MODIFICATION PROPOSAL FORM			
Proposer *(Company)*	**Date of receipt** *(assigned by System Operator)*	**Type of Proposal** *(delete as appropriate)*	**Modification Proposal ID** *(assigned by System Operator)*
DRAI		**Standard**	

Contact Details for Modification Proposal Originator		
Name	**Telephone number**	**Email address**
Lisa McMullan		

Modification Proposal Title		
Combining Capacity Units into a Capacity Market Unit - Proposed Changes		
Documents affected *(delete as appropriate)*	**Section(s) Affected**	**Version number of CMC used in Drafting**
Capacity Market Code	**E.7.6 & I.1.3**	**Version 3 October 2019**

Explanation of Proposed Change
(mandatory by originator)

Changes to section E7.6 – Requirements for Combining Candidate Units into a Capacity Market Unit.

Changes to section I1.3 – Variation in Mix (Obligations Associated with Awarded Capacity)

This modification proposal seeks changes to the above section of the Capacity Market Code to allow demand side units and aggregated generation units to combine candidate units into a capacity market unit. Something which is currently prohibited.

This modification forms part of a solution that will allow for full utilisation of demand response flexibility in both the Capacity Market and DS3 System Services Market. It will aid demand response providers to better achieve their reliability obligations within the Capacity Market. This modification has been discussed under the Flexible Technologies Initiative as removing one of the barriers to integration and utilisation of flexible technologies.

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

E.7.6 Requirements for Combining Candidate Units into a Capacity Market Unit

E.7.6.1 Subject to paragraph E.7.6.3, 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:

(a) each of the Candidate Units is a Generator Unit or a proposed Generator Unit;
(b) all the Candidate Units are registered or provisionally registered to the same Participant;
(c) all the Candidate Units are separately registered under the Trading and Settlement Code, or in the case of New Capacity, are intended to be separately registered under the Trading and Settlement Code;
(d) all the Candidate Units are Connected in the same Currency Zone;
(e) the Regulatory Authorities have not approved a Unit Specific Price Cap for any of the Candidate Units in respect of the Capacity Auction;
(f) none of the Candidate Units are proposed to be included in any other proposed Capacity Market Unit for which an Application for Qualification in respect of the same Capacity

Auction has been made;

(g) none of the Candidate Units are Capacity Market Units in their own right, or part of another Capacity Market Unit, allocated Awarded Capacity for the Capacity Year in a prior Capacity Auction;

(h) the Capacity Market Unit includes all of the individual Candidate Units that it included in any prior Capacity Auction in which it has already been allocated Awarded Capacity for the Capacity Year (though it may include additional Candidate Units);

(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; or

(iii) a Demand Side Unit; or

(iv) an Aggregated Generation Unit.

(j) if any of the Candidate Units proposed to be combined into the Capacity Market Unit is a Demand Side Unit, then all the Candidate Units proposed to be combined are Demand Side Units;

(k) if any of the Candidate Units proposed to be combined into the Capacity Market Unit is intended to provide New Capacity, then the same Maximum Capacity Duration applies to all of the Candidate Units proposed to be combined; and

(l) if any of the Candidate Units is an Autoproducer Unit, then all the Candidates Units are Autoproducer Units at the same Autoproducer Site.

I.1.3 Variation in Mix

I.1.3.1 The Participant in respect of each of its Capacity Market Units that is an Aggregated Generator Unit or a combination of Aggregated Generator Units (under E7.6) may vary the mix of Generators that give rise to the Awarded Capacity provided by that Capacity Market Unit provided that:

(a) each individual Generator comprising the ~~Aggregated Generator~~Capacity Market Unit meets all requirements of this Code to be included as part of the ~~Aggregated Generator~~ Capacity Market Unit;

(b) at all times during the Capacity Year the cumulative de-rated capacity provided by the mix of Generators (based on each Generator's individual Initial Capacity and the De-Rating Factor applicable to its Technology Class at the time the Aggregated Generator Unit last Qualified) equals or exceeds the Awarded Capacity provided by that Capacity Market ~~Aggregated Generator~~ Unit applicable to that Capacity Year (except to the extent the System Operators agree otherwise in writing);

(c) where the Awarded Capacity provided by that Capacity Market ~~Aggregated Generator~~ 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 Aggregated Generator Unit is or forms part of a Capacity Market Unit that is Clean, the Capacity Market Unit continues to be Clean after the variation.

