

Methodology for GB Commercial Arrangements relating to Interconnector Capacity Calculation - Response Proforma

NGESO invites responses to this consultation by **17:00 Tuesday 2nd June 2021**. The responses to the specific consultation questions (below) or any other aspect of this consultation can be provided by completing the following form. Please note that responses submitted after this time may not be counted.

Please complete this form regarding the proposal titled: **“Methodology for GB Commercial Arrangements relating to Interconnector Capacity Calculation”**.

Please return the completed form (word version) to: box.europeancodes.electricity@nationalgrideso.com

Respondent	Mark Duffield
Company Name	National Grid Ventures
Does this response contain confidential information? If yes, please specify.	No

Number	Question	Response
1.	Do you agree with the commercial compensation methodology?	The compensation methodology has made significant strides forward in recent months through detailed discussions between NG ESO and Interconnector TSOs. This has led to a number of issues being resolved and clarity in the methodology being greatly enhanced. However there remain key issues that mean we cannot agree with the commercial compensation methodology in its current form. We set out these thoughts in our answer to question 2 below.
2.	Any further comments relating to the commercial compensation methodology?	<p>Use of “Unrestricted” Bid Curves and Discount Factors</p> <p>The proposal set out by NG ESO to compensate restrictions in an explicit auction at the “unrestricted” clearing price we feel is entirely inappropriate. We set out our rational for this in the Annex to this note.</p> <p>On Discount Factors for implicitly allocated borders we welcome the NG ESO commitment to not introduce these for the first year and then only after further analysis. The analytical methods proposed to be used to derive any such discount factors must be robust, well justified and cost reflective across all credible scenarios. It is also vital that there is full and transparent consultation on a</p>

proposed discount factor methodology including the results of that methodology given over the range of credible input data.

Use of Interconnector Capacity Restrictions

We note that alongside the consultation, National Grid ESO has set out a full timeline of events for the coming weeks and months in order to implement this methodology (if approved by Ofgem).

We note that as part of this process NG ESO will be seeking to classify this service as a “non-frequency ancillary service” – the definition of which is set out in EU Regulation 2019-943 as amended by Statutory Instrument and forming part of Retained EU Law. NG ESO will be further seeking a derogation from Ofgem to permit the procurement of this “Non-frequency ancillary service” without a commercial tender process.

We note that the definition of a “non-frequency ancillary service” set out in Regulation 2019-943 sets out an exhaustive list of circumstances where such a service may be used. It states:

“non-frequency ancillary service” means a service used by a transmission system operator or distribution system operator for steady state voltage control, fast reactive current injections, inertia for local grid stability, short-circuit current, black start capability and island operation capability;

We would suggest that the methodology, where it states the uses to which the NTC methodology is to be utilised are aligned with this definition. This will avoid any doubt around its future use.

Impact on Capacity Market Revenues

Interconnectors are established participants in many capacity markets including both GB and France. The established precedent in the GB Capacity Market is that where NG ESO takes an action on for example a

generator to restrict its output then no financial penalty is incurred by the generator. It is important then that the impact of NTC restrictions imposed by NG ESO should also not lead to a financial penalty being placed upon an interconnector in any capacity market. We would strongly recommend that the compensation proposals are amended to cover any capacity market penalties resultant from an NG ESO NTC restriction.

Cost-Benefit Assessment of a move to Day Ahead Restrictions

In the methodology NG ESO commits that for interconnectors with a sufficiently well supplied intraday market there will be no day ahead implementation of NTC restrictions unless a robust cost-benefit analysis has been undertaken and demonstrates that there is a consumer welfare benefit in doing so. We have long viewed this position as the most sensible and pragmatic. We therefore support this being adopted in the methodology and would be happy to work with NG ESO as they progress any cost benefit analysis and where possible provide supporting data for analysis.

Implementation

NG ESO has set out a number of proposals for implementation of the commercial compensation methodology. The main implementation vehicle being amendments to individual interconnector's bilaterally agreed Operating Procedures to give effect to the NTC restrictions and subsequent compensation.

A bilateral implementation route introduces a need for transparency both for those that do implement and those that have yet to do so.

All interconnector parties that are seeking to implement that new arrangements should be offered the ability to do so at the earliest opportunity.

That said other interconnectors may need longer to implement and they should not be disadvantaged by their own circumstances. There should not be any different treatment of these interconnectors, other than in terms of

the commercial compensation methodology, ahead of them adopting the NTC restrictions. For example, interconnectors with the legacy ITL process should not be curtailed more or less frequently or for different operational reasons than an equivalent interconnector that has signed up to the NTC restriction compensation methodology.

Annex: Use of “Unrestricted Bid Curves”

NG ESO is seeking to ensure that the compensation for any “restricted” interconnector capacity does not over-compensate the interconnector owner. The ESO’s concern is that the restriction, by limiting the amount of interconnector capacity auctioned, makes it scarcer and thus a higher price is achieved for the “restricted” capacity auctioned that would have been the case if the full, “unrestricted” capacity amount had been auctioned.

