

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>
EirGrid & SONI	09 May 2019	Standard	Mod_06_19v3
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Aodhagan Downey			
Modification Proposal Title			
Modification to the Proportion of Delivered Capacity calculation (G.3.1.4)			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of CMC used in Drafting	
Capacity Market Code	G.3.1.4, G.3.1.5, Glossary	May 2019	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p>Currently, the calculation of Proportion of Delivered Capacity in the CMC is not clear. On one hand, G.3.1.4 compares Grid Code Commissioned Capacity to Initial Capacity. On the other hand, where there are multiple tranches, G.3.1.5 allows for the reduction of the Initial Capacity to take into account e.g. "that other Tranches that Qualified but were not allocated the full amount in the relevant Capacity Auction".</p> <p>Under G.3.1.4, the CMC implies that Proportion of Delivered Capacity should be measured against Initial Capacity (New); however, there are many reasons why Awarded New Capacity could be less than the de-rated Initial Capacity (New) e.g. where the CMU did not submit a Capacity Auction Offer for the full de-rated Initial Capacity (New) or where the CMU did not clear the full Capacity Auction Offer in the Capacity Auction.</p> <p>As such, we consider that it is not reasonable to expect the delivery of Awarded New Capacity to be assessed against Initial Capacity (New). We believe it should be measured against the Awarded New Capacity as obligations under the CMC pertain to Awarded Capacity.</p> <p>If we go back to the design on this in CRM2 decision, it states:</p> <p><i>The SEM Committee has decided that 90% of contracted capacity will be the definition for Substantial Completion and 50% of contracted capacity for Minimum Capacity.</i></p> <p>The decision does not specify exactly what the 90% refers to but if we go back to the CRM2 consultation, the RAs state:</p> <p><i>Substantial Completion: would mean that the new capacity is operational and has demonstrated the ability to deliver (after de-rating) a significant proportion of its Reliability Option capacity. It is anticipated that a definition of Substantial Completion similar to that used for GB would be appropriate for the I-SEM. Notably;</i></p> <ul style="list-style-type: none"> <i>• In GB, "operational" is defined in terms of the Grid Code for transmission connected capacity and requires an independent expert to certify that a distribution connected unit has passed all the necessary commissioning tests and is permitted to export onto the distribution network.</i> <i>• To achieve Substantial Completion in GB, new capacity must be capable of producing 90% of its Reliability Option capacity, after de-rating.</i> 			

- *The definition of Substantial Completion used in GB is consistent with the Implementation Agreements previously used in Ireland when contracting for new capacity in 2003, i.e. that the capacity is operational and has met a certain performance standard.*

This second bullet is consistent with the GB rules, where the approach is:

In the case of a Generating CMU, a New Build CMU or a Refurbishing CMU will have met its Substantial Completion Milestone obligation if: (a) the corresponding Generating Unit(s) is/are Operational with an aggregate physical generating capacity (in MW) which, after being multiplied by its De-rating Factor, equals or exceeds 90 per cent of its Capacity Obligation.

On this basis, we consider that the current drafting reflects this in G.3.1.5 but that this is not applied in the case where there is only one tranche and only G.3.1.4 applies. While this may have been intentional e.g. to provide for instances where units de-rate themselves further than the de-rating approach required under the CMC, the reason for Awarded New Capacity being less than the de-rated Initial Capacity tends to arise where units do not submit their full Qualified amount or are not successful in the Capacity Auction.

As such, we consider that the below changes address are more appropriate. They simplify the calculation of Proportion of Delivered Capacity and also provide flexibility in the delivery of energy limited capacity such as that provided by DSUs or Storage units. So long as 90% of the de-rated Grid Commissioned Capacity is achieved, the duration that the unit can run for is not an issue.

Two new definitions are proposed to be added to the Capacity Market Code Glossary, 'De-Rated Grid Code Commissioned Capacity' and 'Awarded Existing Capacity'.

Paragraph G.3.1.4 of the CMC has been amended to reflect their application in the calculation of the Proportion of Delivered Capacity.

