

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	5 th May 2022	Standard	CMC_08_22
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Aodhagan Downey		aodhagan.downey@eirgrid.com	
Modification Proposal Title			
Locational Capacity Constraints Maximum Quantities			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of CMC used in Drafting	
CMC	Chapter C, F, Glossary	6.0	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p>This Modification Proposal seeks to introduce a maximum limit applicable to Locational Capacity Constraint Areas. This value would be specified by the System Operators and approved by the Regulatory Authorities and published as part of the Final Auction Information Packs in accordance with the same processes that apply to current determination of minimum Locational Capacity Constraint Required Quantities.</p> <p>The below legal drafting changes introduces the concept in Chapter C alongside the existing minimum quantities and that they are determined by the System Operators in accordance with the approved Locational Capacity Constraints methodology (SEM-17-040). Changes may be required to this methodology to provide for this change and these would need to follow the appropriate process as this methodology does not form part of the Capacity Market Code.</p> <p>The legal drafting goes on to bring the new maximum requirements into the auction process in Chapter F.</p> <p>By including, Locational Capacity Constraint Maximum Quantity in the Locational Capacity Constraint Information definition ensures that the quantities will be published in the Final Auction Information Pack.</p>			
Legal Drafting Change <i>(Clearly show proposed code change using tracked changes, if proposer fails to identify changes, please indicate best estimate of potential changes)</i>			
<p>C.2.1 Concepts</p> <p>C.2.1.1 The System Operators may determine one or more Locational Capacity Constraints in accordance with this section Error! Reference source not found. for the purposes of a Capacity Year with a view to ensuring that a minimum and maximum capacity is</p>			

cleared in the Capacity Auctions for that Capacity Year in one or more specific areas of the SEM for the purposes of system security.

C.2.2 **Form of Locational Capacity Constraints**

C.2.2.1 There is no requirement that any given area of the SEM must necessarily be subject to a Locational Capacity Constraint.

C.2.2.2 If they determine a Locational Capacity Constraint, the System Operators shall also determine the following features of the Locational Capacity Constraint:

- (a) a name of the Locational Capacity Constraint;
- (b) the area to which the Locational Capacity Constraint applies, defined by reference to nodes on the Transmission System (and Distribution System, as applicable) (called the "**Locational Capacity Constraint Area**");
- (c) a minimum and a maximum de-rated capacity quantity that is required to satisfy the Locational Capacity Constraint, where the maximum de-rated capacity quantity shall be not less than the minimum de-rated capacity quantity; and
- (d) the nesting level of the Locational Capacity Constraint determined in accordance with paragraph **Error! Reference source not found.** and, in the case of a Level 2 Locational Capacity Constraint, the Level 1 Locational Capacity Constraint that the Level 2 Locational Capacity Constraint falls within.
- ~~(d)~~(e) The aggregate maximum de-rated capacities for a set of Level 2 Locational Capacity Constraints that comprise all the nodes of a Level 1 Locational Capacity Constraint shall be not be less than the minimum de-rated capacity quantity for that Level 1 Locational Capacity Constraint.

F.4 **DETERMINATION OF LOCATIONAL CAPACITY CONSTRAINTS FOR A CAPACITY AUCTION**

F.4.1.1 For each Locational Capacity Constraint, the System Operators shall, when requested to do so by the Regulatory Authorities and as required under this section F.4.1 determine the following for a Capacity Year:

- (a) the Locational Capacity Constraint Required Quantity, being:
 - (i) the minimum de-rated capacity quantity that is required to satisfy the Locational Capacity Constraint determined under paragraph (c); less
 - (ii) the de-rated value of capacity that is not existing Awarded Capacity for the relevant Capacity Year but which the System Operators forecast to be operational during the relevant Capacity Year and will not participate in the Capacity Auction;
- (b) the total quantity of Gross De-Rated Capacity (Total) in respect of Capacity Market Units that are Qualified as contributing to satisfying the Locational Capacity Constraint;

