

Quick Guide to the Capacity Market and 2023/2024 T-4 Capacity Auction Provisional Results

5th May 2020



Executive Summary

The Capacity Market is a mechanism designed to ensure that the island has enough electricity to power homes, businesses and industry in both jurisdictions.

The market takes the form of an auction, held every year, for capacity for the future.

Firms who generate electricity, offer into the auction, which was **designed by the Single Electricity Market Committee (SEM Committee)**, which is made up of representatives from regulators in Northern Ireland (the Utility Regulator) and Ireland (the Commission for the Regulation of Utilities) and two independent members.

The auction is run by the Single Electricity Market Operator (SEMO), a joint venture between SONI in Northern Ireland and EirGrid in Ireland.

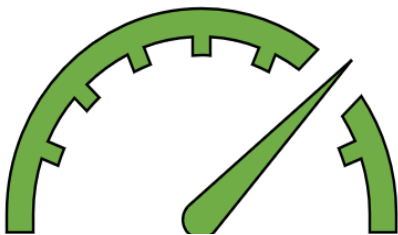
Since December 2017, new auction arrangements have been in place to increase competition and reduce costs for consumers. Under the old market, all generators were paid based on their availability. Under the new market, only generating units that are successful in the capacity auctions will receive capacity payments. The goal of the auction is to ensure that **consumers don't pay for more capacity than is needed**.

Since 2017, a number of auctions have been run to provide capacity either for the **year ahead (T-1 auctions)**, **two years ahead (T-2 auctions)** or **four years ahead (T-4 auctions)**. This latest auction is a T-4 auction in that it secures capacity for delivery four years ahead of the delivery period (October 2023- October 2024). Like all of the SEM capacity auctions it is designed to deliver wholesale electricity at the least possible cost, the T-4 2023/24 auction also aims to **encourage new investment and innovation**, but **only if it is the most economical solution**.

The T-4 auction was run on the 27th of April 2020 and a high-level summary of the provisional results are below:

- The Auction Clearing Price for this auction is **46,149.00 €/MW** per year or **43,666.18 £/MW** per year.
- The T-4 Auction procured a total of **7,322** megawatts and had a total cost of **363 million euro** or **343 million pounds sterling**.
- **115** out of the **124** generators that offered into this auction were successful.
- These successful generators will receive regular payments, and in return, they must deliver on their capacity market obligations.

Key Messages



7,322 MW

The T-4 Auction procured a total of 7,322 MW at a total cost of 363 million



761 MW

A total of 761 megawatts was procured from new sources in the T-4 Auction



Demand

This Capacity Auction ensures that we have enough electricity to power homes, business and industry on the island of Ireland

1. The Single Electricity Market

What is the Single Electricity Market?

The Single Electricity Market (SEM) is the wholesale electricity market for the island. It is designed to provide wholesale electricity at the lowest possible cost, ensuring that there is adequate supply to meet demand and to support long-term sustainability. It was upgraded on the 1st of October 2018 to increase integration with European markets. This means that consumers here can benefit from low-cost generation from across Europe.

The SEM is designed and regulated by the Single Electricity Market Committee (SEM Committee) which is made up of representatives from regulators in Northern Ireland (the Utility Regulator) and Ireland (the Commission for the Regulation of Utilities) and two independent members.

SONI and EirGrid operate the Integrated Single Electricity Market, under the joint venture SEMO.

2. The Capacity Market

Why do we need a capacity market?

Electricity demand varies significantly throughout the year. The lowest level of demand occurs during summer nights and the peak demand occurs during cold winter evenings. The transition to a low carbon power system also means that there is an increasing level of renewable energy such as wind and solar. To ensure consumers have the reliability they expect, the electricity system and the Single Electricity Market need to be flexible enough to cater for windy days with low demand and also to have sufficient energy available on low wind days with high demand (and all scenarios in-between).

Who can participate and how is it funded?

The capacity market is funded by consumers and businesses through their energy suppliers. Generators that wish to participate in a capacity auction must first qualify to take part. During the qualification process, generators have to show that the units they intend to offer in the auction meet a set of minimum requirements set out in the market rules. The qualification process helps to provide confidence that successful generators will deliver on their obligations and contribute to security of supply in Ireland and Northern Ireland.

Generators that are successful in the capacity auction will be paid regularly throughout the year for each megawatt (MW) of capacity they successfully sell to the market in the auction. In return, these generators must be available to provide energy, especially at times of high demand or system stress. If a generator is unable to do this, they risk being exposed to substantial charges.

