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)
System Operators	4 May 2023	Standard	CMC_14_23

Contact Details for Modification Proposal Originator		
Name	**Telephone number**	**Email address**
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Modification Proposal Title		
Locational Capacity Constraint Violation Criteria		

Documents affected (delete as appropriate)	Section(s) Affected	Version number of CMC used in Drafting
CMC	Chapter F, Glossary	8

Explanation of Proposed Change (mandatory by originator)

This Modification Proposal seeks to provide further detail to the Capacity Market Code following design of the algorithm used to give effect to modification CMC_08_22 approved in SEM-22-066 on 30 September 2022.

CMC_08_22 introduced LCC Maximum Quantities into the Capacity Auction. The below change updates the definition of Locational Capacity Constraint Information to provide price quantity values that would be used by the Capacity Auction software to violate a Locational Capacity Constraint where no feasible solution exists in accordance with F.8.2.3. F.8.2.3 is also updated to ensure that the CMC explicitly states the manner in which these constraint violations should proceed.

This will ensures that the Capacity Auction outcomes are clearly defined in the presence of both min and max constraints.

The below text details that where it is not possible to satisfy all Locational Capacity Constraints that both min and max quantities will be relaxed such that the cost of relaxing them is minimised.

Example:

Where an LCC Required Quantity (i.e. minimum quantity) is 1000 MW and the LCC Maximum Quantity is 1199 MW and there are four 300 MW inflexible offers, it is not possible to solve the Capacity Auction. Three units = 900 MW would breach the LCC Required Quantity and Four units = 1200 MW would breach the LCC Maximum Quantity.

Based on the rules set out below, where price quantity for violating the LCC Required Quantity is 100 €/MW and the price quantity for violating the LCC Maximum Quantity is 200 €/MW, the infeasibility would be resolved as follows:

Three units = 900 MW is a 100 MW violation of the LCC Required Quantity, which would cost €10,000. Four units =1200 MW is a 1 MW violation of the LCC Maximum

Quantity, which would cost €200. Minimising the cost of the violation would mean that the LCC Maximum Quantity would be adjusted to 1200 MW and the auction would solve as normal.

As the definition of Locational Capacity Constraint Information has been updated to include the price quantity pairs used under F.8.2.3, it provides full transparency as to why one constraint may be violated over another.

F.8.2.3   In the software program used to conduct Capacity Auctions, the System Operators ~~may~~shall include a feature that allows Locational Capacity Constraint~~s~~ ~~s~~ to be violated subject to the following conditions:

(i) any violation of a Location Capacity Constraint shall be on the basis of a notional cost equal to the price of the violation included in the Locational Capacity Constraint Information multiplied by the quantity of the violation;

(ii) the level of these prices shall be set so that no such violations will occur unless no solution that satisfies the Locational Capacity Constraints would exist that could be found by the software program; ~~subject to a high cost being charged~~and~~,~~

(iii) ~~with this~~the cost ~~added to the costs in the calculation in paragraph F.8.4.2(b)~~of all violations for all Locational Capacity Constraints is minimised.~~, provided that the level of this cost is set so that no such violations will occur unless no solution that satisfies the Locational Capacity Constraints would exist that could be found by the software program.~~

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;
	(e) the Locational Capacity Constraint Maximum Quantity.
	(f) price quantity pairs for the violation of the Locational Capacity Constraint Required Quantity in accordance with F.8.2.3
	~~(e)~~(g) price quantity pairs for the violation of the Locational Capacity Constraint Maximum Quantity in accordance with F.8.2.3.

The System Operators are introducing this Modification Proposal for discussion with industry and the Regulatory Authorities to provide additional detail to the rules pertaining to implementing a Maximum Limit for Locational Capacity Constraint areas following on from the approval of modification CMC_08_22. CMC_08_22 was proposed in order to address scenarios where more capacity could be cleared in a

part of the power system than can feasibly be accommodated in the timeframes involved in the delivery of capacity.

The changes in this modification reflect more detailed information available during the development of the algorithm to give effect to the intention of modification CMC_08_22.

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;

Ensures that Capacity Auction outcomes are always clearly defined.

to provide transparency in the operation of the SEM;

Ensure that any outcome that requires an LCC to be violated is clearly defined on basis of published information. As the price quantity pairs to violate a LCC are included in the definition of LCC Information, this ensures that the information is published in the FAIP.

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

clear objective criteria to ensure capacity results are feasible (in respect of the LCCs) ensure no undue discrimination.

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.

By minimising the cost of the violation of constraints, we are ensure that sensible outcomes such as that covered in the example prevail.

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

The implementation of CMC_08_22 could give rise to results where the Capacity Auction results are not clearly defined under the Capacity Market Code.

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

These changes would need to be implemented in the Capacity Market Platform. As they form part of the current design work to implement CMC_08_22, it is envisaged, subject to any changes that arise as part of the modifications process and subject to approval of the modification proposal, that these changes would be implemented as part of the broader work to implement CMC_08_22.

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.