

Frequency Response auction trial – Phase 1 webinar

21st March 2019

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The webinar will
commence at 11:05 to
allow attendees to sign in

All attendees will be
joined in listen-only
mode



Today's webinar – purpose and agenda

Purpose

To provide further information on Phase 1 of the frequency response auction trial, following the publication of the Future of Frequency Response publication.

Agenda

1. The product being procured
2. How to prepare for and participate in Phase 1 of the auction trial
3. The process for running the auction and how the algorithm will work
4. Next steps

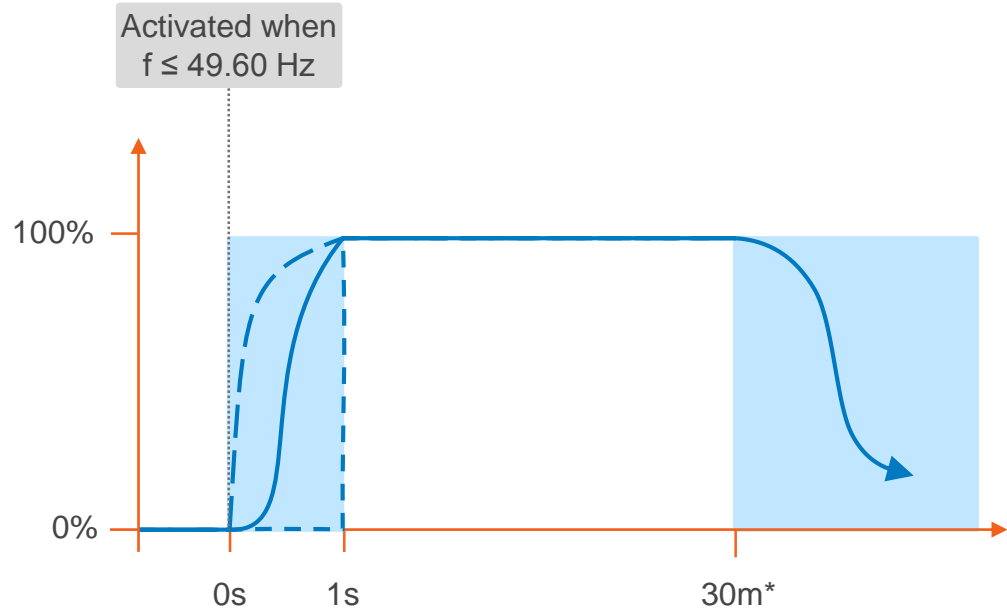
Due to the number of attendees dialled into the webinar, we won't be opening the floor to live Q&A. Instead we will leave the Webex open for questions and feedback to be submitted and we will capture these for our Q&A document.

The product being
procured

Low frequency static response product

Service description

- Service activation at 49.60 Hz
- Full response within 1 second
- Duration is 30 minutes
 - * unless advised that it is lower, before that week's auction
- Delivery profiles
 - Activation: monotonically increasing
 - Deactivation: monotonically decreasing



Participation in go-live

First auction go-live across 25th and 26th April.

Providers will be required to demonstrate they can meet the service being delivered in as light touch a way as possible. We will be publishing testing guidance shortly, which will involve demonstrating assets respond when they are required to and not when they shouldn't.

We are introducing the concept of an independent technical expert (ITE) to improve the testing process. ITEs will be required to verify that assets have passed the testing requirements and this report should be sent to National Grid ESO as part of the pre-qualification process.