I.1.3.2 The Participant in respect of each of its Capacity Market Units that is a Demand Side Unit or a combination of Demand Side Units (under E7.6) may vary the mix of Demand Sites providing the load reduction capability that gives rise to the Awarded Capacity provided by that Capacity Market Unit provided that:

(e) each individual Demand Site comprising the load reduction capability meets

all requirements of this Code to be included as part of the Capacity Market ~~Demand Side~~ Unit;

(f) at all times during the Capacity Year the cumulative de-rated capacity provided by the Demand Site or Demand Sites providing the load reduction capability equals or exceeds the Awarded Capacity provided by that D Capacity Market~~emand Side~~ Unit applicable to that Capacity Year (except to the extent the System Operators agree otherwise in writing);

(g) where the Awarded Capacity provided by that Capacity Market ~~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

(h) 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)

Demand Response is an inherently different type of market participant to traditional conventional generators and renewable generators. This modification seeks to accommodate a number of these unique characteristics (key differences) and through doing so better utilise demand response flexibility. Demand response providers need to optimise the make-up of the sites that are contained within each demand response unit for example, matching speed of response, duration of response, location of response and other technical characteristics from individual sites across a demand response unit. Within the current rules, it is very difficult for demand response providers to optimise response between the capacity market and system services markets and thus there is a loss of flexibility capability from existing sites.
Furthermore, this modification could help to mitigate against increased costs to the end customer caused by more costly flexibility solutions that may need to be implemented if the full capability of demand response is not realised.
We also believe that this modification will help demand side units and aggregated generation units to better achieve their Reliability Obligation under the Capacity Market.

Unique characteristics of demand response accommodated by this modification:

1. **Moving Sites either Within Demand Response Providers Portfolios**
   Once a Reliability Obligation has been awarded to a demand side unit, it is very difficult to move individual customer sites from one unit to another unit within one demand response providers portfolio without being in breach of the capacity market code, exposing the unit to potential difference charge penalties and/or additional performance security requirements.

   This modification will allow, for example, demand response providers to move sites within their portfolios from Demand Side Unit to Demand Side Unit, both of which DSUs are within the same Capacity Market Unit.

2. **Individual Customer Sites Moving from one Demand Response Provider to Another**
   Demand Side Units and Aggregated Generation Units are made up of individual customer sites. These customers contract with the demand response provider to provide the capacity that makes up the candidate units. As demand response is a competitive market providing a service to individual customers, these customers can elect to move provider or remove themselves from demand response schemes. This

leaves demand response providers with reduced availability and at risk of non-performance difference charge exposure on a unit level. At the same time there may be additional availability on another unit within the demand response providers portfolio that is not contributing to their Reliability Obligation.

This modification will allow demand response providers to have their Reliability Obligation applied at portfolio level thus allowing providers to incentivise availability across all units and not just to their contracted volume on that unit.

3. Individual Customer Sites having Different Technical Characteristics

Each individual customer site participating in demand response has characteristics specific to that site be that duration of response, speed of response, frequency of response.

This modification is the first part of a two stage solution, which will enable demand response providers to create optimal unit (composition?) make up across their units.

The second stage of the solution will allow individual demand sites to be registered within more than one unit within one demand response provider's portfolio. This would therefore allow a long duration of response site, within Dublin to form part of one capacity market unit whilst forming part of a different system services unit that providers a fast frequency response service. DRAI is also working with the TSOs and SEMO to develop this stage of the solution.

For example, if two individual demand sites are aggregated together into a single Demand Side Unit, the TOD-set for the aggregated unit is set by the ramp rate of the slowest constituent site. This means that valuable quantities of faster response time DS3 services (e.g. TOR2, RRD) are potentially unrealised. To optimise this, a DSU provider could split the two sites into two separate DSUs, however this is not possible if the original DSU already has a Reliability Obligation.

We believe it is important to highlight the second part to this solution as although this modification will provide more flexibility and capability across the demand response industry, the second part to this solution will allow for increased flexibility from existing behind the meter flexibility and ultimately assist with the Flexible Technologies Initiative and the government targets of 70% by 2030.

Code Objectives Furthered

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

(i) 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;

(j) to promote competition in the provision of electricity capacity to the SEM;

(f) to ensure no undue discrimination between persons who are or may seek to become parties to the Capacity Market Code; and]

(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

(State the possible outcomes should the Modification Proposal not be implemented)

Without this modification, Demand Response providers cannot work to optimise their portfolios in an appropriate way. There is the potential for a significant loss of flexibility from behind the meter of existing customers. The Flexible Technologies Initiative, the Irish Governments 70% renewables by 2030 and the Northern Ireland governments carbon neutral by 2050 requirements will all require a more flexible grid. Demand Response from Industrial, Commercial customers and also residential customers is an integral part to implementing these requirements. Removing barriers to optimal operation of demand response is key to incentivising increased participation.
Furthermore, without the implementation of this modification, there could potentially be increased costs to the end customer caused by more costly flexibility solutions that may need to be implemented if the full capability of demand response is not realised.

Impacts

(Indicate the impacts on systems, resources, processes and/or procedures)

We believe that as this modification utilises an existing mechanism within the capacity market that this modification will not impact systems, resources, processes and/or procedures.

We believe that the correct capacity market qualification, auction, administration, settlement is all in place to facilitate this modification proposal to allow Demand Side Units and Aggregated Generation Units to combine candidate units into a capacity market unit.

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.**