



**Single Electricity Market
(SEM)**

**Capacity Remuneration Mechanism
T-1 2023/2024 Capacity Auction Parameters
Decision Paper**

**Decision Paper
SEM-21-088**

01 December 2022

1. EXECUTIVE SUMMARY

On 23 September 2022, the SEM Committee consulted on the parameters for the 2023/24 T-1 Capacity Auction.

This paper describes the SEM Committee's decision for the relevant parameters to apply in the 2023/24 T-1 capacity auction, scheduled to take place on 18 July 2023. Most of the parameters proposed in the consultation are the same as those used in recent auctions, including the 2026/27 T-4 auction.

A total of four responses were received. Having considered these responses, the SEM Committee has decided to retain all the parameter values as published within the consultation paper. These are summarised in the following table:

Parameter	Proposed Value for T-1 2023/24 capacity auction
De-Rating Curves, defining De-Rating Factors by unit Initial Capacity and by Technology Class (including for Interconnectors)	To be determined by System Operators prior to publication of Initial Auction Information Pack.
Capacity Requirement	To be determined by System Operators prior to publication of Initial Auction Information Pack.
Indicative Demand Curve	The Demand Curve will be based on the following principles: horizontal at the Auction Price Cap between 0MW and 100% of the adjusted Capacity Requirement. vertical at 100% of the adjusted Capacity Requirement between the Auction Price Cap and Net CONE. a straight-line slope with a zero-crossing point at 115% of the adjusted Capacity Requirement.

Auction Price Cap	1.5 times Net CONE i.e., €146,920 ¹ / de-rated MW / year. This value may be subject to change following the outcome of the ongoing BNE study.											
Existing Capacity Price Cap	0.5 x Net CONE i.e., €46,150 / de-rated MW /year.											
New Capacity Investment Rate Threshold	€300,000 /de-rated MW / year.											
Annual Stop Loss Limit Factor	1.5											
Billing Period Stop Loss Factor	0.5											
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These parameters will be included within the Initial Auction Information Pack for the auction, to be published on 5 December 2022. The auction is scheduled to take place in July 2023.

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3. SUMMARY OF PROPOSALS IN THE CONSULTATION PAPER

On 23 September 2022, the SEM Committee consulted on the parameters for the 2023/24 T-1 Capacity Auction.

This paper describes the SEM Committee's decision for the relevant parameters to apply in the 2023/24 T-1 capacity auction, scheduled to take place on 18 July 2023. Most of the parameters proposed in the consultation are the same as those used in recent auctions, including the 2026/27 T-4 auction.

A total of four responses were received. Having considered these responses, the SEM Committee has decided to retain all the parameter values as published within the consultation paper.

4. SUMMARY OF RESPONSES

Four responses were received in total from the following:

1. BGE
2. DRAI
3. ESB GT
4. TSOs EirGrid/SONI

De-Rating Curves, De-Rating Factors

ESB noted a concern in relation to the recent SEM-22-063 decision paper on the application of ARHL. ESB request clarity on extension of ARHL to existing capacity and ask that any change to the DRF methodology must part of a consultation process to allow input from market participants, given that any change to the De-rating Factors will have a significant impact on investment decisions for both New and Existing Capacity.

EirGrid/SONI mention a review of the operation of the current derating and capacity requirement methodology has identified several opportunities for improvement of the process. The TSOs state these improvements will more accurately assess the contribution to reliability from each technology.

Indexation

BGE wish to see the RAs more reasonably reflect inflation at a greater value than the nominal 2% per annum, which is applied to the Auction Price Cap as per SEM-21-110. BGE also wish to see an indexation placed upon the underlying cost inputs to the Net CONE calculation and the Existing Capacity Price Cap.

Existing Capacity Price Cap (ECPC) and Auction Price Cap (APC)

BGE believe that indexation for this capacity auction should be uniformly applied to both the APC and Existing Capacity Price Cap (ECPC) aspects of the demand curve to avoid discriminating against existing plants.

ESB wish for a full consultation on Parameters such as the multipliers on Net CONE that determines ECPC along with the other multipliers that determine APC and NCIRT. Their hope was that the BNE study would be concluded and then the APC and ECPC would be known well in advance of the timetable for USPC applications.

Annual Run Hour Limits

BGE wish for clarity regarding the application of the Annual Run Hour Limited de-rating factor (ARHLdf) for this auction, as applied to new gas turbines and new steam turbines. Further to this, the volumes identified by the theoretical application of the ARHLdf to already existing Awarded New Capacity contracts for the capacity year are included in the capacity requirement for the auction to avoid under-procurement.