Version 2 adds introduces Initial Maximum On Time to the Capacity Market Code to capture the use of this characteristic in the calculation of derating factors. In order to provide flexibility in respect of delivery for different combinations of Initial Capacity and Initial Maximum On Time that result in the same De-rated Grid Code Commissioned Capacity, it is necessary to define Maximum On Time more explicitly in the Capacity Market Code. It is introduced in a manner similar to Initial Capacity in Chapter C and all references to the determination of de-rating factor refer to Initial Maximum On Time (as applicable).

Further to version 1, this version also provides for instances where the participant voluntarily de-rates their unit beyond what is set out in the Initial Auction Information Pack. Rather than revert to the IAIP in the measurement of delivery, the new text retains the original Gross De-Rating Factor.

Legal Drafting Change

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

C.1.1.2 (g) a *de-rating curve* is specific to a technology class and defines the de-rating factor applicable to a specific value of initial capacity and initial maximum on time. The de-rating curves are determined by the Regulatory Authorities;

C.3.7 Initial On Time

C.3.7.1 For a Generator Unit (other than a Demand Side Unit), the Initial Maximum On Time (Existing) for a Capacity Year shall be equal to the Maximum On Time based on the Final Compliance Certificate, Operational Certification or Final Operational Notification for that Generator Unit or Interconnector under the applicable Grid Code.

C.3.7.2 For a Demand Side Unit, the Initial Maximum On Time (Existing) for a Capacity Year shall be equal to the Maximum Down Time based on the Final Compliance Certificate, Operational Certification or Final Operational Notification for that Demand Side Unit under the applicable Grid Code.

C.3.7.3 For a Generator Unit (other than a Demand Side Unit), the Initial Maximum On Time -(Total) for a Capacity Year shall be equal to the Participant's expectation of the Generator Unit's Maximum On Time under the applicable Grid Code.

C.3.7.4 For a Demand Side Unit, the Initial Maximum On Time (Total) for a Capacity Year shall be equal to the Participant's expectation of the Demand Side Unit's Maximum Down Time under the applicable Grid Code.

D.3.1.2 The Initial Auction Information Pack for a Capacity Auction shall set out:

(a) the final De-Rating Curves, defining De-Rating Factors ~~by unit Initial Capacity and~~ by Technology Class (including for Interconnectors), by unit Initial Capacity and by unit Initial Maximum On Time, as applicable, to be used in the Capacity Auction;

D.3.1.3 The Regulatory Authorities shall determine the following parameters for each Capacity Auction and provide them to the System Operators for inclusion in the applicable Initial Auction Information Pack:

(a) the final De-Rating Curves, defining De-Rating Factors ~~by unit Initial Capacity and~~ by Technology Class (including for Interconnectors), by unit Initial Capacity and by unit Initial Maximum On Time, as applicable, to be used in the Capacity Auction;

E.7.8.2

(e) in determining the Gross De-Rated Capacity (Existing) of the Capacity Market Unit in the case of Candidate Units (other than Demand Side Units and Generator Units referred to in paragraph E.2.1.1(e) that are Variable Generator Units), the System Operators shall use the methodology set out in sections E.8.2 and E.8.3 except that, in substitution for the value(s) of Gross De-Rated Capacity (Existing) nominated in the Application for Qualification, they shall use, subject to paragraph E.8.3.2, the product of:

(i) the applicable Initial Capacity (Existing) as determined under section E.8.1; and

(ii) the De-Rating Factor applicable to that Initial Capacity (Existing) (without applying any tolerance) and Initial Maximum On Time (Existing), as applicable;

(g) in determining the Gross De-Rated Capacity (New) of the Capacity Market Unit in the case of Candidate Units (other than Demand Side Units and Generator Units referred to in paragraph E.2.1.1(e) that are Variable Generator Units), the System Operators shall use the methodology set out in

sections E.8.2 and E.8.3 except that, in substitution for the value(s) of the Gross De-Rated Capacity (Existing) nominated in the Application for Qualification, they shall use the value determined under paragraph (e) and in substitution for the value of Gross De-Rated Capacity (New) nominated in the Application for Qualification they shall use the product of:

