

Report to Secretary of State Adjustment to Demand Curve

2020 Four-Year Ahead Capacity Auction for 2024/25

21 January 2021

T-4 auction
2024/25 Delivery Year

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Report to Secretary of State on Amendments to the T-4 Demand Curve

Background

The Electricity Capacity Regulations 2014 (“the Regulations”) and the Capacity Market Rules 2014 (“the Rules”), both as amended, oblige National Grid Electricity System Operator Limited in its role as Delivery Body to publish Auction Guidelines. This document has been prepared to discharge that obligation.

Capitalised terms used in this report shall have the meanings given in the Rules and references to a Rule are to a rule within the Rules.

In accordance with the specific requirements in the Regulations and the Rules, this document sets out:

- The aggregate de-rated capacity of Capacity Market Units (CMU) which have prequalified to bid in the Capacity Auction
- The aggregate de-rated capacity of CMUs of which applications were rejected
- The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will be closed down, decommissioned or otherwise non-operational by the commencement of the delivery year
- The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will be temporarily non-operational for all the winter of the delivery year but will be operational thereafter
- The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will remain operational during the delivery year
- Whether an adjustment is required to the Demand Curve in light of Prequalification Results
- A recommendation as to the adjustment to the Demand Curve.

Prequalification Results

Volume of Prequalified Capacity Market Units

The aggregate de-rated capacity of Capacity Market Units (CMUs) that have Prequalified to bid in the Capacity Auction is 51,696 MW.

Volume of Conditionally Prequalified Capacity Market Units

The aggregate de-rated capacity of Capacity Market Units (CMU) that have Conditionally Prequalified to bid in the Capacity Auction is 2,197 MW.

Volume of Capacity Market Units of which the Applications Did Not Prequalify

The aggregate de-rated capacity of CMUs that have Not Prequalified to bid in the Capacity Auction is 4,536 MW.

Volume of Capacity Market Units of which the Applications were rejected

The aggregate de-rated capacity of CMUs of which applications were rejected is 442 MW.

CMUs that submitted Opt-Out Notifications

Opt-Out: Non-Operational

The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will be closed down, decommissioned or otherwise non-operational by the commencement of the delivery year is 12,317 MW.

Opt-Out: Temporarily Non-Operational

The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will be temporarily non-operational for all the winter of the delivery year but will be operational thereafter is 1,998 MW.

Opt-Out: Operational

The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will remain operational during the delivery year is 470 MW.

Update to the Demand Curve

COVID-19 Adjustments to Base Case ACS Peak Demand

As described in the 2020 Electricity Capacity Report (ECR), the demand and supply assumptions used to inform our recommendations in the ECR did not consider any potential impact from the COVID-19 pandemic. This is because our assumptions had already been largely finalised when the potential impact from the pandemic arose and even if we had been able to revise them, this would not have been based on any robust evidence as we were still in the early stages of the pandemic.

Since then, in line with the timeline set out in the ECR, we have reviewed the potential impacts of the COVID-19 pandemic on our assumptions. This work was carried out in summer 2020 and discussed with BEIS, Ofgem and the PTE in October 2020. A document summarising the analysis and potential range of impacts will be published on the Delivery Body website¹ at the same time as this report.

This COVID-19 impact document describes three potential COVID-19 peak demand suppression scenarios. For two out of the three scenarios, the Base Case underlying ACS peak demand had recovered to the level assumed in the ECR by 2024/25. The document noted that even if the pandemic reduced GDP compared to pre-COVID-19 projections, the link between GDP and peak demand is very weak (if it exists at all), leading to the conclusion that there is insufficient evidence to change our Base Case peak demand assumption for 2024/25.

We also reviewed whether it would be appropriate to include a lower peak demand sensitivity in the Least Worst Regret (LWR) calculation used to derive the recommended target capacity for 2024/25 in the ECR. We concluded that adding such a sensitivity would not change the LWR outcome unless the peak demand reduction applied fell outside of the credible range of such reductions.

As such, we do not recommend an adjustment to the Demand Curve relating to peak demand.

COVID-19 Adjustments to Base Case Supply Assumptions

This COVID-19 impact document reviewed the potential impact on the Base Case supply assumptions for 2024/25 and concluded that there was insufficient evidence to change those assumptions beyond the changes set out in the sections below. Therefore, we recommend no change to the demand curve for this adjustment.

Opt-Out: Operational

The Demand Curve should be adjusted to reflect capacity that has elected to opt-out of the capacity market to ensure that consumers are not required to pay for capacity that will remain operational without a capacity agreement.