- (c) the absolute value of the amount (if any) by which the total quantity determined under sub-paragraph (b) falls short of the Locational Capacity Constraint Required Quantity for the Locational Capacity Constraint;
- (d) the total quantity of Gross De-Rated Capacity (Existing) in respect of Capacity Market Units that are Qualified as contributing to satisfying the Locational Capacity Constraint; and
- (e) the absolute value of the amount (if any) by which the total quantity determined under sub-paragraph (d) falls short of the Locational Capacity Constraint Required Quantity for the Locational Capacity Constraint.
- (f) the Awarded Capacity for the Capacity Year in respect of Capacity Market Units that contribute to satisfying the Locational Capacity Constraint.
- (g) the Locational Capacity Constraint Maximum Quantity, being:
 - (i) the maximum de-rated capacity quantity that can be cleared under the Locational Capacity Constraint determined under paragraph C.2.2.2(c); less
 - ~~(ii)~~ the de-rated value of capacity that is not existing Awarded Capacity for the relevant Capacity Year but which the System Operators forecast to be operational during the relevant Capacity Year and will not participate in the Capacity Auction;

For the avoidance of doubt, the minimum de-rated quantity determined in C.2.2.2(c) does not take account of the Awarded Capacity for the Capacity Year in respect of Capacity Market Units that contribute to satisfying the Locational Capacity Constraint.

F.8.2 Inputs for the Capacity Auction

F.8.2.1 The System Operators shall use the following information when conducting a Capacity Auction:

- (a) the Demand Curve determined by the Regulatory Authorities and provided to the System Operators in accordance with section **Error! Reference source not found.**;
- (b) for each Locational Capacity Constraint applicable to the Capacity Auction:
 - (i) the ~~level of the constraint~~Net Required Quantity that will apply in the Capacity Auction, being the greater of zero and:
 - (A) the Locational Capacity Constraint Required Quantity required to satisfy the Locational Capacity Constraint; less
 - (B) the Awarded Capacity for the Capacity Year in respect of Capacity Market Units that contribute to satisfying that Locational Capacity Constraint;
 - (i2) the Net Maximum Quantity that will apply in the Capacity Auction, being the greater of zero and:
 - (A) the Locational Capacity Constraint Maximum Quantity that can be cleared under the Locational Capacity Constraint; less
 - (B) the Awarded Capacity for the Capacity Year in respect of Capacity Market Units that contribute to satisfying that Locational Capacity Constraint;

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- (ii) the Locational Capacity Constraint Information referred to in paragraphs (a), (c) and (d) of the definition of that term in the Glossary; and
- (iii) the Capacity Market Units that have Qualified for the Capacity Auction; and
- (c) the Validated Capacity Auction Offers for each Capacity Market Unit Qualified to participate in that Capacity Auction as determined under section **Error! Reference source not found.** and Chapter L.

F.8.4.4 Subject to paragraphs **Error! Reference source not found.**, F.8.4.6A and **Error! Reference source not found.**, the System Operators shall determine the remaining price-quantity pairs contained in Capacity Auction Offers cleared in a Capacity Auction by applying the following rules:

- (a) a price-quantity pair that is Flexible may be cleared to any point between zero MW and the maximum quantity offered in that price-quantity pair;
- (b) a price-quantity pair that is Inflexible may be cleared at either zero MW or the maximum quantity offered in that price-quantity pair;
- (c) a price-quantity pair with a price less than the Offer Price Clearance Ratio of the Auction Clearing Price shall be cleared to its scheduled quantity as determined in accordance with paragraph **Error! Reference source not found.**;
- (d) price-quantity pairs relating to the same Capacity Market Unit shall be cleared in order of increasing price, with nothing cleared from a price-quantity pair unless all lower priced price-quantity pairs relating to that Capacity Market Unit have fully cleared to their maximum quantity;
- (e) from the set of price-quantity pairs relating to Capacity Market Units that contribute to satisfying ~~the quantity determined under paragraph F.8.2.1(b)(i) in respect of~~ a Locational Capacity Constraint, ~~either~~:
 - (i) ~~the cumulative quantity cleared equals or exceeds that~~ the Net Required Quantity; or, where the cumulative quantity is less than the Net Required Quantity.
 - (i) ~~if sub-paragraph (i) does not apply,~~ all of those price-quantity pairs shall be cleared; and
 - (ii) the cumulative quantity cleared does not exceed the Net Maximum Quantity.
- (f) Exempt Price-Quantity Pairs are not to be cleared to satisfy a Locational Capacity Constraint or to maximise Net Social Welfare until all applicable price-quantity pairs with an offered capacity duration of one Capacity Year have been cleared.

