



**Single Electricity Market
(SEM)**

Capacity Remuneration Mechanism

**Information Note on the T-4 CY2022/23 Capacity Auction
Volumes**

SEM-19-021

9 May 2019

1 SUMMARY

This information paper provides a summary of considerations made by the SEM Committee in determining the demand curve and the Locational Capacity Constraint Area (LCCAs) minimum MW in advance of the T-4 Capacity Auction for 2022-23.

The SEM Committee decision on these values fed into the Final Auction Information Pack (FAIP), which was published on 7 March 2019¹ by the TSOs.

The table in section 3 gives the volumes the SEM Committee added and deducted from the All-island Demand Curve, and also shows the derivation of the minimum MW for each Locational Capacity Constraint.

2 BRIEF SUMMARY

In determining the parameters to be published in the FAIP, the SEM Committee adjusted the demand curve to reflect the intentions regarding amounts of additional volumes to allow for uncertainty², and the participation of demand-side units closer to the year of delivery.

Volumes Decisions: Background

The SEM Committee considered settings for the four components that determine the volume of capacity procured. These are summarised below.

- A. The Capacity Requirement and LCCA minimum MW was calculated by the TSOs, and is then subject to approval by the SEM Committee. The SEM Committee had already approved the all-island Capacity Requirement as part of approving the Initial Auction Information Pack (IAIP) in September 2018.
- B. The amount of reserves added to this requirement set by the SEM Committee at all-island level and for each LCCA;
- C. The amount to withhold at the all-island level and for each LCCA to account for Demand Side participation entering the market closer to the year of delivery; and,
- D. The amount to withhold at the all-island level and for each LCCA to account for the uncertainty in the forecasted demand growth out to 2022-23;

¹ See https://www.sem-o.com/documents/general-publications/Final-Auction-Information-Pack_FAIP2223T-4.pdf for details.

² To clarify, throughout this paper, 'uncertainty' refers to the Demand Growth uncertainty that is stated through the Median – High scenarios in the Generation Capacity Statement. For details on the current GCS, see [here](#).

The next section sets out the SEM Committee decisions on these values.

3 OUTCOMES OF SEMC MEETING 28 FEBRAURY 2019

In Table 3 below the SEM Committee made firm recommendations for the levels of DSU withholding and demand forecast withholding. Before arriving at these recommendations, it is worthwhile considering the volumes before the adjustments.

Requirements before adjustment

Before the SEM Committee adjusted the volumes on an all-island and LCCA basis, the initial volumes are as follows:

Table 1: Volume Requirements before Adjustments

| Area | MW Requirement pre adjustments |
|----------------------------|--------------------------------|
| All-island | 7524 |
| Level 1:1 Northern Ireland | 1810 |
| Level 1:2 Ireland | 5970 |
| Level 2:1 Dublin | 1900 |

The SEM Committee used these values as a starting point for its considerations and the subsequent addition and deduction of amounts for Non-Participating Capacity, Reserves and Withholding.

Non-Participating Capacity

Some generators are expected to be present in 2022/23 but did not apply for qualification in the auction. These volumes are deducted as a first step.

These deductions were estimated by the TSOs on an all-island at **410 MW**.

Reserves

In the recent Reserves Decision paper, published in November 2018 (SEM-18-173), the SEM Committee made some decisions about the amount of reserve to include in the Capacity Year 2022/23 auctions, but did not make a final decision on the MWs to include at all-island level or LCCA level.

Specifically, the SEM Committee decided to include a measure of reserves in the all-island demand curve, and to include a measure of reserves in the Level 1 and Level 2 LCCA minimum MWs for at least the T-4 auction for Capacity Year 2022/23. The SEM Committee decided that the jurisdictional values to be included for Reserves were as follows:

- Ireland: **225MW**, to reflect the level of operating reserve at which the TSOs have advised the RAs that they are likely to undertake demand control actions within Ireland; and
- Northern Ireland: **150 MW**, to reflect level of operating reserve at which the TSOs have advised the RAs that they are likely to undertake demand control actions within Northern Ireland;
- Dublin: **70 MW** (roughly one-third of the total for Ireland) is broadly a pro-rata allocation of the Ireland reserve to Dublin.

