

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>
Energia	15 <sup>th</sup> May 2024	Standard	CMC_07_24
Contact Details for Modification Proposal Originator			
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Modification Proposal Title			
Treatment of Capacity Contracts of Varying Duration in Constrained Auction Solution			
<b>Documents affected</b> <i>(delete as appropriate)</i>	<b>Section(s) Affected</b>	<b>Version number of CMC used in Drafting</b>	
Capacity Market Code	Section F.8 Conduct of a Capacity Auction	11.0	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p><b>Background:</b> Exempt Price Quantity Pairs are capacity market offers with contract durations greater than one year and prices greater than the auction clearing price. They require an exemption under F.4.1.9 from the Regulatory Authorities to be allowed to clear the auction to resolve a constraint. Under F.8.4.4 (f) of the CMC, these Exempt Price Quantity Pairs cannot clear the auction until all relevant one-year Capacity Market Offers have cleared the auction, regardless of price requested by those one-year offers.</p> <p>This modification seeks to maintain this primacy of one year contracts in the resolution of constraints, but give next preference to shorter duration Exempt Price Quantity Pairs (defined as less than or equal to five years in duration) over longer duration Exempt Price Quantity Pairs (defined as greater than five years in duration).</p> <p>During the analysis undertaken for this modification, other clarity edits were identified to the description of the interaction of maximum and minimum locational constraints in the auction clearing alongside the treatment of Exempt Price Quantity Pairs under F.8.4.4 (f). These are included for completeness and are secondary to the consideration of the changes to F.8.4.4 (f).</p> <p>The rationale for this modification is implicit within the State Aid approval (<a href="#">No. SA. 44464 (2017/N)</a>) for the CRM, which gives emphasis to network build to resolve constraints ahead of long-term locational capacity priced above the clearing price of the capacity auction and is also in keeping with the principles of the existing CMC which gives preference to shorter duration contracts for the resolution of constraints.</p>			
Legal Drafting Change <i>(Clearly show proposed code change using <b>tracked</b> changes, if proposer fails to identify changes, please indicate best estimate of potential changes)</i>			
<p><b>Amend the following paragraphs:</b></p> <p>F.8.2.3 In the software program used to conduct Capacity Auctions, the System Operators shall include a feature that allows Locational Capacity Constraints to be violated subject to the following conditions:</p>			

- (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 <sup>(1)</sup>~~no~~ such violations shall only occur if:
  - (A) <sup>(2)</sup>no breach of any other requirement of F.8.4.4 (other than F.8.4.4 (e)) has occurred; and
  - (B) no solution that satisfies the Locational Capacity Constraints <sup>(3)</sup>would otherwise exist that could be found by the software program without such violations;
- (iii) the cost of all violations for all Locational Capacity Constraints is minimized.

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- (1) Optional change to positively express the scenarios where a violation might occur (as opposed to the double negative phrasing)
- (2) Change suggested to ensure all other requirements of F.8.4.4 have primacy and the auction solution should breach the locational capacity constraints first.
- (3) Continued discretionary drafting clarity]

F.8.4.4 Subject to paragraphs F.8.4.6, F.8.4.6A and F.8.4.7, 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:

...

(e) from the set of price-quantity pairs relating to Capacity Market Units that contribute to satisfying the Net Required Quantity determined in respect of a Locational Capacity Constraint: <sup>(4)</sup>~~either:~~

(i) either

- (A) <sup>(5)</sup>the cumulative quantity cleared shall equal or exceed that Net Required Quantity; or
- (B) if sub-paragraph (A) above does not apply, all of those price-quantity pairs <sup>(6)</sup>as determined pursuant to paragraph F.8.2.3 on violation of the Locational Capacity Constraint shall be cleared; and

(ii) either:

- (A) the cumulative quantity cleared <sup>(7)</sup>shall not exceed the Net Maximum Quantity; ~~and or~~
- (B) <sup>(8)</sup>if sub-paragraph (A) above does not apply, all of those price-quantity pairs as determined pursuant to paragraph F.8.2.3 on violation of the Locational Capacity Constraint shall be cleared; and

(f) Exempt Price-Quantity Pairs with:

- (i) <sup>(9)</sup>an offered capacity duration less than or equal to five years shall ~~are~~ not ~~to~~ be cleared to satisfy a Locational Capacity Constraint or to maximise Net Social Welfare until all <sup>(10)</sup>applicable price-quantity pairs capable of resolving that particular Locational Capacity Constraint with an offered capacity duration of one Capacity Year have been cleared; and

- (ii) <sup>(9)</sup>an offered capacity duration greater than five years shall-not be cleared to satisfy a Locational Capacity Constraint or to maximise Net Social Welfare until all other Exempt Price Quantity Pairs capable of resolving that particular Locational Capacity Constraint with an offered capacity duration less than or equal to five Capacity Years have been cleared.