- (i) the applicable Initial Capacity (Total) as determined under section E.8.1; and
- (ii) the De-Rating Factor applicable to that Initial Capacity (Total) (without applying any tolerance) and Initial Maximum On Time (Total), as applicable,

E.8.2.3

- (d) DRFE is the De-Rating Factor applicable to the Technology Class, ~~and~~ Initial Capacity (Existing) and Initial Maximum On Time (Existing), as applicable, of the Generator Unit or Interconnector as specified in the relevant Initial Auction Information Pack;

E.8.2.6

- (e) DRFT is the De-Rating Factor applicable to the Technology Class, ~~and~~ Initial Capacity (Total) and Initial Maximum On Time (Total), as applicable, of the Generator Unit or Interconnector as specified in the relevant Initial Auction Information Pack;

E.8.2.7

- (g) DRFE_i is the De-Rating Factor applicable to the Technology Class, ~~and~~ Initial Capacity (Existing) and Initial Maximum On Time (Existing), as applicable, of Generator i as specified in the relevant Initial Auction Information Pack;

E.8.2.8

- (h) DRFT_i is the De-Rating Factor applicable to the Technology Class, ~~and~~ Initial Capacity (Total) and Initial Maximum On Time (Total), as applicable, of Generator i as specified in the relevant Initial Auction Information Pack;
- (n) DRFE_i is the De-Rating Factor applicable to the Technology Class, ~~and~~ Initial Capacity (Existing) and Initial Maximum On Time (Existing), as applicable, of Generator i as specified in the relevant Initial Auction Information Pack;

G.3.1.2A The value of Grid Code Commissioned Maximum On Time in respect of a Generator Unit or Interconnector (other than a Demand Side Unit) at a given time is the Maximum On Time based on the Final Compliance Certificate, Operational Certification or Final Operational Notification for that Generator Unit or Interconnector under the applicable Grid Code.

G.3.1.2B The value of Grid Code Commissioned Maximum On Time in respect of a Demand Side Unit at a given time is the Maximum Down Time based on the Final Compliance Certificate, Operational Certification or Final Operational Notification for that Demand Side Unit under the applicable Grid Code.

G.3.1.4 The Proportion of Delivered Capacity in respect of Awarded New Capacity at a given time is a percentage value being:

- (a) the greater of:

- (i) zero; and
- (ii) the lesser of:
 - (A) the De-Rated Grid Code Commissioned Capacity; and
 - (B) the Awarded ~~Initial~~ Capacity; ~~(Total)~~;
 less the ~~Initial~~ Awarded Existing Capacity ~~(Existing)~~;

(b) divided by:

- (i) the Awarded ~~Initial~~ Capacity ~~(Total)~~; less
- (ii) the ~~Initial~~ Awarded Existing Capacity ~~(Existing)~~;

G.3.1.4A For a Capacity Market Unit, ~~where the~~ De-Rated Grid Code Commissioned ~~Initial Capacity (Existing) and Initial Capacity (Total)~~ shall ~~behave~~ the Grid Code Commissioned Capacity of the Generator Unit or Interconnector multiplied by the lesser of:

- (a) the De-Rating Factor applicable to a unit of the Technology class of that Generator Unit or Interconnector and with an Initial Capacity equal to the Grid Code Commissioned Capacity and an Initial Maximum On Time equal to the Grid Code Commissioned Maximum On Time of that Generator Unit or Interconnector as specified in the Initial Auction Information Pack for the relevant Capacity Auction in which the relevant Awarded New Capacity was allocated.
- ~~(e)~~(b) ~~values~~ the Gross De-Rating ~~ed~~ Factor, as specified in item 3 (b) of Appendix E "Qualification Capacity Register Data"; ~~Capacity (New) divided by the Initial Capacity (New) determined when the Awarded New Capacity Qualified.~~

G.3.1.5 Where at a given time there is more than one Tranche of Awarded New Capacity in respect of a Capacity Market Unit (whether for the same Capacity Year or different Capacity Years), the System Operators shall calculate the Proportion of Delivered Capacity in respect of each Tranche by applying the methodology under paragraph G.3.1.4 but with such modifications to the values of ~~Initial~~ Awarded Existing Capacity ~~(Existing)~~ and ~~Initial~~ Awarded Capacity ~~(Total)~~ as are necessary to account for the multiple Tranches. The required modifications shall include (as applicable):