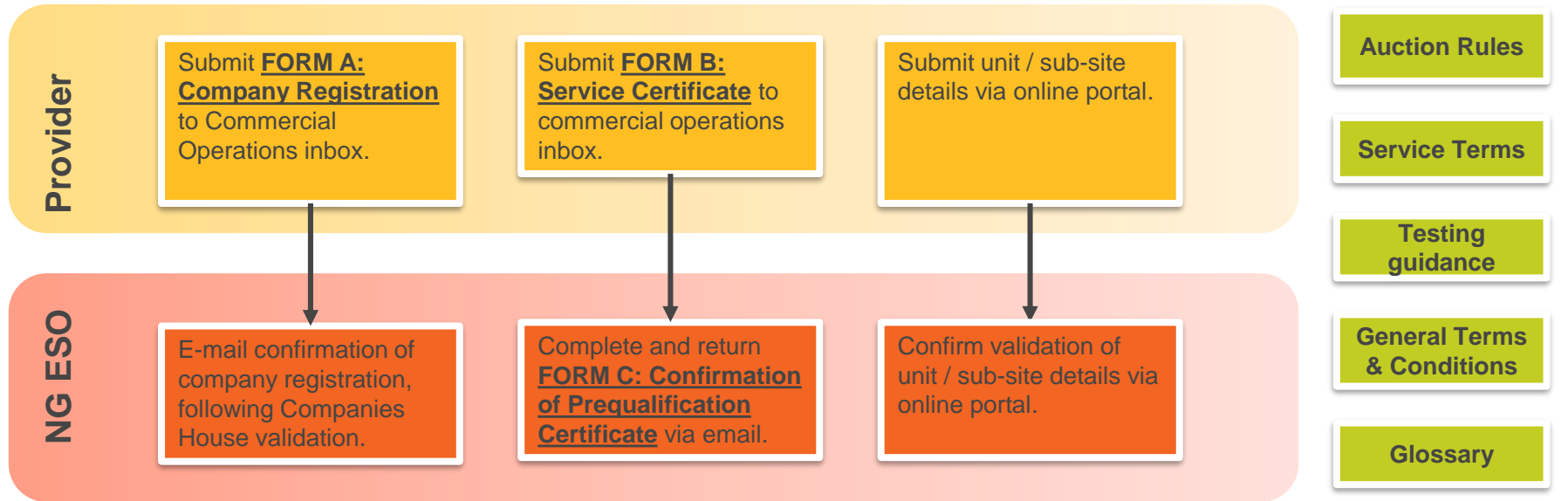
Anyone not pre-qualified ahead of go-live will have weekly opportunities to participate in the auctions throughout the Spring and Summer.

FFR Auction Trial: Prequalification Process

1. High level overview
2. Auction Trial contract documentation
3. Company Registration
4. Confirmation of Prequalification

Emily Hirst

Prequalification process – high level overview



- **Existing Framework Agreements replaced with 1-2 page forms available to download from NGE SO website.**
Exchange via email: no requirement for posting contracts or physical signature. Digital signatures accepted.
- **Once FORM B and FORM C have been exchanged, NGE SO and Provider become legally bound to the Auction Rules. Service terms become legally binding ONLY once a sell order is accepted and upon publication of results indicating that the Provider has been successful in the weekly auction.**
Prequalification documents are not confirmation of contract award.

Prequalification process - Auction Trial documentation

Providers submit to
NGESO

**FORM A: Company
Registration**

One submission per Parent Company / Agent / Aggregator (+ 1 Appendix per Related Entity)

**FORM B: Service
Certificate**

Provides legal declarations regarding Auction Trial documentation

NGESO

**FORM C: NGESO
Confirmation**

NGESO confirmation of Provider prequalification – not a confirmation of contract for investment purposes

Contract
documents –
available to
download on
NGESO website

Auction Rules

Sets out how to take part in the Auction Trial. Establishes that a contract is formed upon acceptance of Sell Order in a weekly auction. Confirms the “rules of the game”

Service Terms

Sets out the obligations of the Provider and NGESO once a contract has been awarded following a weekly auction.

