Phase 1 Auction Trial for Frequency Response

FAQs version 5

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For clarification, or to submit additional questions and feedback, please contact commercial.operation@nationalgrid.com.

- Please read the below Q&A before contacting Account Managers with queries regarding the Auction Trial as this may address the questions you have.
- New information will be underlined for the week it's been added.

Testing & performance monitoring	
Would it be necessary to undertake pre-qualification trials for windfarms that are already providing the mandatory frequency response service?	Testing will be required for all providers participating in the Low Frequency Static service. This is because the trigger frequency is 49.6 Hz – different a number of other static services currently provided – and when frequency reaches that level we need to be sure the required service can be met/delivered.
How long does the testing validation take (currently 1 month for FFR) and will it be case of only having to have passed the testing prior to the week of delivery? Or does not passing by 25th of April mean that you are not allowed to participate in the whole trial?	There will be no validation of testing data from NGESO. Instead, an Independent Technical Expert (ITE), employed by the Provider, will confirm validation of the test data and sign a declaration, which will be submitted to NGESO (via email) in place of the test data. As soon as NGESO have confirmed receipt of the ITE's signed declaration, the Provider will have completed the requirement. Participants can take part in the first weekly auction if prequalification testing is completed prior to the 25th April. However, if you haven't passed the pre-qualification testing ahead of 25th April, then there are weekly opportunities to participate throughout the Spring and Summer. It is not the case that if you haven't pre-qualified by the go-live of Phase 1, you will be precluded from participating in any of the weekly auctions; our intention is to maximise participation and maximise learning through the trial.

Auction algorithm	
Regarding the worked examples for the auction, could you please add some chronological labels to describe the process on the slides. I understood it now but I suspect that in a weeks' time I will not remember very much.	Please see slides from the Phase 1 auction trial webinar, which have now been published. The sections with the worked examples has been updated to provide clarity.
There were more detailed examples about how auctions would clear and (eventually for phase 2 how bids would be linked) in the previous FFR auction webinar last year. Are the processes outlined in that previous webinar still current/valid?	Today's announcements do not affect Phase 2, where multiple services will be procured. The EPEX SPOT platform allows for additional features which will not be in place for Phase 1, where only the Low Frequency Static product is being procured.
Did you cover tiebreak situations, and who clears in those scenarios?	In tiebreak situations, we will use an ordering based on a random number allocated before the auction is run. This is consistent with the approach used in Phase 2 of the auction trial by EPEX SPOT. The random numbers will not be affected by the time that sell orders are submitted. Orders will be sorted first by price, then by the random number – so it will only be taken into account in the scenario where the marginal offer is not the only offer at that price. In this instance the auction algorithm will run through the orders in sequence until the buy order is satisfied. This is because the provider with the lowest random number allocation may not have a sufficiently flexible sell order to fill the remaining buy order without exceeding it. If none of the providers who submitted the marginal offers have sufficiently flexible offers to fit within the buy order limit (for example, 100 MW), none will be accepted and on this occasion, the buy order will not be fully satisfied (for example, we may buy 98 MW). This element of the auction trial is explained further in the Phase 1 webinar slides on the Future of Balancing Services website. The random number allocation will be published each week as part of the publication of results, so providers are able to see that the allocation varies week to week.
Do you need to make a submission in the sell order for each EFA block? Do we have to put a zero if we don't want to make a bid?	Yes, a submission is needed for each EFA block, so the formatting of the sell orders is consistent and can be run through the algorithm. Please submit a zero for EFA blocks with zero availability. Sell orders with missing data cannot be accepted as there will not be sufficient time to notice the error and notify providers to rectify the issue.
Prequalification	
What are the timeframes required to prequalify and participate in an auction?	The electronic portal user guide, available on the Future of Balancing Services website, provides details of the prequalification process using a process

