

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>
UR	12 th August 2022	Urgent	CMC_11_22
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Modification Proposal Title			
De-rating for Annual Run Hours Limits			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of CMC used in Drafting	
CMC	C,D,E,G, & I, Glossary, Apps D&E	6.0	
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p>Following the decision by the SEM Committee on 10 August 2022, this modification introduces a downward adjustment to de-rated capacity for Candidate Units with a limit on their annual run hours. It uses analogous drafting to that employed for daily run hour limits for storage and DSUs. Like current interconnector de-rating, it will compound an additional de-rating factor to the marginal outage-based de-rating factor to produce an effective de-rating factor.</p> <p>The additional de-rating will only apply to combustion plant and will initially only apply to New Capacity. This is important to provide New Capacity with appropriate economic incentives to deliver capacity for the whole Capacity Year. It is not appropriate to apply this additional de-rating to Existing Capacity at this time as it could lead to early exit of capacity at a time of capacity shortage given the current level of the Auction Price Cap. In the longer term it is anticipated that the additional de-rating for annual run hours limits would apply to all combustion plant.</p> <p>The drafting collects the Annual Run Hours Limit for all Candidate Units, but the additional de-rating is only applied to New Capacity by use of the variable Initial Annual Run Hours Limited (Total).</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><u>Main Body of the CMC</u></p> <p><i>Modify the following paragraph as shown:</i></p> <p>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 and initial annual run hours limit. The de-rating curves are determined by the Regulatory Authorities; and</p>			

Add the following sub-section:

C.3.8 Annual Run Hours Limit

- C.3.8.1 For a Generator Unit, the Initial Annual Run Hours Limit (Existing) for a Capacity Year shall be equal to its Annual Run Hour Limit as set out in the relevant environmental licence or permit.
- C.3.8.2 For a Generator Unit (other than a Demand Site Unit), the Initial Annual Run Hours Limit (Total) for a Capacity Year shall be equal to the Participant's expectation of the Generator Unit's Annual Run Hours Limit given the applicable emissions legislation.
- C.3.8.3 The Initial Annual Run Hours Limit (Total) of a Generator Unit that has no New Capacity for a Capacity Year shall be set equal to 8760 hours in respect of that Capacity Year.

Modify the following paragraphs as shown:

- D.3.1.2(a) the final De-Rating Curves, defining De-Rating Factors by Technology Class, Initial Capacity, Maximum On Time and Annual Run Hours Limit (including for Interconnectors) to be used in the Capacity Auction;
- D.3.1.3(a) the final De-Rating Curves, defining De-Rating Factors by Technology Class, Initial Capacity, Maximum On Time and Annual Run Hours Limit (including for Interconnectors) 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;
- E.7.8.2(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) and Initial Annual Run Hours Limit (Total), as applicable, less the Gross De-Rated Capacity (Existing) determined under sub-paragraph (e);

- E.8.2.6(e) DRFT is the De-Rating Factor applicable to the Technology Class, Initial Capacity (Total), Initial Maximum On Time (Total) and Initial Annual Run Hours Limit (Total) be set to, as applicable, of the Generator Unit or Interconnector 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, Initial Capacity (Total), Initial Maximum On Time (Total) and Initial Annual Run Hours Limit (Total), as applicable, of Generator *i* as specified in the relevant Initial Auction Information Pack;
- E.8.5.3 For each Capacity Market Unit, the De-Rated Firm Network Access Capacity shall be:
- (a) in the case of an Aggregated Generator Unit, the sum, for all of the Generators that form part of that Aggregated Generator Unit, of the Firm Network Access Capacity of the Generator multiplied by the De-Rating Factor applicable to a unit of the Technology Class and Initial Maximum On Time (Total) and Initial Annual Run Hours Limit (Total) of that Generator with an Initial Capacity equal to the Firm Network Access Capacity of that Generator; and
- (b) in all other cases, the Firm Network Access Capacity of the Generator Unit or Interconnector multiplied by the De-Rating Factor applicable to a unit of the Technology Class and Initial Maximum On Time (Total) and Initial Annual Run Hour Limit (Total) of that Generator Unit or Interconnector and with an Initial Capacity equal to the Firm Network Access Capacity of that Generator Unit or Interconnector.

Add a new paragraph as follows:

- G.3.1.2E The value of Commissioned Annual Run Hours Limit
- (a) in respect of New Capacity which generates using combustion shall be the maximum number of hours per Capacity Year during which the relevant combustion plant, in whole or in part, may operate in compliance with all applicable legislation, licences, authorisations, consents and permits obtained as required for Substantial Financial Completion; and
- (b) in respect of all other capacity shall be assumed to have the value 8760 hours.
- G.3.1.2F For a Generator Unit (other a Demand Side Unit or Aggregated Generator Unit), the Commissioned Annual Run Hours Limit may differ from the Initial Annual Run Hours Limit included in the Application for Qualification only where this does not result in a breach of the relevant Connection Agreement(s) (as modified from time to time).
- G.3.1.2G For a Demand Side Unit or Aggregated Generator Unit, the Commissioned Annual Run Hours Limit may differ from the Initial Annual Run Hours Limit included in the Application for Qualification.