How is the auction carried out?

SONI and EirGrid work together to establish the amount of capacity needed on the island. This calculation is done using detailed methodologies that have undergone public consultation and approval by the Regulatory Authorities.

The final capacity requirements are set by the electricity regulators. The auction is carried out via a secure online system that was specifically designed for the market.

What is de-rating?

The capacity market uses the concept of 'de-rated' megawatts. The amount of capacity a generator can offer into the auction is adjusted down ('de-rated') in order to take account of their expected reliability and benefit to security of supply. The de-rating process is used because generators and other capacity providers are not

perfectly reliable. It accounts for the fact that outages and other technical issues will occur from time to time for all generators and that there will be days with low wind etc.

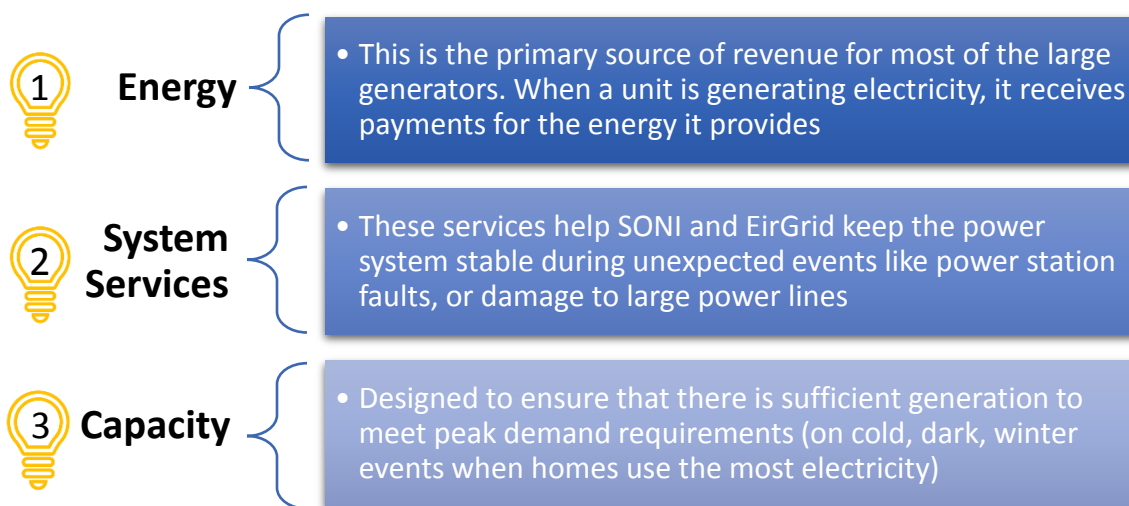
What is a locational constraint?

As well as providing capacity on an all-island basis; Northern Ireland, Ireland and the Greater Dublin Region have specific generation requirements and so the auction needs to meet these geographic constraints.

There are constraints on the grid which restrict the amount of power that can flow into Northern Ireland from Ireland and vice-versa. The absence of a second North-South Interconnector is a significant restriction. This means a certain level of capacity is required specifically for Northern Ireland and a certain level of capacity is required specifically for Ireland to ensure security of supply.

Similarly, there are constraints on the grid that can limit the flow of power into the Dublin region from the rest of Ireland and this means a certain level of capacity is required in Dublin. These limitations increase the quantity of capacity needed to ensure security of supply. This illustrates the importance of investment in transmission infrastructure to remove limitations on the grid.

The three main revenue streams for generators in the market¹ are:



3. The 2023/2024 T-4 Capacity Auction

Headline Results:

