proposal 1 E7.6

Requirements for Combining Candidate Units into a Capacity Market Unit

Subject to paragraph **Error! Reference source not found.**, the System Operators shall reject an Application for Qualification for a Capacity Year, for a proposed Capacity Market Unit comprising a combination of individual Candidate Units unless:

- (i) each of the Candidate Units is either:
 - (i) a unit with a Registered Capacity ~~(or in the case of a Demand Side Unit, a DSU MW Capacity)~~, whether based on Existing Capacity or a combined Existing and New Capacity, below the De Minimis Threshold; or
 - (ii) a Variable Generator Unit;
 - (iii) a Demand Side Unit;
- (j) the quantity offered for each inflexible price-quantity pair in respect of the Capacity Market Unit must not exceed the Registered Capacity (or in the case of a Demand Side Unit, a DSU MW Capacity) largest candidate unit included within the Capacity Market Unit.

Proposal 2:

I1.3.1

The Participant in respect of a Demand Side Unit may vary the mix of Demand Sites providing the load reduction capability that gives rise to the Awarded Capacity provided by that Unit provided that:

- (a) each individual Demand Site comprising the load reduction capability meets all requirements of this Code to be included as part of the Demand Side Unit;
- (b) at all times during the Capacity Year the cumulative de-rated capacity provided by the Participant's Demand Site or Demand Sites providing the load reduction capability (howsoever aggregated or grouped into individual Demand Side Units within its portfolio) equals or exceeds the Awarded Capacity provided by that Participant's portfolio of Demand Side Units applicable to that Capacity Year (except to the extent the System Operators agree otherwise in writing);
- (c) where the Awarded Capacity provided by that Demand Side Unit contributes to satisfying a Locational Capacity Constraint, it continues to do so to the same extent after the variation (except to the extent the System

- Operators agree otherwise in writing); and
- (d) where the Demand Side Unit is or forms part of a Capacity Market Unit that is Clean, the Capacity Market Unit continues to be Clean after the variation.

Modification Proposal Justification
(Clearly state the reason for the Modification)

The intent of these modification proposals is to allow the full flexibility capability of the IDS' that make up a DSU aggregators portfolio to be realised.

The current rules mean there are administrative barriers to delivering flexibility to the grid. The power system of the future requires flexible assets, especially assets that can respond to the changing needs of the system. IDSs can do this once they can be set up appropriately within DSUs.

At this time moving capacity from one DSU to another DSU within a DSU aggregators portfolio results in:

- Delays of up to 4 years in implementation and
- Providers posting significant volumes of performance security for 4 years for existing capacity.

As the demand response market evolves to include residential as well as industrial and commercial customers, the simpler the registration process the better for both the system, market, and end consumer.

The current administratively burdensome process will not lend itself to residential demand response participation when larger individual demand sites are already struggling to participate to their full potential.

If the process for market registration is simplified, we believe that there will be more flexibility available to market and system operators. This could result in less volumes being procured in the Capacity Market and System Services market as existing providers are maximising their delivery and type of delivery.

This will ultimately result in less cost to consumers.

Code Objectives Furthered
(State the Code Objectives the Proposal furthers, see Sub-Section A.1.2 of the CMC Code Objectives)

- (b) to facilitate the efficient, economic and coordinated operation, administration and development of the Capacity Market and the provision of adequate future capacity in a financially secure manner.
- (c) to facilitate the participation of undertakings including electricity undertakings engaged or seeking to be engaged in the provision of electricity capacity in the Capacity Market.
- (d) to promote competition in the provision of electricity capacity to the SEM.
- (g) through the development of the Capacity Market, to promote the short-term and long-term interests of consumers of electricity with respect to price, quality, reliability, and security of supply of electricity across the Island of

Ireland.
Implication of not implementing the Modification Proposal <i>(State the possible outcomes should the Modification Proposal not be implemented)</i>
<p>The current administrative limitations mean that an IDS within one DSU aggregators portfolio is limited to participation in the unit they initially registered with and for at least for four years and only then moving if a DSU provider can post substantial performance securities for this existing capacity to move.</p> <p>The implication of this is that:</p> <ul style="list-style-type: none"> • potential improved response or type of delivery could be lost to system operators, and • market operators may be procuring locational capacity from more expensive plant. • Ultimately impacting the cost to the end consumer. <p>We believe that administrative barriers especially those that are unintended, limit the attractiveness of market participation. There is the potential that capability and capacity is being lost because of these administrative barriers.</p>
Impacts <i>(Indicate the impacts on systems, resources, processes and/or procedures)</i>
No material impact to systems, resources and processes/procedures.
Please return this form to the System Operators by email to CapacityModifications@sem-o.com

Notes on completing Modification Proposal Form:

1. If a person submits a Modification Proposal on behalf of another person, that person who proposes the material of the change should be identified on the Modification Proposal Form as the Modification Proposal Originator.
2. Any person raising a Modification Proposal shall ensure that their proposal is clear and substantiated with the appropriate detail including the way in which it furthers the Code Objectives to enable it to be fully considered by the Regulatory Authorities.
3. Each Modification Proposal will include a draft text of the proposed Modification to the Code unless, if raising a Provisional Modification Proposal whereby legal drafting text is not imperative.
4. For the purposes of this Modification Proposal Form, the following terms shall have the following meanings:

CMC / Code:	means the Capacity Market Code for the Single Electricity Market
Modification Proposal:	means the proposal to modify the Code as set out in the attached form
Derivative Work:	means any text or work which incorporates or contains all or part of the Modification Proposal or any adaptation, abridgement, expansion or other modification of the Modification Proposal

The terms “System Operators” and “Regulatory Authorities” shall have the meanings assigned to those terms in the Code.

In consideration for the right to submit, and have the Modification Proposal assessed in accordance with the terms of Section B.12 of the Code, which I have read and understand, I agree as follows:

1. I hereby grant a worldwide, perpetual, royalty-free, non-exclusive licence:
 - 1.1 to the System Operators and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;
 - 1.2 to the Regulatory Authorities to amend, adapt, combine, abridge, expand or otherwise modify the Modification Proposal at their sole discretion for the purpose of developing the Modification Proposal in accordance with the Code;
 - 1.3 to the System Operators and the Regulatory Authorities to incorporate the Modification Proposal into the Code;

- 1.4 to all Parties to the Code and the Regulatory Authorities to use, reproduce and distribute the Modification Proposal, whether as part of the Code or otherwise, for any purpose arising out of or in connection with the Code.
2. The licences set out in clause 1 shall equally apply to any Derivative Works.
3. I hereby waive in favour of the Parties to the Code and the Regulatory Authorities any and all moral rights I may have arising out of or in connection with the Modification Proposal or any Derivative Works.
4. I hereby warrant that, except where expressly indicated otherwise, I am the owner of the copyright and any other intellectual property and proprietary rights in the Modification Proposal and, where not the owner, I have the requisite permissions to grant the rights set out in this form.
5. I hereby acknowledge that the Modification Proposal may be rejected by the Regulatory Authorities and that there is no guarantee that my Modification Proposal will be incorporated into the Code.