- (a) increasing ~~Initial~~ Awarded Existing Capacity ~~(Existing)~~ of the relevant Tranche to account for the contribution of other Tranches commissioned since the relevant Tranche Qualified;
- (b) decreasing ~~Initial~~ Awarded Capacity ~~(Total)~~ of the relevant Tranche to account for other Tranches that Qualified but were not allocated the full amount in the relevant Capacity Auction or that have been terminated or reduced under section J.6 after the relevant Tranche Qualified; and
- (c) reducing the Grid Code Commissioned Capacity in respect of any increased capacity of the Capacity Market Unit that was not Qualified as New Capacity and that was not otherwise accounted for in the ~~Initial~~ Awarded Capacity ~~(Total)~~.

Glossary (new definition)

De-Rating Curve	means a curve for a Technology Class that represents the De-Rating Factor applicable by unit Initial Capacity and Initial Maximum On Time to be used in a Capacity Auction and is determined by the Regulatory Authorities and provided to the System Operators under paragraph D.3.1.3.
De-Rating Factor	means a factor between zero and one describing the proportion of Initial Capacity of a Generator Unit or Interconnector that can contribute to the satisfying the Capacity Requirement to be used in a Capacity Auction.
De-Rated Grid Code Commissioned Capacity	In respect of a Capacity Market Unit is determined in accordance with paragraph G.3.1.4A.
Awarded Capacity	in respect of a Capacity Market Unit, means a specified amount of de-rated capacity which under this Code must be dedicated and made available using the Generator Unit(s) or Interconnector comprising the Capacity Market Unit. Awarded Capacity may be allocated pursuant to a Capacity Auction or may be the subject of a Product acquired in a Secondary Trade Auction.
Awarded Existing Capacity	in respect of a Capacity Market Unit, means Awarded Capacity which is Existing Capacity at the time of the relevant Capacity Auction.
Awarded New Capacity	in respect of a Capacity Market Unit, means Awarded Capacity which is New Capacity at the time of the relevant Capacity Auction.
Initial Maximum On Time (Existing)	has the meaning given in paragraph C.3.7.1 or C.3.7.2, as applicable to the relevant Unit Type.
Initial Maximum On Time (Total)	has the meaning given in paragraph C.3.7.3 or C.3.7.4, as applicable to the relevant Unit Type.

Appendix D, Paragraph 4 (create new part (m))

In respect of each Candidate Unit to which the Application for Qualification relates and which is, or is intended to be, registered under the Trading and Settlement Code:

(m) the quantity proposed in respect of each of:

- (i) Initial Maximum On Time (Existing) of the Candidate Unit
- (ii) Initial Maximum On Time (Total) of the Candidate Unit

Modification Proposal Justification <i>(Clearly state the reason for the Modification)</i>
To achieve the Substantial Completion milestone, the Proportion of Delivered Capacity should not be less than 90%. CMC paragraph G.3.1.4 requires amendment to reflect how the Proportion of Delivered Capacity should be calculated in line with the intention of the Capacity Market Design and the experience gathered to date in the operation of the Capacity Market.
Code Objectives Furthered <i>(State the Code Objectives the Proposal furthers, see Sub-Section A.1.2 of the CMC Code Objectives)</i>
A.1.2.1 This Code is designed to facilitate achievement of the following objectives (the “ Capacity Market Code Objectives ”): <p style="margin-left: 40px;">(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;</p>
Implication of not implementing the Modification Proposal <i>(State the possible outcomes should the Modification Proposal not be implemented)</i>
CMC paragraph G.3.1.4 will place unreasonably onerous delivery requirements that are not based on the Awarded New Capacity.
Impacts <i>(Indicate the impacts on systems, resources, processes and/or procedures)</i>
No material impact to systems, resources and processes/procedures. Some minor changes required to qualification forms/other documents. Minor system changes may potentially be required, though these are not expected to be material in nature.
<i>Please return this form to the System Operators by email to CapacityModifications@sem-o.com</i>

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.