	diagram. We advise reviewing this in order to familiarise yourself with the process. In summary, interested parties should submit correct testing data to us no later than a week before the first auction they intend to participate in – learnings from the first auction on 13th June indicated more time was needed for this step in order to ensure a smooth and sustainable process for both NGESO and providers. If data provided does not pass the requirements and needs to be resubmitted, this will also need to be at least a week before the auction. In addition to submitting correct testing data, participants must also have completed and submitted their FORM A and FORM B, and received a FORM C from NGESO before gaining access to the electronic portal used to register assets and submit Sell Orders. The whole process can take a week or more, depending on whether providers submit their testing data and their contract forms concurrently or one after the other. It is important that providers allow sufficient time to register and prepare for the first auction they intend to participate in as we may be processing a number of new providers and responding to queries.
Market Information	
Can you give the exact location of Forms A and B on the ESO website please? and where we'll find the Commercial Operations in box	These are available on the Future of Balancing Services website. Some contractual documents have been updated based on comments from stakeholders and our observations on where to provide clarify as we have prepared for the first auction. The updated documents have an updated version number in the document title and a modification history on the first page. In line with clause 2.1 of the Service Terms, we will from time to time update the contractual documents to ensure they are fit for purpose. The documents published on the website will be valid for the auction that is run in seven days' time. This means that if the contracts are updated, they will not affect the current auction week. So that the archived and current versions are visible, there are two folders containing the contractual document – please pay attention to which is the latest version (the most recent upload date and version number). The updated documents themselves have an updated version number in the document title and a modification history on the first page summarising the changes.

Will we know the price cap of National Grid ESO's buy offer in advance of the auction?	No, we will not publish details of the buy order in advance – neither the volume not price cap. This is to establish a double-blind auction. However, we will publish the hash algorithm of our buy order each week to provide reassurance that this is set in advance. See below for more details.

I'd like to understand the "hash" better. When is the hash issued. Do we as a potential seller get to see the requirement (ie buy order) that the ESO has? Can you show us an example of what the has might look like?	We will publish the hash of the document containing our buy order by 10:00 on Thursdays.
	
	For Phase 1 of the auction trial, National Grid ESO will be the buyer and the auctioneer. To give confidence to the industry that the buy order has been set in advance of the auction being run, we will set and lock-in our buy order in advance of receiving providers' sell orders. We will do this by publishing the hash of the document which contains our buy order. The hash is a string of pseudo-random characters which is unique* to the file in question – if even a single character in the document were to change, the hash would also change.
	
	For example, the hash will look like this:
	`25 c3 2f 99 25 ea ec e7 e4 7e e8 39 92 30 85 9b 89 42 57 ea 94 20 40 af 60 3f d7 f4 ea 73 0f 87`
	
	And if one character in the document changed, the hash would change so much that the hash of the amended document could look like:
	
	`3b 17 cc 2a f6 ab 7b 6b 3e 3f 03 f8 0e 1e 9a b2 d0 82 f5 08 2c c2 52 b9 f7 38 d0 ae a8 5d 5a 0a`
	
	By following this process, using the SHA256 algorithm, we're able to maintain the integrity of the double-blind auction, giving market confidence without revealing the buy order to participants ahead of the auction.
	
	*It is possible that different documents could result in the same hash, but the chances of similar documents (two versions of a buy order file) resulting in the same hash are infinitesimal.
	
	There are a number of videos available that describe this in more detail. Once such video can be found here on YouTube. The most relevant content may be up to 3 minutes 30, but please watch the full video or other videos if you are interested in finding more.

Why not share the prices of participants as in FFR tenders? The marginal price is given so the marginal plant's price is effectively revealed anyway.	During the webinar on the results from the mock auction trial we highlighted a couple of examples of the marginal offer to demonstrate where the marginal offers had or hadn't been 'squeezed' (i.e. reduced from the maximum MW to fit within the buy order). This was to illustrate the impact on the cleared MW. For the live auction, it will not be apparent which unit/provider is the marginal offer.
From the mock auction results, on the example where the full buy order was not met, is this because the next offers that could be squeezed were a higher minimum sell price than the rejected offers that could not be squeezed?	Yes, if there is sufficient flexibility within the first rejected sell order i.e. their minimum available MW fit within the unfilled buy order, yet the provider is rejected, this could be because their price exceeded the price cap of the buy order.
Interaction with other services	
How will this product interact with the other response product such as FFR / MFR?	Ahead of the FFR auction trial, a portion of the dynamic and non-dynamic FFR requirement will be transferred from the monthly tenders to the weekly auction.
Products	
What's the service being bought during Phase 1?	A Low Frequency Static Response product, activated at 49.60 Hz, delivering full response within 1 second for a duration of 30 minutes (unless providers are advised of a lower duration before that week's auction). A diagram to illustrate this is available within the Phase 1 auction trial webinar slides on the Future of Balancing Services website.
What's the minimum volume to participate please? 1MW?	Yes, 1MW. This can be aggregated from smaller units.
What volume will be procured?	Through Phase 1 of the Auction Trial, we will procure up to 100MW of the Low Frequency Static product. The exact volume to be procured each week will be confirmed by the Buy Order, which will publicly available to view following the auction (see questions relating to the Buy Order hash)
Why do you have a cap of 30 MW per provider?	We communicated that there would be a 30 MW cap at a provider level. This was to prevent market power situations in the 100 MW auction. However, acting upon feedback received from providers, we have reviewed this requirement. Instead, we will remove this cap at a provider level and have a unit cap of 20 MW (there is no limit on how many units providers are able to enter into the auction). We will however reserve the right to introduce a provider cap and remove the double-blind element of the auction trial should we see evidence of market power being abused, in order to maintain the integrity

