BRITISH HYDROPOWER ASSOCIATION

Capacity Market Explainer

1. What is the Capacity Market?

The Capacity Market was introduced by the government in 2018 to provide security within the grid as we transition to a decarbonised and decentralised grid. By providing all resource capacity providers with a predictable revenue stream which they can incorporate into future investments, the UK government requires reliable capacity which can maintain grid capacity during periods of low intermittent renewables. The aim of the market is to create various baseload Capacity Market Units (CMU), so in times of system stress, the National Grid can issue a "capacity market warning" which will require all of those receiving funding from the Capacity Market to provide their capacity with only 4 hours' notice should a "stress event" occur.

2. How does the Capacity Market work?

- T-4: The main auction, it buys most of the capacity needed for delivery in four years' time. New Build Generators can secure 15-year agreements.

- T-1: A top up auction ahead of each delivery year. This auction is mainly for sites which have not met the criteria for the T-4 Auction and require last minute adjustments, as it is impossible to accurately predict peak demand four years in advance. This usually offers lower prices, so most businesses will want to move to T-4 as soon as possible.

Capacity providers bid for contracts to provide capacity at any time they are required during the contracted period and are paid per MW for what they offer to the market.

3. Who can apply for the Capacity Market?

- New and existing generation plants
- Storage:
- Demand Side Response
- Interconnector Capacity

The capacity of each Capacity Market Unit (CMU) **must be at least 2MW** although there are possibilities for individual generation plants to combine to reach the 2MW entry requirement and can aggregate up to 50 MW. Capacity receiving support through other mechanisms such as the Feed in Tariff or ROCs are currently not eligible

Delivery Years run from 1st October to 30th September

4. How does applying for the Capacity Market work?

Pre-Qualification:
The pre-qualification process takes four months before the relevant auction. Although participation in the Capacity Market is voluntary, all generators with a generation licence (as well as other capacity providers intending to participate) will need to either apply to "prequalify" their existing capacity or seek an opt-out in relation to that capacity. This however

Application Process:
The application portal can be found here, and a separate application is required for each CMU a generator or provider is offering.
The application requires:

- Information about the capacity provider
- The relevant plant and its previous performance (if it's an existing facility)
- Planning consents and information needed to determine if it will be ready to provide the required capacity (if it is a new facility)

The National Grid and the Electricity Market Reform (EMR) Delivery Body will check applications to determine eligibility, and information from the pre-qualification process about opted-out capacity is also used to adjust the amount of required capacity. Decisions on pre-qualification can be appealed to EMRS and then to Ofgem.

5. Auctions

If the provider successfully prequalifies, they are entitled to bid in the relevant auction for a Capacity Obligation. Providers must include the total de-rated capacity of the CMU at the auction, which is the generation capacity adjusted to take account of the availability of the plant, specific to each type of generation technology.

The auction will be 'pay as clear'. This means that all participants will receive the clearing price set by the marginal bidder. It will follow a descending clock format, in which the price offered is gradually reduced until the minimum price is reached, at which the supply of capacity offered by bidders is equal to the volume of capacity required. The government went with this format as they believe this will avoid the risks of participants 'gaming' the system by bidding based on a guess of what the clearing price might be, rather than true costs – noting also that big portfolio players would be better equipped to do this, potentially harming competition. The government is also convinced that existing plants should be compensated on the same terms as new plants, on the assumption that a Capacity Market will dampen wholesale electricity prices – which are currently the means by which all capacity is rewarded.

Bidders can submit an "exit bid", which is the minimum price that they are willing to take an obligation, which means that the bidders withdraw from the auction when the price falls below their exit bid.

To mitigate market power, bidders will be classified as either 'price takers' (who cannot bid above a relatively low threshold) or 'price makers' (who can). It is expected that most bidders will default to being price takers. New entrants and DSR resources will be classified as price makers, and will be free to bid up to the overall auction price cap

1.1. Auction Clearing

If a completed round is identified as the Clearing Round, then all CMUs that have not been subject to an Exit Bid above the Clearing Round price floor will be eligible for an agreement. In addition to these units the auction system will also identify which CMUs (if any) that submitted an Exit Bid in the Clearing Round are also eligible for an agreement and in doing so will also determine what the Clearing Price of the auction is.