The method that the ESO proposes to attempt to mitigate this effect is one where it is presumed that the Bid curve for the “restricted” auction is representative of the bidding behaviour of an “unrestricted” auction. By simply cross referencing from the “restricted” Bid curve the supposed Bid price at the level of the “unrestricted” volume gives, in NG ESO’s view, a realistic estimate of the clearing price of the unrestricted volume.

This is a fundamentally incorrect assumption on which to base the methodology.

Bidding behaviour in an explicit pay-as-bid auction is inherently linked to the amount of capacity being auctioned. For an interconnector capacity auction, the capacity auctioned has a finite upper value. That value is the spread between the market prices in the two markets linked by the interconnector. Parties bidding in the auction will not want to pay more than this market spread for the capacity.

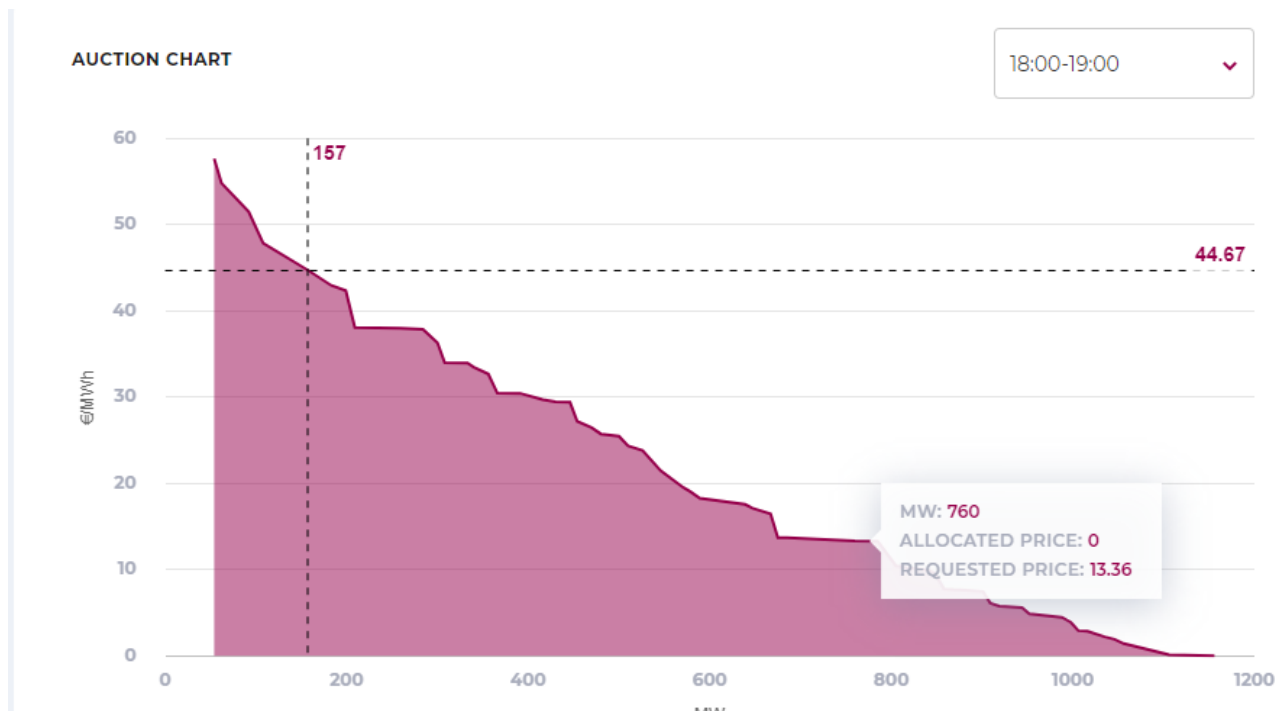
But, bid too low and they will not gain any capacity. The optimal bidding strategy is then to bid close to but not above the expected spread between market prices, the further away from the estimated value of the spread parties bid, the greater the potential reward as they secure the interconnector capacity at lower than its true “value”. However, this is at the risk of not securing any capacity at all as others bid higher.

This optimum bidding strategy sees bids congregate just below the market spread in a liquid auction around the volume of interconnector capacity being auctioned.

A second bidding strategy also exists for those that want to guarantee that they will secure capacity. This is to bid at a price far higher than that market spread, guaranteeing that the bid will be selected, but in the expectation that other bids priced at or just below the market spread will set the clearing price. Of course, not all parties can bid in this way; if too many did the clearing price would clearly be set substantially above the market spread and the true “value” of the interconnector capacity. However, this can be seen in sample bid curves, particularly for well supplied auctions, when a small volume of capacity is bid in at prices far above the market spread.

Illustrating this with some sample data, sourced from JAO for two recent dates in May 2021 for FR→GB capacity sales on the IFA1 interconnector.