Locational Capacity Constraint Information in respect of a Locational Capacity Constraint, means the following information:

- (a) the name;
- (b) the Locational Capacity Constraint Required Quantity;
- (c) whether the Locational Capacity Constraint is a Level 1 Locational Capacity Constraint or a Level 2 Locational Capacity Constraint; and
- (d) for a Level 2 Locational Capacity Constraint, the Level 1 Locational Capacity Constraint it falls within; and
- (e) the Locational Capacity Constraint Maximum Quantity.

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Locational Capacity Constraint Maximum Quantity in respect of a Locational Capacity Constraint, means the quantity (in MW) determined by the System Operators under paragraph F.4.1.1, as reduced under paragraph **Error! Reference source not found.** or adjusted under paragraph **Error! Reference source not found.**

Net Required Quantity means the minimum quantity (in MW) that is required to be cleared in a Capacity Auction in respect of a Locational Capacity Constraint calculated in accordance with F.8.2.1.

Net Maximum Quantity means the maximum quantity (in MW) that can be cleared in a Capacity Auction in respect of a Locational Capacity Constraint calculated in accordance with F.8.2.1.

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

The System Operators are introducing this Modification Proposal for discussion with industry and the Regulatory Authorities to address scenarios where more capacity could be cleared in a part of the power system than can be feasibly be accommodated in the timeframes involved in the delivery of capacity.

Where more capacity applies to qualify in a particular area than can be technically accommodated in the delivery timeframes of a Capacity Auction, the System Operators and ultimately the Regulatory Authorities are faced with a difficult dilemma: (a) to qualify all of the capacity are run the risk that the capacity clears and it cannot be utilised due to locational constraints on the power system or (b) to qualify none of the capacity mitigating this risk but resulting in an outcome that is not satisfactory, reduces competition and increases the risk that there will be insufficient capacity to meet the requirements of the Capacity Auction.

Where some capacity can be accommodated but not all, the this Modification Proposal would allow the System Operators and ultimately the Regulatory Authorities to qualify more capacity that can be accommodated in particular locational capacity constraint area and allow this capacity to compete the amount of capacity that can be accommodated. This strikes a balance between the two extremes set out above and does so in a manner that is promotes competition, does not unduly discriminate between capacity market participants and ultimately promotes the short- and long-term interests of consumers of electricity in Ireland and Northern Ireland.

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

to promote competition in the provision of electricity capacity to the SEM;

Allows more capacity to be qualified in areas where there are locational capacity constraints that cannot accommodate this capacity in the timeframes.

to provide transparency in the operation of the SEM;

To ensure that Capacity Market participants are rejected in the qualification process where the reasons are not clear due to the confidential nature of the process and that this issue arises due to the cumulative impact of multiple applications from different participants.

to ensure no undue discrimination between persons who are or may seek to become parties to the Capacity Market Code

by including these constraints in the Capacity Auction, the System Operators can qualify all capacity that is located or proposed to be located in these areas and to allow all the capacity to compete for the amount of capacity that can be feasibly accommodated in the timeframe.

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.

These changes will enable greater competition, greater transparency and provide the greatest opportunity for capacity to clear in the Capacity Auction that can be feasibility accommodated by the power system in the delivery timeframes.

Implication of not implementing the Modification Proposal

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

All of the above issues will remain.

Impacts

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

The concept of a maximum constraint would need to be implemented in the Locational Capacity Constraints Methodology, which would be subject to normal regulatory processes and is outside the Capacity Market Code.

The changes would need to be implemented in the Capacity Market Platform and the associated processes.

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.