Withholding for DSU Participation

In CRM Decision 3 (SEM-16-039), the SEM Committee stated its intention to hold back between 2% and 5% of the CR from T-4 auctions to T-1 auctions. This decision reflected the recognition that it is hard for DSUs to have certainty of availability and costs at T-4 stage, and hence to participate in a T-4 auction.

The decision to hold back between 2% and 5% reflected the level of DSU participation in the SEM at the time the decision was made, with only around 320MW of DSU participating in the Capacity Remuneration Mechanism in August 2016.

The SEM Committee decided to withhold the lower end of the above range (2%) of the Capacity Requirement at an all-island level and in each LCCA in the T-4 auction.

Withholding for Demand Uncertainty

The unadjusted requirement was derived from the demand growth projections published in the Generation Capacity Statement 2018-27. This growth is particularly steep in the Dublin region, and the SEM Committee noted the wide margin between low, median and high values. As an example of this, the table below is from the Generation Capacity Statement, showing the Peak demand figures (GW) and the Total Energy Requirements (TWh) for the calendar year 2022.

Table 2: TER and Peak Values for three years – GCS2018-27

| IRELAND | High 2021 | Median 2021 | Low 2021 | High 2022 | Median 2022 | Low 2022 | High 2023 | Median 2023 | Low 2023 |
|---------------|-----------|-------------|----------|-----------|-------------|----------|-----------|-------------|----------|
| TER (TWh) | 35.6 | 33.8 | 31.3 | 39.1 | 36.2 | 32.4 | 42.0 | 38.3 | 33.3 |
| TER Peak (GW) | 6.05 | 5.80 | 5.48 | 6.49 | 6.12 | 5.62 | 6.78 | 6.32 | 5.72 |

The table above contains the data from the GCS 2018-27; the values show three Calendar years 2021-23. The growth in the Dublin amounts is contained within the total Ireland figures. While the RAs do not have specific TER and Peak amounts for the Dublin region, it is understood that the majority of the uncertainty is related to the growth in the Ireland figures above.

Much of this growth is already factored into the amounts that were procured in the Capacity Year 2019/20 transitional auction, where volumes were based on the 2018 Generation Capacity Statement demand forecast for the end of the transitional period, Capacity Year 2021/22. The SEM Committee decided that the range between low and high scenarios, coupled with the steepness of the projected median growth particularly in Dublin, justified the withholding of 250MW and 50MW from Dublin and NI respectively. Should this growth materialise as predicted, there will still be opportunity for extra capacity to be procured through a later auction.

Overall Summary of Decisions

Table 3 below shows the values the SEM Committee decided to deduct or add from the All-island Demand Curve for the T-4 2022-23 Capacity Auction, in order to set LCCA requirements.

The All-island Capacity Requirement figure of 7524MW is amended to 6770MW through subtracting the amounts for Non-Participating Capacity and Withholding, and adding in the amounts for Reserves.

Table 3: Minimum amounts to be procured after Adjustments

| Area | Requirement pre Adjustments | Non-participating | Reserves | DSU | Uncertainty | Minimum Amounts |
|-----------------------------------|-----------------------------|-------------------|----------|------|-------------|-----------------|
| All-island | 7524 | -410 | 100 | -144 | -300 | 6770 |
| Level 1:1 Northern Ireland | 1810 | -120 | 150 | -36 | -50 | 1754 |
| Level 1:2 Ireland | 5970 | -290 | 225 | -118 | -250 | 5537 |
| Level 2:1 Dublin | 1900 | 0 | 70 | -38 | -250 | 1682 |
| Implied minimum all-island | 7780 | -410 | 375 | -154 | -250 | 7341 |