Modify the following paragraph as shown:

- 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:
- (a) where a unit has a zero INCTOL value, 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~~Maximum On Time and an Initial Annual Run Hours Limit equal to the Commissioned Annual Run Hours Limit 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 (Grid Code Commissioned De-rating Factor)
 - (b) otherwise where a unit has a non-zero INCTOL value the Gross De-Rating Factor, as specified in item 3 (b) of Appendix E “Qualification Capacity Register Data”;
- I.1.3.1(b) at all times during the Capacity Year the cumulative de-rated capacity provided by the mix of Generators (based on each Generator’s individual Initial Capacity and the De-Rating Factor applicable to its Technology Class and Initial Maximum On Time (Total) and Initial Annual Run Hours Limit (Total) at the time the Aggregated Generator Unit last Qualified) equals or exceeds the Awarded Capacity provided by that Aggregated Generator Unit applicable to that Capacity Year (except to the extent the System Operators agree);

Glossary

Add the following definition~~s~~:

Annual Run Hour Limit in respect of capacity which generates using combustion shall be the maximum number of hours per Capacity Year during which the relevant combustion plant, in whole or in part, may operate in compliance with all applicable legislation, licences, authorisations, consents and permits; and in respect of all other capacity shall be assumed to have the value 8760 hours .

Initial Annual Run Hour Limit (Existing)
has the meaning given in paragraph C.3.8.1.

Initial Annual Run Hour Limit (Total)
has the meaning given in paragraphs C.3.8.2 and C.3.8.3.

Maximum On Time means the for a Demand Side Unit means the Maximum Down Time under the Applicable Grid Code and for all other units shall be the Maximum On Time under the applicable Grid Code.

Modify the following 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 <u>and Annual Run Hour Limit</u> 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.
<u>Appendices</u>	
<i>Modify the following sub-paragraphs as shown:</i>	
Appendix D, 4(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 (iii) <u>Initial Annual Run Hours Limit (Existing) of the Candidate Unit</u> (iv) <u>Initial Annual Run Hours Limit (Total) of the Candidate Unit</u>
Appendix E, 3(b)(iii)	where paragraph G.3.1.2C or G.3.1.2D <u>or G.3.1.2E or G.3.1.2F</u> applies or where a change in Technology Class is granted in accordance with section J.5.4 the Gross De-Rating Factor for a Capacity Market unit (FDERATE Ω) shall be re-determined on the same basis as in sub-paragraph (ii) except that it shall use a value of Initial Capacity equal to the Grid Code Commissioned Capacity and an Initial Maximum On Time equal to the Grid Code Commissioned Maximum On Time <u>and the a value of Initial Annual Run Hours Limit equal to the Commissioned Annual Run Hours Limit</u> and the updated Technology Class of the Capacity Market Unit as applicable; and
Modification Proposal Justification <i>(Clearly state the reason for the Modification)</i>	
To comply with the SEM Committee Decision of 10 August 2022 which is to be implemented for the forthcoming 2026/27 T-4 Auction.	
The current Capacity Market de-rating process does not distinguish between a project that can run continuously for the whole year and one that has restricted running: for example a unit limited to less than 1500 run hours per year. Not providing a categorization for ARHL de-rating factors, means there is no differentiation to incentivise unrestricted run hour unit configurations.	
Run hour restrictions can impact on the ability of such units to effectively contribute to capacity adequacy. This can be best explained with a simple example. Imagine there are 1000 hours each year with a high LoLP. A unit that can operate for 500 hours can only contribute and ensure that the same security standard is retained in half of these periods (even when ignoring the potential for a forced outage). In the remainder of the periods it is not permitted to generate and therefore makes no contribution to generation adequacy. Its effective de-rating factor is therefore lower than a unit that does not face any such restrictions.	
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(a), (b) and (g)	
Implication of not implementing the Modification Proposal <i>(State the possible outcomes should the Modification Proposal not be implemented)</i>	
Non-compliance with a SEM Committee Decision.	
Either the market risks capacity adequacy issues as some units are not permitted to operate due to the emissions limits; or the market procures large volumes of run hour restricted units to	

deliver the required “effective” de-rated capacity, at a significant cost to consumers, which is an inefficient way for delivering security of supply.

Impacts

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

The calculation of de-rating curves, the Qualification process and the process to determine Substantial (or Minimum) Completion will be affected. Additional data will need to be held in the Qualification Capacity Data register to cover the annual run hours limits.

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.