SEM-20-071: POWERHOUSE GENERATION RESPONSE

SUMMARY INFORMATION:

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Type of Stakeholder	Market Participant
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PowerHouse Generation fully endorse the attached submission from the Demand Response Association of Ireland (DRAI) to consultation paper *SEM-20-071 - Capacity Market Code Further Consideration of Modification CMC_07_20.*

SEM-20-071: DRAI RESPONSE

SUMMARY INFORMATION

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Type of Stakeholder	Industry Association
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CAPACITY MARKET CODE MODIFICATIONS CONSULTATION COMMENTS:

The DRAI has included its principal responses in the template table below, complemented by a worked example subsequent to that.

ID	Proposed Modification and its Consistency with the Code Objectives	Impacts Not Identified in the Modification Proposal Form	Detailed CMC Drafting Proposed to Deliver the Modification
CMC_07_20 Version 2 Change in Technology Class for Awarded New Capacity	**Introduction:** The DRAI welcomes the SEM-Committee's decision to further consider CMC_07_20. As per its joint DRAI response to SEM-20-040, The DRAI supports the modification's intent and believes there is considerable merit in enabling a change Technology Class in certain circumstances when delivering Awarded New Capacity. The proposed Modification would provide additional flexibility to ensure (de-rated) Awarded New Capacity is delivered, which is in the best interests of consumers and system security of supply. While The DRAI supports the modification's intent, fundamental issues with the drafting remain, particularly regarding equitable treatment of units which do not change Technology Class or Maximum On Time, including units which apply a DECTOL factor. The DRAI supports the SEM-Committee's 'minded to' intent to approve the modification on the condition these material issues are rectified in the final drafting. **Additional elements brought into CMC_07_20 v2:** The DRAI supports the intent of the amendments to version 2 of the modification which seek to repeat the Exception Application test against the New Capacity Investment Rate Threshold for multi-year capacity, to allow switching to any Technology Class (rather than only between Clean	The current drafting of CMC G.3.1.4A has a material and unduly punitive adverse impact on units which (for legitimate reasons) secure Awarded New Capacity less than the de-rated Initial Capacity New OR which apply a voluntary de-rating using a DECTOL factor. This has not been rectified / addressed in the amended drafting proposed as part of modification CMC_07_20. The DRAI believes the resulting treatment of affected units (with very serious financial implications) simply does not make sense and is not in line with well-established de-rating concepts and Capacity Market design principles. The DRAI recommends the Gross De-Rating Factor (from qualification) is completely removed, for all units, from the process of	**G.3.1.4A** For a Capacity Market Unit, the De-Rated Grid Code Commissioned Capacity shall be 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

	Technology Classes) and requiring the Qualification Capacity and Capacity and Trade registers to be updated following any change to Technology Class. **Requirement for equitable treatment of all units:** A key part of the CMC the proposed modifications seeks to amend is G.3.1.4A, which has already been modified by CMC_06_19. The DRAI believes the drafting of this important part of the CMC needs to ensure fair and equitable treatment of different units when assessing the delivery of Awarded New Capacity. This includes providing for four principal scenarios: (i) where a unit has **changed its Maximum On Time** (in either direction) vs. that included in its Qualification Application; (ii) where a unit which has **changed Technology Class**; (iii) where a unit which has **availed of a voluntary DECTOL factor**; and (iv) where a unit has done **none of the above**. As currently drafted and amended by the proposed modification, The DRAI believes scenarios (iii) and (iv) above are not appropriately treated. Further detail is set out in the worked example below for the severely punitive nature of the impact on any unit which avails of a voluntary DECTOL factor. The modification provides for a unit's Gross De-Rating Factor to be redetermined if it changes Technology Class or Maximum On Time vs. qualification. The DRAI believes it is important the same flexibility is afforded to units which do not make such a change in order to be in line with the Code Objective to ensure no undue discrimination. As currently drafted, this is not the case, and the modification would result in a perverse incentive for a unit to change Technology Class or Maximum On Time at the point of commissioning to circumvent the punitive impact of the Gross De-Rating Factor which would otherwise apply to determine Substantial Completion. **Major impact on units availing of a voluntary DECTOL factor:** Modification CMC_06_19 recognised the many reasons Awarded New Capacity may be less than the de-rated Initial Capacity (New), and intended to clarify the calculation of the Proportion of Delivered Capacity should be measured against the Awarded New Capacity secured in the auction, and de-linked from measurement against the Initial Capacity (New) qualified for the	calculating the Proportion of Delivered Capacity to determine Substantial Completion. Regarding the application of the Gross De-Rating Factor under G.3.1.4A(b) to units that have not applied a DECTOL factor, the final drafting and algebra introduced by CMC_06_19 which causes this issue (not resolved by CMC_07_20) do not align with the clearly stated intent of modification CMC_06 _19 and the justifications set out in that modification proposal are therefore no longer valid. While it was clearly stated in the justification for CMC_06_19 the intent of G.3.1.4A(b) was to provide for the Gross De-rating Factor to be used where a Participant has applied a DECTOL factor, its application to units which have not done so appears to be an unintended consequence of the modification. In addition, it is not clear within modification CMC_06_19 or the associated consultation / decision what the actual policy intent of the inclusion of the provision related to DECTOL was. The application of DECTOL at Qualification is voluntary and there are a range of reasons it would be utilised by a Participant. The application of the related algebra set out in CMC_06_19 appears counterintuitive and unduly punitive on Units that have applied it during Qualification (see worked example below). The issue would also lead to a situation where a participant could effectively negate the effect of that DECTOL by changing the Maximum On Time of the associated capacity at the commissioning stage.	Auction in which the relevant Awarded New Capacity was allocated. ~~(b) the Gross De-Rating Factor, as specified in item 3 (b) of Appendix E "Qualification Capacity Register Data";~~ The DRAI believes the significantly simplified drafting above would deliver additional flexibility for all units when delivering New Capacity. This drafting essentially applies the De-Rating Factor that would otherwise apply to a unit based on its Technology Class, Maximum On Time and Grid Code Commissioned Capacity at the point of assessing Substantial Completion, instead of continuing to apply the Gross De-Rating Factor for a progressively small subset of units, without justification.