**Testing guidance
document**

Guidance document – prequalification testing information

**General Terms &
Conditions**

Standard NGESO legal terms as per existing contracts: legal boilerplate

Glossary

Defined terms, as referenced in above legal documents

Prequalification process – Company Registration

FORM A: Company Registration

One submission per Parent Company / Agent / aggregator (+ 1 Appendix per related entity, e.g. sub-company)

- **Parent Company / Agent / aggregator submits one FORM A on behalf of the “Group” to commercial operation inbox.**
- **Requirement for 1x signature from Parent Company / Agent / aggregator and 1x signature from each Related Entity** which may be listed on separate Appendices to maintain confidentiality
- **Parent Company / Agent / aggregator can act on behalf of all Related Entities listed under Form A.** To add / remove Related Entities or update Provider information, re-submit FORM A with Appendices amended (one version of the truth).
- **Registration not effective until confirmed by NGESO via email from commercial operation inbox after appropriate validation.** Upon email confirmation from NGESO, Provider becomes a Registered Service Provider.
- **Registration details must EXACTLY match Companies House (CH) records** (just like in the CM....). Requirements as per company information required for existing Framework Agreement.
- **FORM A valid for all future NGESO balancing services, except where stated otherwise.**
- **FORM A can be submitted before, or at the same time as FORM B.**
- **FORM A includes a number of legal, market manipulation and anti-bribery declarations.**

Prequalification process - Confirmation of Prequalification

FORM B: Prequalification Certificate

Provides legal declarations regarding Auction Trial documentation

FORM C: NGENSO Confirmation

NGESO confirmation of Provider prequalification –not a confirmation of contract for investment purposes

- **FORM B submitted by Parent Company / Agent / aggregator on behalf of all Related Entities, once the Provider has become a Registered Service Provider.** (ie, submission of FORM A is confirmed by NGENSO)
- **Form B constitutes an expression of interest by the Registered Service Providers in participating in the Response Auction Trial.**
- **Upon receipt and validation of FORM B, NGENSO will issue FORM C to the Provider.**
- **Email exchange of FORM B and FORM C concludes the prequalification process.** NGENSO and the Provider enter into contract, under the Auction Rules and Service terms, once the auction results are published and the results indicate acceptance of a Sell Order.