The DRAI are concerned by the implementation of the ARHLdf as per SEM-22-044, and that there was no proper consideration of the impact on demand side units. They were also concerned at the significant changes included within the urgent modification on ARHLdf and that the changes were implemented over a tight set of timelines.

ESB wish to make clear their concern relating to the application of ARHLdf to New Capacity only. Whilst at a high level, ESB support the notion, the RA reference within [SEM-22-063](#) that states *in the longer term it is anticipated that the additional de-rating for annual run hours limits may apply to all combustion plant risks threatening Security of Supply (SoS)*, as the further application of de-rating in this regard disincentivizes investment decisions on the island, and may dissuade entry into the SEM.

Capacity Requirement

BGE make clear that auctions should secure the adjusted Capacity Requirement at best possible value to meet the forecasted increasing levels of demand whilst maintaining the necessary capacity to ensure security of supply and the sum of the constrained volumes in each of the LCCAs equals the all-island capacity requirement so providing capacity predictability and transparency to participants.

ESB state there is a gap between the amount of Capacity to be procured at an all-island level and those within each Locational Capacity Constraint region, which will distort the signal for entering into an auction in relation to the amount of capacity that is actually needed. As a result, the final capacity requirement value published in the IAIP is no longer capable of providing the appropriate signal as it is becoming more divergent from the LCCA requirements.

EirGrid/SONI state that the results on Capacity Requirements within SEM-22-075 are broadly consistent with both the previous approach and GCS, with the proposed methodology additionally providing more accurate estimates of the contribution to reliability of each technology class.

Indicative Demand Curve

BGE support the shape of the demand curve specified within the consultation. They state that the exact points on the curve be modified to reflect earlier comments on the level of indexation utilised (on Parameters such as the Auction Price Cap and Net CONE).

ESB commented that previous responses of theirs, to Parameter consultations highlighted their concern over the adjustments made to the Demand Curve, and that they claim that

this is done in an opaque manner. They quote the recent EY report² which details a greater level of transparency is needed, and that there is an urgent need for a volume's adjustments paper published after each auction.

Locational Capacity Constraint Areas (LCCAs)

BGE ask that the unconstrained run of the CRM auction is not impacted by the on-going changes from the additional Local Capacity Constraint Areas (LCCAs) in the Greater Dublin area, and that the sum of the constrained volumes in each LCCA equals the all-island requirement, providing predictability and transparency to participants.

BGE are concerned there may be unintended consequences of increased levels of competitive advantage to participants holding existing or prospective development sites within the proposed Dublin North/ Dublin South LCCAs that have higher Required Quantities.

The DRAI feel that the LCC regions for this auction should mirror those set for the T-4 2023/24 auction. This they believe, is because aggregators that won ROs in the T-4 within LLCAs set out in that auction would create an unfair disadvantage to the industry due to the incompatibility of the LCCAs in both the T-4 then, and this T-1.

In principle, ESB GT does not have an issue with multi-year new capacity being used to solve the constrained element of the auction. However, in practice ESB feel the longer the LCCAs remain unsolved and become rooted in the capacity auctions there is likely to be negative unintended consequences as a result.

Termination Charges and Performance Security Bonds

BGE maintains its belief that the proposed higher Termination Charges (and so Performance Security Rates) should exist in conjunction with a separate review by the RAs for units who clear in an auction yet terminate their New Awarded Capacity contracts

² SEM review on the performance of the CRM: [SEM-22-054 Call for Comments on EY Review of the Performance of the SEM Capacity Remuneration Mechanism | SEM Committee](#)

only to bid the same units in successive auction(s) to secure increased payments for the same capacity.

DRAI reiterate their view as to the 'problematic nature' of performance securities and termination charges as they apply to DSUs. The cumulative effect of performance securities across multiple auction years alongside the high rates applied creates bias towards larger market players and as such DRAI would like a review of the applicability of Performance Securities to multiple auctions and to demand side capacity.

Capacity Aggregation Threshold

ESB commented on the absence of this newly determined Parameters inclusion in the consultation. They claimed that as per Modification decision SEM-22-028³ industry would expect the RAs to consult upon this at each Parameters stage.

5. SEM COMMITTEE RESPONSE

De-Rating Curves and De-Rating Factors

The SEM Committee note the points raised on the De-Rating Factors and Curves. They wish to express that the consultation on enhancements to the methodology (SEM-22-075) should address some of the issues, and once the enhancements are adopted a more robust process will be in place.