	auction. However, a strong link to qualified values remains, particularly for units that have, for perfectly legitimate reason, voluntarily derated their unit using a DECTOL factor (despite achieving no commercial advantage by doing so). This effectively places a different value on Delivered Capacity depending on how it was qualified. For example, two DSUs could be awarded exactly the same quantity of De-rated Capacity in an auction and commission and deliver identical capacity but, the current CMC algebra (not rectified by CMC_07_20), could deem one Substantially Complete, while the other if it had qualified more Initial Capacity or applied a DECTOL factor may not achieve Substantial / Minimum completion. This is clearly inconsistent with the market design and de-rating principles. See the worked example below for further detail on this. **Bidirectional flexibility to change Maximum On Time:** The DRAI notes that version 2 of modification CMC_07_20 resolves a previous issue raised regarding the restricted "one way" flexibility currently available to Participants delivering capacity within the same Technology Class. While CMC_06_19 introduced flexibility to meet Awarded New Capacity obligations with a lower derating factor within the same Technology Class, it did not allow a unit to do so with a higher derating factor than envisaged at qualification. The DRAI believes providing bidirectional flexibility in this regard is highly important, particularly with regard to DSUs and storage technologies for which Maximum On Time is a key parameter in de-rating. **Ultimate focus on the delivery of (de-rated) Awarded Capacity:** The DRAI believes the delivery of (de-rated) Awarded Capacity is paramount, and providing Participants maximum flexibility to do so is in the best interests of all parties. As the derating methodology ensures 1 MW of de-rated capacity is of the same value to the system, irrespective of Technology Class, Maximum Down Time, or how a unit was qualified, The DRAI recommends this equitability of treatment is reflected in the final drafting (in particular of G.3.1.4A) prior to it being approved. **Conclusion:** While The DRAI supports the intent to provide additional flexibility in delivering Awarded New Capacity (both allowing a change in Technology Class and a bi-directional change in Maximum On Time), as outlined above and in	Given the unintentionally misleading nature of modification CMC_06_19 and clear misalignment with established design principles, The DRAI believes it is of paramount importance to ensure the associated inconsistencies are remedied as part of modification CMC_07_20 which seeks to modify G.3.1.4A.	

	the worked example below, there are currently fundamental issues with the drafting. On the condition these material issues are rectified in the final drafting, The DRAI supports the SEM-Committee's 'minded to' intent to approve the modification.		

Worked example illustrating the counterintuitive and unduly punitive impact on Units that have applied a voluntary DECTOL factor during qualification:

The DRAI has developed a worked example based on two DSUs which are identical at the point of commissioning, but one of which applied a voluntary DECTOL factor during qualification to reflect 4 MW of capacity it knew would retire prior to the Capacity Year. This is presented in the table below and considers two scenarios:

(i) **DSU-A**: 8 MW Existing Capacity (of which it is known 4 MW will be leaving the DSU's portfolio prior to the Capacity Year in question) plus 2 MW New Capacity. To best reflect its portfolio the DSU has qualified the full 8 MW of Existing Capacity plus 2 MW New Capacity, and has then voluntarily de-rated its unit, by only nominating a part of its eligible Existing Capacity. Due to the mandatory requirement to qualify all Existing Capacity, voluntarily de-rating using a DECTOL factor is the only method available to such a unit to account for a portion of its Existing Capacity leaving at the same time as also bringing in New Capacity. It is not possible for such a unit to use the well-established process for generators seeking to derate or close their plants.