[Comments

- (4) Deletion of spurious "either".
- (5) Discretionary drafting clarity.
- (6) Prevents F.8.2.3 reaching an auction solution (without reaching the Net Required Quantity, despite capacity being available to do so due to more expensive violation of Net Maximum Quantity) which in turn requires F.8.4.4(e)(ii) to clear such available non-cleared capacity anyway, which would be contrary to the intent of F.8.2.3.
- (7) Discretionary drafting clarity
- (8) As per note (6) above, allows for the operation of F.8.2.3 in line with the auction objectives (which allow for a Net Maximum Quantity to be breached). This also sets a clear (albeit) implicit hierarchy between the Net Maximum Quantity breaches and the absolute requirements of F.8.4.4(f).
- (9) **Core Element of Modification: Provides for a second tier of clearing priority for Exempt Price Quantity Pairs, differentiating between Exempt Price Quantity pairs greater than five years and those below or equal to five years.**
- (10) Discretionary drafting clarity

**Modification Proposal Justification**

(Clearly state the reason for the Modification)

**Recent Developments:** The SEM Committee has recently decided ([SEM-24-035](#)) to introduce intermediate length contracts (ILC) of up to five years for refurbishing capacity. Energia, in its [response](#) to the relevant consultation ([SEM-23-093](#)) requested that all Exempt Price Quantity Pair ILC capacity offers should clear in advance of an Exempt Price Quantity Pair New capacity offers. This request was stated in this manner given that all New Capacity to date has requested capacity durations of the full ten-years. Energia viewed this as being aligned with the principles of the State Aid decision referenced above and is also in keeping with the principles of the existing CMC which gives preference to shorter duration contracts for the resolution of constraints.

The SEM Committee, however, rejected this suggestion on the basis that:

- 1) One year capacity should still have priority over Exempt Price Quantity Pairs. Energia, however, agrees with this position and does not believe it was contrary to the intent of its consultation response;
- 2) There should be no differentiation between a five-year New Capacity offer and a five-year ILC offer. Energia also agrees with its position and accepts it could have been clearer with its ask in this particular scenario. The intent of the consultation response was not to prioritise ILC offers over New Capacity offers under the circumstances of equal offered capacity durations, but when the New Capacity offers were longer in duration (which historically they would have always been relative to the five-year ILC maximum duration).
- 3) ILC contracts still lock in capacity for up to a 9-year window if clearing a T-4 auction, which is a timeframe under which relevant constraints are intended to be resolved by network build-out and locking-in a shorter out-of-merit contract is preferable to locking-in a longer out-of-merit contract. Energia also agrees with this view. Whilst it can be challenging to resolve constraints through network build-out, it is still preferable to lock-in shorter out-of-merit contracts and this is what Energia was advocating in its response to the consultation.

Therefore, whilst there is large degree of alignment on the principles between the SEMC and Energia, Energia believes that a further modification to the CMC is needed that should receive SEMC support. It is also important to treat this modification as urgent so it can be in place for the upcoming T-4 28/29

auction and its drafting can be considered in the round with the introduction of the ILC modification which was flagged in SEM-24-035.

**Modification Development:** Two options were considered for the modification:

- Option 1: For the purposes of clearing Exempt Price Quantity Pairs, a total cost would be assigned to each offer being the product of the requested price and contract duration (with one-year contracts being treated equivalently as today); or
- Option 2: A second prioritisation category would be introduced in F.8.4.4 (f) changing the current situation of:
  - One-year contracts are prioritised over
  - multi-year duration contractsto:
  - One-year contracts are prioritised over
  - multi-year duration contracts up or equal to five years, which in turn are prioritised over
  - multi-year duration contracts greater than five years up or equal to ten years.

Two further options were considered but rejected:

- Adding a penalty cost based on the length of contract only in order to select lower duration contracts was rejected on the basis that it would select a nine-year contract at €130k/MW/annum over a 10-year contract at €90k/MW/annum which is an inefficient outcome.
- A simple prioritisation of Exempt Price Quantity Pairs from ILC offers over Exempt Price Quantity Pairs from New Capacity offers was rejected given the SEMC's concern noted above when both offers are of the same contract duration.

Energia believes that Option 2 is more favourable based on the following assumptions:

- It can better leverage the existing differentiation in treatment of one-year contracts and multi-year contracts, by replicating that differentiation to provide for three different classes.
- While Option 1 is more refined in its approach, the instruction of graduated costs for increasingly long offers would need to be extensively tested against other implicit or explicit cost functions within the clearing process (such as the minimum and maximum locational requirements), would likely require more development, and given the history of multi-year capacity bidding the longest available contract available to it, pragmatically Option 2 should deliver the same result without the complexity.

This modification is therefore drafted on the basis of the second considered option (Option 2).

#### **Code Objectives Furthered**

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

This modification furthers the following Code Objectives outside of the in-principle alignment with the CRM's State Aid approval and continuation of the principles of the existing CMC which gives preference to shorter duration contracts for the resolution of constraints.

#### **A.1.2 Capacity Market Code Objectives**

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

...

(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;

...

...

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

...

(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)*

If the modification is not implemented, the CMC runs the risk of securing locational capacity for longer than necessary. This has negative impacts on consumers, and also runs the risk of displacing refurbished generation in favour of new thermal generation with associated delivery risks and a longer lifespan, which has negative security of supply and environmental impacts. These outcomes undermine many of the reasons for providing ILCs in the first place.

The clarification elements of the modification also provides greater clarity in the interaction of the various locational requirements of the CMC, particularly around F.8.2.3 and F.8.4.4, which would otherwise be unavailable. This clarity is important to understand auction outcomes as capacity margins are increasingly tight and such locational requirements become increasingly binding in the auction solution.

**Impacts**

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

Any change to the capacity auction clearing process will require development and testing. This modification which directly impacts this area is no different. All attempts have been made to consider various options and minimise the impact of the change, should the modification be accepted.

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