

**MODIFICATION PROPOSAL FORM**

<b>Proposer</b> <i>(Company)</i>	<b>Date of receipt</b> <i>(assigned by System Operator)</i>	<b>Type of Proposal</b> <i>(delete as appropriate)</i>	<b>Modification Proposal ID</b> <i>(assigned by System Operator)</i>
<b>Regulatory Authorities</b>	<b>29 October 2019</b>	<b>Standard</b>	<b>CMC_08_19</b>

**Contact Details for Modification Proposal Originator**

<b>Name</b>	<b>Telephone number</b>	<b>Email address</b>
<b>Kevin Lenaghan</b>		<b>Kevin.lenaghan@uregni.gov.uk</b>

**Modification Proposal Title**

**General Housekeeping Modifications**

<b>Documents affected</b> <i>(delete as appropriate)</i>	<b>Section(s) Affected</b>	<b>Version number of CMC used in Drafting</b>
<b>Capacity Market Code</b>	<b>E.8.2.5, E.8.2.8</b>	<b>2.0</b>

**Explanation of Proposed Change**  
*(mandatory by originator)*

General Housekeeping Modifications:

Three issues were identified by the Capacity Auction Monitor in the formulae used to determine the values of Gross De-rated Capacity set out in sub-section E.8.2.

- Error in the formula in E.8.2.5:

$$GDRCN = \text{MAX}[0, \text{MIN}[ \text{DRFT} \times \text{ICT} \times (1 + \text{INCTOL}), \text{NDRVE} + \text{NDRVN}] - \text{GDRCE}]$$

There is a surplus bracket "]" (shown highlighted) contained within the formula shown in E.8.2.5 which will require removal.

- Errors in the formula in E.8.2.8:

CMC Paragraph E.8.2.8 states that:

"The System Operators shall determine the Gross De-Rated Capacity (New) of an Aggregated Generator Unit is determined in accordance with the following formula:

$$GDRCN = \text{MAX}[0, \sum_{i \neq VU} \text{MIN}[\text{DRFT}_i \times \text{ICT}_i \times (1 + \text{INCTOL}_i), \text{MAX}[\text{DRFT}_i \times \text{ICT}_i \times (1 - \text{DECTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i] + \sum_{i \neq VU} \text{MIN}[ \text{DRFE}_i \times \text{ICE}_i \times (1 + \text{INCTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i] - \text{GDRCE}]$$

The brackets do not balance in this formula. There is a surplus bracket "(" (shown highlighted) which needs to be removed to allow the SOs to determine the value in accordance with the formula.

For the purposes of assessing the SOs' compliance with their obligations, the intended formula should be:

$$\text{GDRCN} = \text{MAX}[0, \sum_{i \neq \text{VU}} \text{MIN}[\text{DRFT}_i \times \text{ICT}_i \times (1 + \text{INCTOL}_i), \text{MAX}[\text{DRFT}_i \times \text{ICT}_i \times (1 - \text{DECTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i]] + \sum_{i = \text{VU}} \text{MIN}[\text{DRFE}_i \times \text{ICE}_i \times (1 + \text{INCTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i] - \text{GDRCE}]$$

There is a second more significant issue with the formula in E.8.2.8. The formula comprises two elements: the first replicates E.8.2.4 and the second E.8.2.5, in each case summed over the components of the AGU.

In the second summation (applying to variable units), the formula makes reference to the existing initial capacity (ICE) and the applicable existing capacity de-rating factor (DRFE). This is not appropriate for determining the New Gross De-rated Capacity (GDRCN), particularly when compared to the equivalent operation carried out in E.8.2.5 which performs the same function for units that are not AGUs. The formula should refer to total initial capacity (ICT) and the applicable total capacity de-rating factor (DRFT), as shown below:

$$\text{GDRCN} = \text{MAX}[0, \sum_{i \neq \text{VU}} \text{MIN}[\text{DRFT}_i \times \text{ICT}_i \times (1 + \text{INCTOL}_i), \text{MAX}[\text{DRFT}_i \times \text{ICT}_i \times (1 - \text{DECTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i]] + \sum_{i = \text{VU}} \text{MIN}[\text{DRFT}_i \times \text{ICT}_i \times (1 + \text{INCTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i] - \text{GDRCE}]$$

#### Legal Drafting Change

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

- Correction to formula in E.8.2.5:

$$\text{GDRCN} = \text{MAX}[0, \text{MIN}[\text{DRFT} \times \text{ICT} \times (1 + \text{INCTOL}), \text{NDRVE} + \text{NDRVN}] - \text{GDRCE}]$$

- Corrections to formula in E.8.2.8:

$$\text{GDRCN} = \text{MAX}[0, \sum_{i \neq \text{VU}} \text{MIN}[\text{DRFT}_i \times \text{ICT}_i \times (1 + \text{INCTOL}_i), \text{MAX}[\text{DRFT}_i \times \text{ICT}_i \times (1 - \text{DECTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i]] + \sum_{i = \text{VU}} \text{MIN}[\text{DRFT}_i \times \text{ICT}_i \times (1 + \text{INCTOL}_i), \text{NDRVE}_i + \text{NDRVN}_i] - \text{GDRCE}]$$

#### Modification Proposal Justification

*(Clearly state the reason for the Modification)*

- Correction to formula in E.8.2.5:

Avoids ambiguity in regards to the calculation

- Corrections to formula in E.8.2.8:

Error in the current drafting of the formula has a material effect on checks that are carried out by the Capacity Auction Monitor. Correcting the drafting will correct this issue.

#### Code Objectives Furthered

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

A.1.2.1 This Code is designed to facilitate achievement of the following objectives (the “Capacity Market Code Objectives”):

(e) to provide transparency in the operation of the SEM;

**Implication of not implementing the Modification Proposal**

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

Ambiguity would remain in regards to the above calculations and failure to correct the formula within E.8.2.8 would allow for the material impact on the Auction Monitor’s checks to continue.

**Impacts**

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

No material impact to systems, resources and processes/procedures.

**Please return this form to the System Operators by email to [modifications@sem-o.com](mailto:modifications@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 Modifications Committee.
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:

**Agreed Procedure(s):** means the detailed procedures to be followed by Parties in performing their obligations and functions under the Code as listed in Appendix D "List of Agreed Procedures".

**T&SC / Code:** means the Trading and Settlement 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 "Market Operator", "Modifications Committee" 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 2 of the Code (and Agreed Procedure 12), 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 Market Operator and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;
  - 1.2 to the Regulatory Authorities, the Modifications Committee and each member of the Modifications Committee 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 Market Operator 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 Modifications Committee and/or the Regulatory Authorities and that there is no guarantee that my Modification Proposal will be incorporated into the Code.