(ii) **DSU-B**: 4 MW Existing Capacity plus 2 MW New Capacity. N.B. This is exactly the same position as DSU-A, but without the 4 MW of additional Existing Capacity registered to the unit at the point of qualification which is due to no longer participate during the Capacity Year for which the auction is being held.

Each DSU has Maximum On Time > 6 hours, and the de-rating factors used are from the T-4 2024/25 Initial Auction Information Pack. Both units effectively desired to bid the same physical capacity into the auction (4 MW Existing Capacity plus 2 MW New Capacity) and both successfully cleared the auction with 5.37 MW Awarded Capacity.

As can be seen from the table, with the application of the Gross De-Rating Factor from qualification, DSU-A would need to deliver 10 MW of Grid Code Commissioned Capacity in order to achieve 100% delivery of the 1.79 MW Awarded New Capacity, vs. DSU-B which would only need to deliver 6 MW. For DSU-B, the capacity required to be delivered matches that which is intuitive from what the unit qualified and bid into the auction for. However, this is not the case for DSU-A which, despite having attempted to qualify its capacity the way which best reflects the status of its current / planned capacity portfolio, and having prudently derated its unit to reflect the 4 MW of Existing Capacity it knew would retire (via the only method available to it).

In the scenario set out, if DSU-A retained the planned 4 MW of Existing Capacity and brought in the 2 MW of New Capacity as was envisaged when bidding into the auction, this would result in the unit failing to achieve Minimum Completion. This would have a material financial impact on the unit, including the termination of all of the unit's Awarded New Capacity under CMC J.6.1.4, with the associated Termination Charge as well as foregone Capacity Payments associated with this capacity.

As can be seen from the bottom of the table below, if the Gross De-Rating Factor is not applied, the two DSUs are treated identically, and both require the delivery of 6 MW of Grid Code Commissioned Capacity to meet 100% of Awarded New Capacity. The DRAI believes this is the fair and intuitive outcome that treats the two units equitably in such a case.

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	Acronym	Unit	DSU-A	DSU-B	
Initial Capacity (Existing)	ICE	MW	8	4	Based on Existing Capacity at qualification
Initial Capacity (New)	-	MW	2	2	Based on New Capacity
Initial Capacity (Total)	ICT	MW	10	6	
De-Rating Factor Existing (DRFE)	DRFE		0.895	0.895	
De-Rating Factor applicable to the Technology Class, Initial Capacity (Total) and Initial Maximum On Time (Total)	DRFT		0.895	0.895	2 hours in this case for both examples
Increase Tolerance Factor	INCTOL		0	0	0% for DSUs, as per IAIP
Decrease Tolerance Factor	DECTOL		1	1	100% for DSUs, as per IAIP
Gross De-Rated Capacity (Existing) nominated in the Application for Qualification in respect of Existing Capacity	NDRVE	MW	3.58	3.58	Nominated value as part of Qualification Application
Gross De-Rated Capacity (New) nominated for Application for Qualification in respect of New Capacity	NDRVN	MW	1.79	1.79	Nominated value as part of Qualification Application
Gross De-Rated Capacity (Existing)	GDRCE	MW	3.58	3.58	Determined as per CMC E.8.2.1
Gross De-Rated Capacity (New)	GDRCN	MW	1.79	1.79	Determined as per CMC E.8.2.4
Gross De-Rated Capacity (Total)	-	MW	5.37	5.37	Determined as per CMC E.8.3.1(c)
Gross De-Rating Factor (for the sum of Existing and New capacity)	-	%	0.537	0.895	Determined as per CMC E.8.8.1(c)
Awarded Existing Capacity	-	MW	3.58	3.58	From auction results
Awarded New Capacity	-	MW	1.79	1.79	From auction results
Awarded Capacity	-	MW	5.37	5.37	From auction results
Grid Code Commissioned Capacity to deliver 100% of Awarded New Capacity	**-**	**MW**	**10**	**6.0**	Determined as per CMC G.3.1.4A
Grid Code Commissioned Capacity to deliver 90% of Awarded New Capacity (for Substantial Completion)	**-**	**MW**	**9.666**	**5.8**	Determined as per CMC G.3.1.4A
Grid Code Commissioned Capacity to deliver 50% of Awarded New Capacity (for Minimum Completion)	**-**	**MW**	**8.333**	**5.0**	Determined as per CMC G.3.1.4A

Comparison had the two DSUs not had to apply the Gross De-Rating Factor when determining Substantial Completion					
Grid Code Commissioned Capacity to deliver 100% of Awarded New Capacity	**-**	**MW**	**6**	**6**	Determined as per CMC G.3.1.4A
Grid Code Commissioned Capacity to deliver 90% of Awarded New Capacity (for Substantial Completion)	**-**	**MW**	**5.8**	**5.8**	Determined as per CMC G.3.1.4A
Grid Code Commissioned Capacity to deliver 50% of Awarded New Capacity (for Minimum Completion)	**-**	**MW**	**5.0**	**5.0**	Determined as per CMC G.3.1.4A