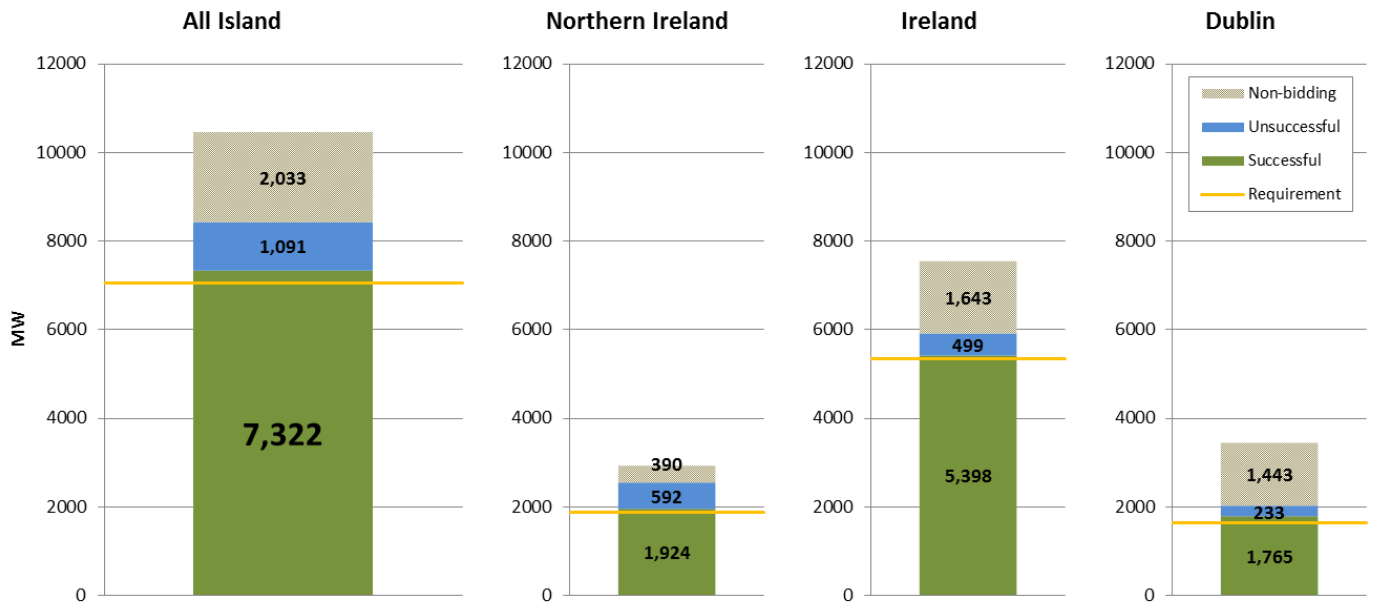
- The Auction Clearing Price for this auction is **46,149 €/MW per year** or **43,666.18 £/MW per year**.
- The T-4 Auction procured a total of **7,322 megawatts** and had a total cost of **363 million euro** or **343 million pounds sterling**.

The chart below shows the auction requirements along with the successful and unsuccessful quantities that did not offer into the auction. The yellow horizontal lines indicate the minimum requirements in each area. The

¹ For ease of understanding we use the term generator in this plain English guide, but it is important to note that demand side units, storage and interconnectors also participate and provide valuable services in each market

green indicates the successful capacity, the blue the unsuccessful capacity and the grey is capacity that was qualified but that did not participate in the auction. All requirements set in the auction were met.

A total of 761 megawatts of new capacity was successful (592 megawatts in Northern Ireland and 265 megawatts in Ireland). This comprised of gas generation, wind generation, demand side units and battery storage.



How do the results compare to the previous Capacity Auctions?

This 2023/2024 T-4 Capacity Auction is comparable to Capacity Auctions however, as with previous T-4 Capacity Auctions, payments are made four years after the auction takes place. This differs from the T-2 2021/22 auction held in December 2019 as payments for this auction will not be made until September 2023.

The clearing price of this T-4 Auction is similar to recent T-1 and T-2 Auctions of which there is **very good clearing price stability**. There is a significant reduction in total costs compared to the 550 million euro which was the average cost of the old capacity market.

It is important to note that the results of each capacity auction will depend on the supply and demand within that auction. For this reason, it is to be expected that from year-to-year there will be some fluctuation in clearing prices and total costs.

What do these results mean?

All the MW requirements set in this auction have been satisfied. A significant quantity of new generation, demand side units and storage has been procured at a **very competitive price**, which is to the **benefit of all electricity consumers on the island**.

What is the schedule for the next Capacity Auctions?

Capacity Auctions are held four years before the delivery Capacity Year, which is where we get 'T-4'. The next T-4 auction (T-4 2024/25) is scheduled to take place in January 2021.

In the coming years, we will see further T-4 auctions, we may also possibly see further T-1 auctions for incremental capacity, for any year (s) where the need for a T-1 auction is identified.

Further Information

The 2023/2024 T-4 Capacity Auction Provisional Results document and associated published data files provide a full breakdown of the detailed results in line with the publication requirements set out in the Capacity Market rules. Final results will be published following approval by the Single Electricity Market Committee at the end of January.

Capacity Market Contact Details

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