The process for running the auction and the auction algorithm

The auction process

Thursday by 10:00

- National Grid ESO publish the hash of the document containing the buy order

Thursday 12:00

- Providers submit their sell offers to National Grid ESO

Friday by 12:00

- National Grid ESO published auction results and buy order

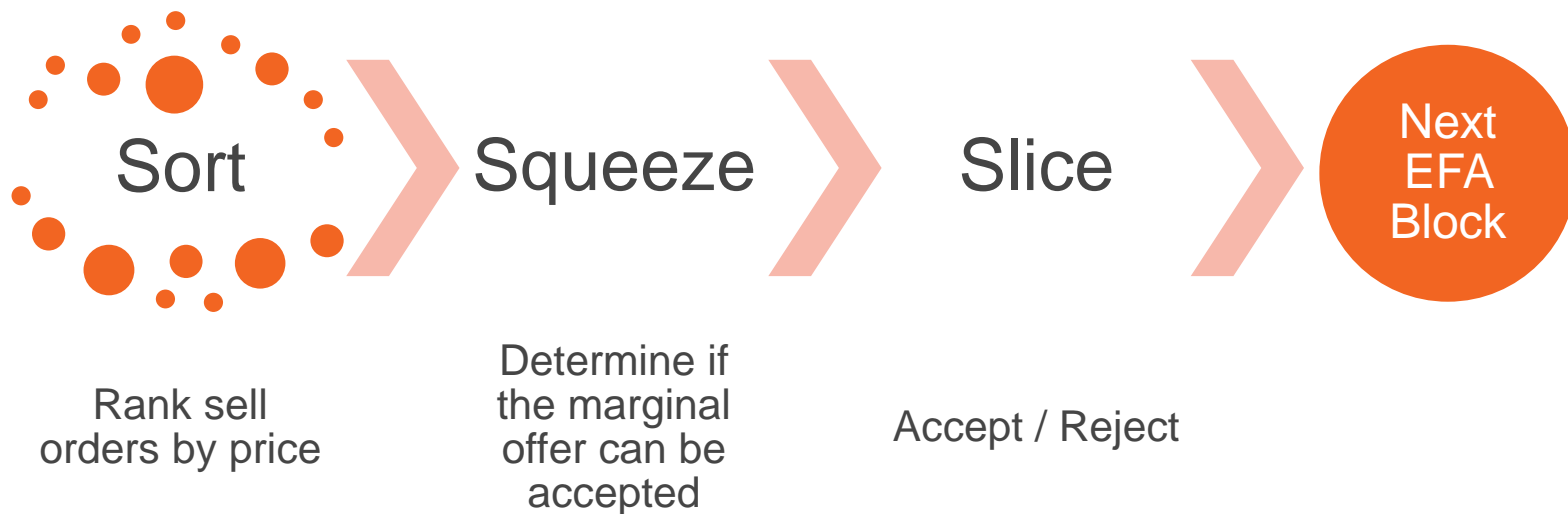
Friday 23:00

- Service delivery commences

Whilst running the auction algorithm itself will be a short process, for Phase 1 of the auction trial there are more manual processes involved, run by operational teams. Therefore it is necessary to allow time to ensure unforeseen operational issues can be addressed whilst meeting committed timeframes for the auction.

The auction algorithm

For each Electricity Forward Agreement (EFA) block in the week (42x):



Marginal unit acceptance

Example buy order limit = 100 MW

Offers are ranked by price

Units' maximum response capacity is accepted up to the buy order limit

Example 1: Marginal offer's maximum capacity fills buy order

Unit ID	Price (£/MW/h)	Min Response Capacity (MW)	Max Response Capacity (MW)	Cleared Response Capacity (MW)	
				Unit	Total
⋮	⋮	⋮	⋮	...	78
ABCD-1	5.00	5	10	10	88
WXYZ-1	6.00	8	12	12	100
ABCD-2	7.00	10	15		
JKLM-1	8.00	1	1		

WXYZ-1 is accepted

Buy order is filled, as we have bought up to 100 MW and no more than that.

Price clears at £6.00

Marginal unit acceptance

Example buy order limit = 100 MW

Offers are ranked by price

Units' maximum response capacity is accepted up to the buy order limit

Example 2: Marginal offer's maximum capacity would exceed buy order, but it can be partially accepted

Unit ID	Price (£/MW/h)	Min Response Capacity (MW)	Max Response Capacity (MW)	Cleared Response Capacity (MW)	
				Unit	Total
⋮	⋮	⋮	⋮	...	80
ABCD-1	5.00	5	10	10	90
WXYZ-1	6.00	8	12	10	100
ABCD-2	7.00	10	15		
JKLM-1	8.00	1	1		

WXYZ-1 is accepted

Buy order is filled as WXYZ-1 has sufficient flexibility in their sell offer to enable us to meet our 100 MW buy order limit without exceeding 100 MW.

Price clears at £6.00

Marginal unit acceptance

Example buy order limit = 100 MW

Offers are ranked by price

Units' maximum response capacity is accepted up to the buy order limit

Example 3: Marginal offer's maximum capacity would exceed buy order, but it cannot be partially accepted

Unit ID	Price (£/MW/h)	Min Response Capacity (MW)	Max Response Capacity (MW)	Cleared Response Capacity (MW)	
				Unit	Total
⋮	⋮	⋮	⋮	...	88
ABCD-1	5.00	5	10	10	98
WXYZ-1	6.00	8	12	(8)	(106)
ABCD-2	7.00	10	15		
JKLM-1	8.00	1	1		

WXYZ-1 is rejected

Buy order is filled below the limit of 100 MW as the marginal offer from WXYZ-1 does not have sufficient flexibility to fit within the remaining MW. WXYZ-1's minimum capacity is 5 MW but only 2 MW remains to be filled.

Next steps

Next steps

We will publish:

- The testing guidance document
- Expectations of the independent technical expert (used to verify asset testing)
- Contractual documentation
- More detailed FAQs, as a live document

Thank you for listening

Please submit your questions via Webex