Existing Capacity Price Cap (ECPC) and Auction Price Cap (APC)

The SEM Committee note the proposals to increase the ECPC, however the Committee do not consider that there is a compelling reason to do so for this T-1 auction, noting that the USPC process still allows existing units to apply for permission to bid prices above the ECPC.

The Auction Price Cap (APC) will be set at €146,920. This value may be subject to change following the outcome of the ongoing BNE study.

³ See [WP-05: Institutional Arrangements \(sem-o.com\)](#) for details

Capacity Requirement

The Capacity Requirement for any Capacity Year was, prior to this T-1 2023/24 auction calculated by the System Operators (SO) using the methodology described in SEM-18-030a (Capacity Requirement and De-rating Factors Methodology June 2018). That methodology was closely aligned to the generation adequacy methodology employed by the System Operators to produce the annual Generation Capacity Statements. It is then the most recently available⁴ Total Energy Requirement (TER) from the GCS that feeds into the SOs modelling⁵.

The TSOs have enhanced the Adequacy Model as per [SEM-22-075](#). The SEM Committee wish to state its intention to utilise these outputs to calculate the Capacity Requirement and De-Rating Factors to be published in the forthcoming Initial Auction Information Pack (IAIP). The IAIP will be published via the SEMO website on 5 December 2022.

The SEM Committee want to highlight that given ISAC2 will be implemented for this auction, the Capacity Requirement that features in the IAIP (as an output to the Adequacy Calculator, ISAC2) will appear lower for this T-1 than if net demand had not been used.

Indicative Demand Curve

The SEM Committee decides prior to the publication of the Final Auction Information Pack for each auction to account for:

- a) existing Awarded Capacity in respect of the relevant Capacity Year.
 - b) an allowance for changes in forecast capacity requirements.
 - c) an allowance for capacity to be procured in later auctions for the Capacity Year.
 - d) an allowance for the de-rated value of capacity that is forecast to be operational during the Capacity Year, but which will not be participating in the Capacity Auction;
- and

⁴ The SEMC note that the Capacity Requirement for this auction was modelled using the GCS2020-29, available here [All-Island-Generation-Capacity-Statement-2020-2029.pdf \(eirgridgroup.com\)](#)

⁵ It is worth noting that at the time of writing, a new GCS was published for 2021-30. Adjustments in this regard will be considered as part of the Final Auction Information Pack.

e) Reserves and other appropriate adjustments

The SEM Committee, for this T-1 Auction will employ a sloping Demand curve, and any amounts not procured of the adjusted Capacity Requirement will be in a future T-1.

LCCAs & Treatment of Constraints

The SEMC note ESB GT's views on the application of LCCAs in the CRM Auctions. The SEM Committee notes the comments received on the treatment of constraints within the 2025/26 T-4 Capacity auction.

The SEM Committee will decide on allowing the Locational Capacity Constraints to be satisfied using multi-year New Capacity in advance of the publication of the Final Auction Information Pack, having considered the information from the System Operators on the Location Capacity Constraints.

Termination Charges

Noting the views of respondents, the Committee have decided to apply the Performance Bonds and Termination Charges for this T-1 auction, as set out in the consultation paper. This schedule does away with the first two milestones as the requirement to post securities and charges greater than 24 months was not feasible given the slightly tighter timeline for this T-1 auction.

Annual Run Hour Limited Plants De-Rating Factors

Participants will have been aware of the modification, consultation, and decision on Annual Run Hours Limited (ARHL) necessitating the implementation of a de-rating factor for ARHL plant.

The SEM Committee notes the concerns Participants have in relation to ARHL plants, however, the policy that was implemented in the ongoing T-4 2026/27 auction will apply for this auction, where details of this policy can be found within the decision paper on Parameters for T-4 2026/27 CY ([SEM-22-044](#)).

Capacity Aggregation Threshold (CAT)

The SEM Committee notes the issue raised by ESB in relation to this parameter. The intention is to consult on the CAT should there be a need to changes its value. As at present there is no need, we have not consulted upon it.

Indexation

The SEM Committee notes the ongoing Trading and Settlement Code modification⁶ (Mod 07_22) on indexation. This issue is not covered as part of this decision paper.

⁶ <https://www.sem-o.com/rules-and-modifications/balancing-market-modifications/>

6. SEM COMMITTEE DECISION

The table below is a summary of the decisions taken by the SEM Committee in light of the responses above. The following parameters will apply for the 2023/24 T-1 Capacity Auction:

Parameter	Proposed Value for T-1 2023/24 capacity auction
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