	of the auction for all participants. This will be part of the learning we take from the trial.
Eligible assets	
Do I need to group sub-assets via GSP Group?	If a unit is made up of other sub-units, these sub-units must be located within the same Grid Supply Point (GSP) Group. We have received feedback that our requirement for aggregated units to be made up of sub-units within the same GSP Group needs to be more clearly signposted. This requirement exists as knowing the location of units enables us to consider thermal constraints in the assessment of our services and in dispatch of these services. Thermal constraints can have a critical impact on system security regardless of whether they conflict with a service that is being delivered for a matter seconds or hours. We understand that this requirement needs to be clearer for participants and so have updated our contractual documents (the definition of Eligible Assets in v1.2 of the Phase 1 Glossary) to reflect this.
Sell orders	
How do I complete the Sell Order template?	If you have pre-qualified and registered your assets via the electronic portal, in order to participate in an auction, you need to submit a Sell Order(s) via the electronic portal using the Sell Order template found on the Future of Balancing Services website in the participation information folder. Sell Orders must contain: **UNIT_ID** Unit ID that matches the online portal **DATE** EFA date of service delivery, with format YYYY-MM-DD NB: EFA block 1 starts at 23:00 on the previous calendar date, if in doubt, check with your account manager. **EFA** EFA block number, 1-6 **MIN_RESPONSE_CAPACITY_MW** Integer between 0 and 20, less than or equal to MAX_RESPONSE_CAPACITY_MW **MAX_RESPONSE_CAPACITY_MW** Integer between 0 and 20 **PRICE_GBP_MW_H** Decimal value representing pounds and pence, 2 decimal places only, do not include a currency symbol

	Please be aware of the following information with regards to common errors associated with submitting Sell Orders. Sell Orders must be uploaded as CSV files. Opening CSV files in Excel can alter the format of date - always be careful of this as this will result in non-compliant Sell Orders if the formatting is incorrect because the algorithm will be unable to process the Order. To check: • After opening the file in Excel, select Column B > right-click > Format Cells > Number > Custom > "yyyy-mm-dd" • After saving the file, open in a text editor, e.g. Notepad, to verify that all columns match the specification above The first hour of the first EFA block of the week's delivery falls on a Thursday, however the Sell Order reflects this as being EFA block 1 on the Friday, so for each day of the auction – Friday to Friday – has 6 EFA blocks in the Sell Order. **Do not** change the date of the first EFA block to the Thursday's date as this will result in a non-compliant Sell Order that is not compatible with the auction algorithm. There are no requirements for the file name, but including the unit ID and submission date, while keeping it short would be advisable.
Service delivery	
What do I do if my assets are unavailable?	Assets must be available for the period during they have submitted Sell Orders for and been awarded a contract for. However, if a provider needs to declare their unavailability for technical reasons, they should submit a "Notification of unavailability/restoration of availability" fax form to the National Grid ESO control room. This form and fax details can be found on the Future of Balancing Services website in the participation information folder.
General	
The Future of Frequency Response report suggests that from here on out change consultations will be annual and will be tied to the ESO Forward Plan. Is that the case? Will there only be one opportunity per year to consult on and alter the auction and new frequency response products?	We will publish and consult on broad milestones and commitments through the ESO Forward Plan, across a range of our activities as ESO. This process will not be used to consult on the detail of how we are reforming our balancing services. Instead we will continue to seek feedback on this through dedicated events, organised at the appropriate times throughout the year.
The Future of Frequency Response report says that the Auction Trial will last for 24 months from the end of the development phase. What are the timings of the auctions?	Phase 1 of the auction trial will go-live on 25th April (when the first auction will be run) and successful providers will commence delivery for the week at 23:00 on 26th April. Phase 1 will run through out spring

	to late Summer, with Phase 2 going live with our partner EPEX SPOT in September 2019. We will run Phase 2 of the auction trial for 24 months, taking learnings as the trial progresses to inform what follows the trial.
What qualifies as sufficient liquidity to run the auction?	We require sufficient competition to run the auction trial. Ideally this would contain three or more independent participants, however we reserve the right to run the auction with fewer participants to support market confidence and ensure that we maximise learning opportunities from the trial.