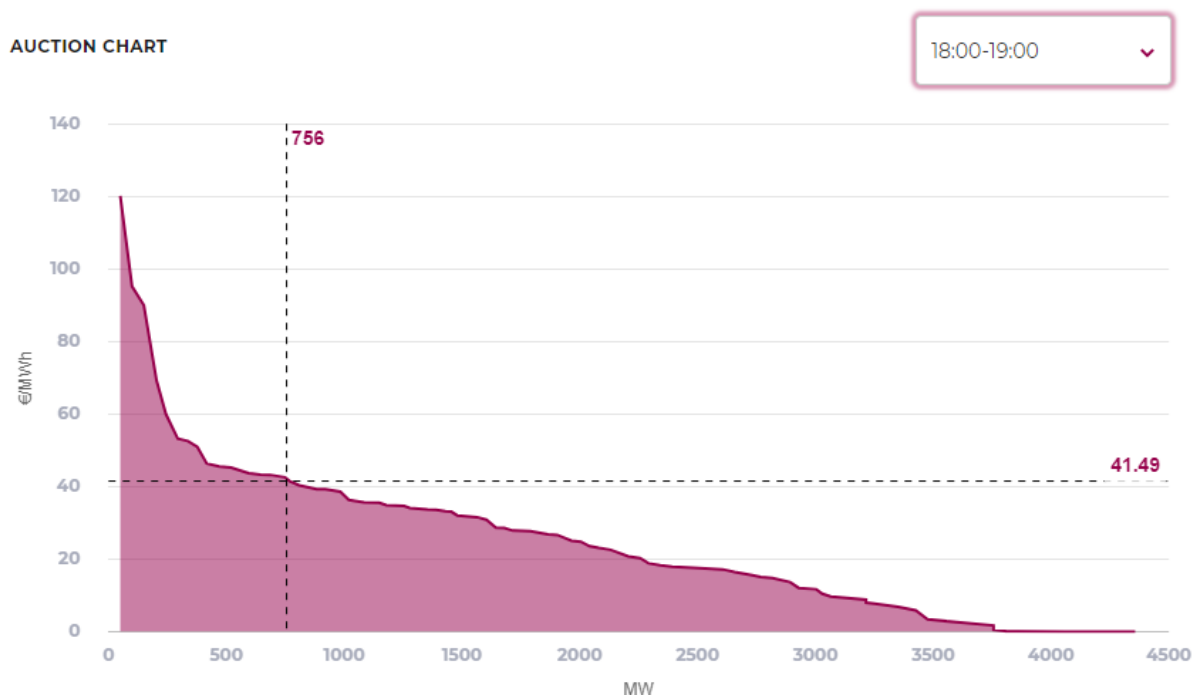
Chart 1: 21/05/2021 Day Ahead IFA1 Capacity Auction (FR→GB)



NG ESO's proposed methodology contends that had the 157MW actually auctioned in this auction represented a curtailed volume from an original 760MW starting position, rather than clearing at the €44.67/MWh price the auction would have cleared around €13.36/MWh.

National Grid Interconnectors counters that this is an entirely incorrect assumption. Consider the Chart below.

Chart 2: 18/05/2021 Day Ahead IFA1 Capacity Auction (FR→GB)



This chart shows the Bid curves for a similar day in May with a similar clearing price. The key difference is that 756MW of capacity was auctioned rather than 157MW.

The differences are noticeable.

- Firstly a far greater volume of Bids are received into the auction. Approximately 3500MW of Bids were submitted for this auction compared to just over 1000MW for the 157MW auction. This is intuitive. The greater the capacity auctioned, the greater the interest in securing that capacity.
- Secondly the early part of the Bid curve is quite different with Bids of up to €120/MWh being received in the 756MW auction, almost 3 times the eventual clearing price. This compares quite markedly with the 157MW auction where a top bid of just €57.64 was received – a mark up of only ~30% rather than 300%.

The bid curves above show that despite the value of the capacity being similar the amount of capacity auctioned dramatically alters the bid curve. The market spread relating to the 756MW auction was approximately €46/MWh for reference demonstrating that the market efficiently cleared 756MW of interconnector capacity.

To summarise, the NG ESO proposed method is based upon a fundamentally incorrect understanding of how explicit auction curves are built up by market participants and should not be taken forward.

Alternative Approach

National Grid Interconnectors recognises the ESO's concerns about over-paying for capacity. We think that there is very limited potential for this to happen. As noted above market parties will not want to ever pay more than the market spread. Typically, explicit auctions clear around 80-95% of market spread. Any inflation to prices would tend to be within the boundaries of that range, if at all. That said markets are extraordinarily efficient at pricing commodities and so this effect is not guaranteed.

However, to guard against any potential inflationary pressure from NG ESO restrictions we think a fairer way to calculate the "unrestricted price" for an interconnector auction is to focus on the percentage of market spread that is captured in interconnector auctions. By examining a reference set of unrestricted interconnector capacity auctions, the "average" percentage of market spread captured in these auctions can be determined. Then if an auction is "restricted", the percentage capture figure can be applied to the actual market spread for the "restricted" auction to derive what the "unrestricted" clearing price may have been.

This we feel is a far fairer approach to the issue and we would encourage NG ESO to work with interconnector operators to develop a methodology based upon this approach in the days following this consultation to fully develop it.