

Capacity Market Modifications Workshop 20

CMC_12_21: Modification to the methodology for calculating the De-Rated Grid Code Commissioned Capacity

27th July 2021

Overview



Background

CMC_06_19

Intent:

- 1) Calculation of the Proportion of Delivered Capacity should be measured against the Awarded New Capacity secured in the auction and de-linked from the measurement against the Initial Capacity (New) qualified for the auction.
- 2) Address inconsistencies within Chapter G of the CMC.

Result of Implementation:

- 1) The unintended consequence of applying the Gross DRF (based on the qualified Initial Capacity) within limb (b) of G.3.1.4A, is that this link to qualification values is strengthened as opposed to removed.
- 2) Some legacy text remains within G.3.1.4

Justification

CMC_12_21 (GDRF)

Intent:

- 1) the Gross De-Rating Factor (from qualification) is completely removed, for all units, from the process of calculating the Proportion of Delivered Capacity to determine Substantial Completion
- 2) Address inconsistencies within Chapter G of the CMC.

Result of Implementation:

- 1) the Gross De-Rating Factor (from qualification) is completely removed, for all units, from the process of calculating the Proportion of Delivered Capacity to determine Substantial Completion
- 2) Legacy text removed from G.3.1.4

Examples

	CMU A	CMU B	
Initial Capacity	100 MW	200 MW	
Derating Factor	0.904	0.89	
Net Derated	90.4	178	
Awarded Capacity (derated)	50 MW	50 MW	
Delivered Capacity (nameplate)	50 MW	50 MW	• 2 CMUs with identical generators
GDRF	0.904	0.89	
Delivered Capacity (Derated)	45.2 MW	44.5 MW	• One discriminated against due to use of Gross De-Rating Factor in Substantial Completion determination
Proportion of Delivered Capacity	90.4%	89%	
Substantially Complete	Yes	No	

	CMU X	
Initial Capacity	100 MW	• CMU X qualifies with 100 MW but only clears 10 MW
Awarded Capacity	10 MW	• CMU X delivers 10 MW achieving a Proportion of Delivered Capacity of 100%
Delivered Capacity	10 MW	
Proportion of Delivered Capacity	100%	• Current algebra within G.3.1.8 would suggest Commissioned Capacity would be 100 MW

$$\begin{aligned}
 \text{qCCOMMISS}\Omega\gamma &= \text{Initial Capacity (Existing)} + \text{Proportion of Delivered Capacity} * \\
 &\quad (\text{Initial Capacity (Total)} - \text{Initial Capacity (Existing)}) \\
 &= 0 + 100\% * (100 \text{ MW} - 0 \text{ MW}) \\
 &= 100 \text{ MW}
 \end{aligned}$$

Legal Drafting Change

Change 1: Remove reference to Gross Derating Factor from CMC G.3.1.4A

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 paragraph G.3.1.2C or G.3.1.2D applies or where a change in Technology Class is granted in accordance with section J.5.4~~ 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 Auction in which the relevant Awarded New Capacity was allocated (**Grid Code Commissioned De-Rating Factor**).

~~(b) otherwise the Gross De-Rating Factor, as specified in item 3 (b) of Appendix E “Qualification Capacity Register Data”;~~

Change 2: Remove legacy text from CMC G.3.1.4

G.3.1.4A The Proportion of Delivered Capacity in respect of Awarded New Capacity at a given time is a percentage value being:

- (a) the greater of:
 - (i) zero; and
 - (ii) the lesser of:
 - (A) the De-rated Grid Code Commissioned Capacity; and
 - (B) the Awarded Capacity ; less the Awarded Existing Capacity ;
- (b) divided by:
 - (i) the Awarded Capacity ; less
 - (ii) the Awarded Existing Capacity ,

~~where “Initial Capacity (Existing)” and “Initial Capacity (Total)” shall have the values determined when the Awarded New Capacity Qualified.~~

Change 3: Change text in CMC G.3.1.8

Status of Capacity	Proportion of Delivered Capacity	Commissioned Capacity
New Capacity, - Substantial Completion prior to Long Stop Date	≥ 90%	Initial Capacity (Existing) + Proportion of Delivered Capacity times $\frac{[\text{Initial Awarded Capacity (Total)} - \text{Initial Awarded Capacity (Existing)}]}{\text{Grid Code Commissioned De-Rating Factor}}$
New Capacity, operating but has only achieved Minimum Completion by Long Stop date.	≥ 50% ≤ 90%	Initial Capacity (Existing) + Proportion of Delivered Capacity times $\frac{[\text{Initial Awarded Capacity (Total)} - \text{Initial Awarded Capacity (Existing)}]}{\text{Grid Code Commissioned De-Rating Factor}}$

→ If limb (b) is needed to account for certain units it should only apply to a specific subset units, not all units which aren't specified in limb (a)

Justification / impact of not accepting proposed modification



JUSTIFICATION

- Many reasons why Awarded New Capacity may be less than the de-rated Initial Capacity (New)
- Removes the assessment based on qualified values when determining if Awarded New Capacity has been delivered
- Removes inconsistencies within the CMC due to legacy text



IMPACT OF NOT ACCEPTING MODIFICATION

- Units will continue to get discriminated against depending on how they qualified
- Legacy text remains in the CMC