The aggregate de-rated capacity of Generating CMUs of which the Delivery Body received an Opt-out Notification stating that the CMU will remain operational during the delivery year is around 450 MW. Given uncertainty over whether this capacity will be operational throughout winter 2024/25, we do not recommend an adjustment.

Embedded Generation adjustments

Modelling work carried out to inform the Electricity Capacity Report and updated for new information received since then assumed that there was approximately 4,600 MW of existing embedded small-

¹ <https://www.emrdeliverybody.com/cm/home.aspx>

scale de-rated capacity (outside of our generation backgrounds) including Demand Side Response (DSR) without a previous Capacity Obligation covering 2024/25 that is capable of meeting a Capacity Obligation for 2024/25.

This volume has been compared to the volume of small embedded Existing Generating CMUs, small embedded Refurbishing CMUs, Proven DSR CMUs and Unproven DSR CMUs in the CM register to test if any such capacity has implicitly opted-out from the Capacity Market.

The de-rated capacity of such CMUs, which have submitted a Prequalification Application for the T-4 Auction for 2024/25, is approximately 3,900 MW. It would, therefore, appear that most existing eligible small-scale capacity assumed by National Grid ESO has opted-in to the Capacity Market and is seeking a Capacity Agreement.

Of the remaining capacity (approximately 700 MW), it is unclear whether this capacity will close prior to 2024/25 (e.g. due to emissions legislation) or opt in to the T-1 auction for 2024/25 (and could be included in the capacity held back by BEIS for this auction). In the absence of any evidence that provides confidence that we can rely on that this embedded capacity will be operational in 2024/25, we do not recommend any adjustment to the target capacity at this stage.

Adjustments to Autogeneration Capacity assumed to be outside of the CM

Modelling work carried out to inform the Electricity Capacity Report assumed around 700 MW of existing de-rated autogeneration capacity was outside of the Capacity Market.

Since then, our assumptions have been revised based on updated market intelligence. As such, it is recommended that the demand curve should be increased by around 150 MW to reflect the reduced volume of existing de-rated autogeneration capacity assumed to be outside of the Capacity Market.

Adjustment to Previously Contracted De-Rated Storage Capacity

There are no changes to the de-rating factors for storage capacity since the Electricity Capacity Report was published, therefore we recommend no change to the demand curve for this adjustment.

Adjustment to De-Rated Renewable Capacity assumed to be outside of the CM

There are no changes to the Renewable Capacity assumed to be outside of the CM since the Electricity Capacity Report was published, therefore we recommend no change to the demand curve for this adjustment.

Additional Known Non-Delivery since the 2020 ECR

The 2020 ECR used CM registers published in late Feb / early March 2020 to determine the non-delivery in the target year 2024/25. Since then, around 350 MW de-rated capacity in the 2021/22 T-4 register with multi-year agreements covering 2024/25 have been terminated. As a result, we recommend an increase to the demand curve target of 350 MW to account for this additional known non-delivery.

Long-Term STOR adjustments

Following a recent rule change, applicants in the CM auction are not prevented from holding both a long-term STOR contract and a Capacity Market Agreement simultaneously. Furthermore, the long-term STOR contracts currently in place are due to end part way through the 2024/25 delivery year. As such, there is no need to consider a change to the demand curve for this adjustment as long-

term STOR capacity is no different to any other eligible small-scale capacity (see section on embedded generation adjustments above).

Conclusion

In light of the Prequalification Results and new or updated information, National Grid Electricity System Operator, as EMR Delivery Body, recommends that the Demand Curve for the T-4 auction is adjusted to reflect:

- the reduced volume of existing de-rated autogeneration capacity assumed to be outside of the Capacity Market, and;
- additional known non-delivery covering 2024/25 since the ECR assumptions were finalised.

On the basis of this analysis, it is recommended that the target capacity for the T-4 Auction for Delivery Year 2024/25 should be increased by 500 MW, comprising of:

$$+150 \text{ MW autogeneration} + 350 \text{ MW additional known non-delivery} = 500 \text{ MW}$$

It should be noted that the recommended target adjustment has been informed by T-4 participant actions and that market conditions may change in advance of the T-1 auction for 2024/25. In the event that such market conditions prevail, it may be necessary to make further changes to the required volume for 2024/25 ahead of the T-1 auction.

As such, the Auction Parameters would be provisionally amended as shown in the following table:

Target capacity for T-4 2024/25 Capacity Auction	41,700 MW
Demand curve – minimum capacity at price cap	40,700 MW
Demand curve – maximum capacity at £0/kW	42,700 MW
Price Cap	£75/kW/yr
Price Taker Threshold	£25/kW/yr
15-Year Agreement Threshold	£280/kW de-rated capacity
3-Year Agreement Threshold	£140/kW de-rated capacity
Indexation base period	2019/20