



**Single Electricity Market  
(SEM)**

**Information Note on DSU De-Rating Factors in  
the CRM**

**SEM-23-053**

**31 July 2023**

In December 2022, the SEM Committee published a Decision Paper<sup>1</sup> formally approving the adoption of enhancements to the TSO modelling of De-Rating Factors (DRFs) and the Capacity Requirement for each Capacity Auction. These enhancements had been proposed by and consulted<sup>2</sup> on by the TSOs in time to be implemented for the 2023/24 T-1 auction, at the request of the SEM Committee.

A range of modelling enhancements were implemented from the 2023/24 T-1 auction, which took place in July 2023. Amongst these is a change in the way that DRFs are calculated for Demand Side Units (DSUs). For Capacity Auctions that have taken place since go live of the new market arrangements, DSUs have been treated as “new technology” and assigned system-wide outage statistics in determining the DRFs to be applied to them, given the absence of historical data on which to base DSU-specific statistics<sup>3</sup>.

The TSOs proposed that DSUs no longer be assigned system-wide outage statistics on the grounds that there are now five years of DSU-specific outage statistics under the new SEM arrangements available, which can be used instead. This proposed enhancement was approved by the SEM Committee, but with a “glidepath” to be implemented for the 2023/24 T-1 auction, such that the DSU DRFs for this auction have been set at the DRFs calculated based on DSU-specific availability statistics, plus 50% of the difference between those DRFs and the DRFs calculated using system-wide availability statistics i.e. only half of the impact of the change in the modelling approach has been applied in setting the DRFs for DSUs in the 2023/24 T-1 auction. Given that DSU availability over the last 5 years has been lower than the system wide average, the modelling enhancement has the effect of lowering the DRFs for DSUs at this time. The glidepath approach was implemented in order to moderate this impact in the case of the T-1 auction in particular, given that it was to take place so soon after the decision to amend the modelling approach and that it represented the final opportunity to obtain a capacity contract for the 2023/24 Capacity Year.

The full move to the new approach for calculating DSU DRFs will take place from the 2027/28 T-4 auction in September 2023. While it is mandatory for existing capacity to participate in this auction, the SEM Committee notes the option available to DSUs to amend their Gross De-rated Capacity Nominated, as submitted in their qualification applications, to a value anywhere below their Gross De-rated Capacity, given that the DECTOL parameter is set to 100% for DSUs in this auction. DSUs can therefore effectively opt not to offer any of their capacity into this auction.

In the interests of continuing to moderate the impact of the modelling enhancement, the SEM Committee is minded to maintain the same glidepath approach applied for the 2023/24 T-1 auction for the purposes of the next T-1 auction also, i.e. the 2024/25 T-1, which will take place in March 2024.

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<sup>1</sup> <https://www.semcommittee.com/publications/sem-22-097-crm-capacity-requirement-and-associated-de-rating-factors>

<sup>2</sup> <https://www.semcommittee.com/publications/sem-22-075-consultation-proposed-enhancements-methodology-determination-crm-capacity>

<sup>3</sup> <https://www.semcommittee.com/sites/semc/files/media-files/SEM-18-030a%20Appendix%20A%20TSO%20Capacity%20Requirement%20and%20De-rating%20Factors%20Methodology%20June%202018.pdf>

The SEM Committee also confirms that the final demand curve for the 2027/28 T-4 auction, will include an adjustment for demand withholding in anticipation of a T-1 auction for that Capacity Year, in line with the approach set out in the CRM Detailed Design<sup>4</sup>.

The SEM Committee will monitor DSU availability statistics on an ongoing basis and assess whether there has been a marked change in these statistics at any point. In the case where a clear and sustained increase in DSU availability becomes apparent, the SEM Committee confirms that it will consider adapting the de-rating methodology for subsequent auctions to give a greater weighting to more recent data for as long as it deems appropriate to do so.

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<sup>4</sup> [SEM-16-039 CRM Decision 3 | SEM Committee](#)