Report to Secretary of State

Adjustment to Demand Curve

2016 Four year ahead Capacity Auction

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2016 T-4 Auction
2020/21 Delivery Year

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Executive Summary

The Electricity Capacity Regulations 2014 (“the Regulations”) and the Capacity Market Rules 2014 (“the Rules”), both as amended, oblige National Grid Electricity plc 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 (CMU) which have Prequalified to bid in the Capacity Auction is 55,762 MW

Volume of Conditionally Prequalified Capacity Market Units

The aggregate De- rated Capacity of Capacity Market Units (CMU) which have Conditionally Prequalified to bid in the Capacity Auction is 18,909 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 700 MW.

CMUs which 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 3,989 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 0 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 1,917MW.

Update to the Demand Curve

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 which 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 approximately 1,900 MW. Modelling to set the Demand Curve in the Electricity Capacity Report assumed that 100 MW of this volume would be operational in 2020/21.

As such, it is recommended that the demand curve should be amended to reflect that volume of capacity which has elected to Opt Out while remaining operational for the delivery year where that volume was not already taken account of. This would result in the target capacity being reduced by 100 MW.

In addition, 1,000 MW of existing de-rated transmission-connected capacity did not submit an opt-out notice but this was assumed to be non-operational in 2020/21 in our modelling. We do not recommend a further adjustment to account for this capacity that has implicitly opted out but is assumed to be non-operational.

Long Term STOR adjustments

Applicants in the CM auction cannot hold both a long term STOR contract and a Capacity Market Agreement simultaneously. Long term STOR contract holders can prequalify for the CM but must declare that they will surrender their long term agreement.

There is currently circa 390 MW of Long Term STOR contracts in place. In 2015 265 MW prequalified for the CM and our recommendation was to reduce volume by 135 MW.

Following this year's prequalification process 293 MW of STOR has prequalified for the T-4 auction, we would therefore recommend a reduction of 97 MW rounded to 100 MW.

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 4,300 MW of existing embedded small scale de-rated capacity capable of meeting a Capacity Obligation including Demand Side Response (DSR). This has been increased by 300 MW to 4,600 MW to take account of autogeneration capacity assumed to be outside of the CM participating in prequalification (see section below). 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 to test if any such capacity has implicitly opted-out from the Capacity Market.

The de-rated capacity of Non CMRS Existing Generating CMUs which have submitted a Prequalification Application for the T-4 Auction for 2020/21 is approximately 4,400 MW. It would therefore appear that nearly all existing small scale generation for which National Grid has access to information has opted in to the Capacity Market and is seeking a Capacity Agreement.

Of the remaining capacity (approximately 200 MW) it is unclear whether this capacity will close prior to 2020/21 or opt in to the T-1 auction for 2020/21 (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 2020/21, 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 over 1,400 MW of existing de-rated autogeneration capacity was outside of the Capacity Market. New information received since the modelling has reduced this amount by approximately 150 MW.

Of the remaining existing autogeneration de-rated capacity assumed to be outside of the CM, approximately 300 MW of Existing Generating CMUs have submitted a Prequalification Application for the T-4 Auction.

As such, it is recommended that the demand curve should be amended to reflect that volume of existing autogeneration capacity assumed to be outside of the capacity market that has participated in prequalification or is no longer assumed to be outside of the CM (see next section for net adjustment)

Secretary of State's Adjustments to Demand Curve

Following the publication of the 2016 Electricity Capacity, the Secretary of State made two adjustments totalling 2,900 MW to our recommended volume for 2020/21.

1. Firstly the volume was increased by around 1,750 MW to account for new information (after the ECR was submitted) on previously contracted capacity with multi-year contracts (assumed to be operational in our modelling) defaulting on formal milestones.
2. Secondly an increase of around 1,150 MW to reflect uncertainty over autogeneration assumed not to bid in to the CM and growth in small scale renewables capacity that does not currently have support. With respect to uncertainty over non-CM autogeneration, our intention has always been to review our assumptions in light of prequalifaction.

We have received no updated information in relation to the first adjustment and therefore do not recommend a change to this adjustment.

In relation to the second adjustment, we have reviewed our modelling assumptions and have provided further evidence to BEIS to support our modelling assumptions on the growth in small scale renewable capacity. However in light of updated evidence on autogeneration assumed not to bid in to the CM (see previous section), we agree that 450 MW of the second adjustment is supported by new information. We therefore recommend a net reduction of 700 MW (1,150MW - 450 MW) in the demand curve relating to this adjustment.

Conclusion

In light of the Prequalification Results, National Grid as EMR Delivery Body recommends that the Demand Curve for the T-4 auction is adjusted to reflect the volume of capacity which has submitted an Opt-out Notification but which will remain operational for the Delivery Year and a small adjustment for Long Term STOR participation.

In light of the Prequalification Results and updated information, National Grid as EMR Delivery Body recommends that the Demand Curve for the T-4 auction is adjusted to reflect the volume of capacity that has submitted an Opt-out Notification and is assumed in our modelling to remain operational for the Delivery Year, the volume of autogeneration capacity assumed to be outside of the CM in the modelling that has submitted a Prequalification Application, an adjustment to the Secretary of State's adjustment in light of new information and a small adjustment for Long Term STOR participation.

On the basis of this analysis, it is recommended that the target capacity for the 2016 T-4 Auction should be reduced by **900 MW** (-100 MW - 700 MW - 100 MW = -900 MW).

It should be noted that the recommended reduction has been informed by T-4 participant actions and that market conditions may change in advance of the T-1 auction for 2020/21. In the event that such market conditions prevail, it may be necessary to make further changes to the required volume for 2020/21 ahead of the T-1 auction.

As such the Auction Parameters would be amended as shown in the table below,

Target capacity for 2016 T-4 Capacity Auction	**51,100 MW**
Demand curve coordinate – target volume at price cap	**49,600 MW**
Demand curve coordinate – target volume at £0/kW	**52,600 MW**
Price cap	£75/kW/yr
Price Taker Threshold	£25/kW/yr
15 Year Minimum £/kW Threshold	£255/kW de-rated capacity
3 Year Minimum £/kW Threshold	£130/kW de-rated capacity
Indexation base period	Average CPI October 2015 – April 2016