An Exit Bid that is made in the Clearing Round is known as a Relevant Exit Bid. In the 2017 Transitional Capacity Auction, Relevant Exit Bids are ranked first by price (lowest to highest), then by capacity offered (highest to lowest), then by duration of agreement (lowest to highest) and finally by lottery via a random number (lowest to highest). Figure 4 demonstrates the Exit Bid ranking - In the event of a tie break the system will use this hierarchy to decide who is eligible for an agreement.

Rank	CMU	Exit Bid	Capacity	Duration	Lottery
1	CMU 1	£6	100	3	5
2	CMU 2	£7	105	3	4
3	CMU 3	£7	100	1	3
4	CMU 4	£7	100	3	1
5	CMU 5	£7	100	3	2

Figure 4: Exit Bid Ranking

6. What do the Capacity Agreements entail?

Duration

One year Capacity agreements are usually offered to existing plants, with 3-year agreements if the plant needs significant refurbishment. New plants or those with "new build elements" are offered 15-year contracts.

For New Build and Refurbishing CMUs, there are additional requirements:

- **Financial Commitment Milestone:** That at least 10% of anticipated project capital expenditure has been incurred within 18 months of the Capacity Agreement being awarded**,** if this has not occurred, Refurbished CMUs will revert to a one year agreement, for New Build CMUs, the agreement will be terminated.
- **Substantial Completion Milestone:** 90% of the anticipated capacity has been achieved by the start of the first Delivery Year, with repercussions from reverting to one-year contracts or shortening of the contract depending on the CMU
- **Minimum Completion Requirements:** For new build CMUs, they will have to have achieved 50% of stated capacity by the long stop date of 12 months after the beginning of the first delivery year. If this has not occurred, the agreement can be terminated.

7. Hydropower and the Capacity Market

In the 2023 auction for the 2026/2027 delivery year, SSE renewables secured contracts for de rated Hydro generation and Pumped Storage Capacity in the T-4 Capacity Auction for a one year contract. The contract included nearly 906MW across 26 units, including Sloy Hydro and the Pumped Storage at Foyers. SSE also secured further contracts in the 2024 auction.

The Capacity Market has the potential for Reservoir (and possibly run of river) Hydropower and Pumped Storage Hydropower, providing stable finance for existing and new facilities.

8. Consultations

The July 2024 consultation response only covered minor changes in the capacity market, with the main changes being:

- Proposal to roll over a temporary amendment to enable mothballed plants to prequalify for the CM auction
- Proposal to support battery participation

There were other changes to the Capacity Market, such as the potential introduction of 9-year contracts. The government intends to consult further on the Capacity Market however, and so a push on our key asks from our members and the association could help change the direction.

According to the Clean Power 2030 report " the REMA programme, is considering how the existing CfD, Capacity Market and wholesale market arrangements need to evolve to recognise the changing nature of the system." The report goes onto say that a "decision is needed in time for the publication of the Capacity Market Parameters in July 2025"

Key Asks:

The Capacity Market can provide great opportunities for Hydropower, and as part of our advocacy role, the BHA is looking to see what amendments to the CM are possible and what would be most beneficial for the industry.

Due to Hydropower tending to be smaller scale, changing the CMU requirement **from 2MW to 1MW** would encourage smaller scale Hydro to be potentially built in areas previously discarded due to a lack of clarity on return on investment.

Another change that would be welcomed would be either utilising either **3-, 9- or 13-year contracts for existing Hydro generation.** Given the lengthy admission process, and the need to apply several years in advance, only 1-year contracts (or 3 if significant refurbishment is needed) are not sufficient for most generators, and by extending the contracts even to a 3-year period would encourage significantly more uptake of the scheme by hydropower generators.