Technical Questions Webinar

17 March 11am-12.30pm

Published Questions

Question	Answer
Could you set out how the live NESO Power Requirement +Operational Review of Storage Behind Constraints projects interact with CFI - these are not cited in CFI.	The "Power Requirement project" is looking at what shorter-term, tactical solutions might be needed to help with the current, specific challenges primarily with energy balancing (i.e. focused mainly on frequency management). They are looking at options which could be delivered quicker than the RNP Balancing Reforms, to bridge the gap between today and expected implementation of RNP reforms. If you have any further/detailed information which can contribute to CBA, please provide through CFI. NESO are in the early stages of conducting an operational review into the dispatch of storage assets behind constraints. We are considering a wide range of options, but are keen to hear any suggestions from stakeholders. The scope of NESO's review is only options that are within NESO's current capabilities and remit (e.g. don't require market, licence, or code changes); and the objective is not to "solve" phenomena such as "Repetitive Re-Trading", but to ensure that NESO continues to meet its current licence conditions in the best way possible when operating storage assets behind constraints. This includes examples such as the obligation to operate the system efficiently. This review is being coordinated with the RNP workstreams
Has NESO considered making full use of existing tools that allow contracting ahead of GC, e.g. Sch 7 trades/constraint management markets identified in the Constraint Collaboration Project?	Yes, NESO is in the process of considering all the existing pre-gate tools and the relevant previously discounted CCP options. While we are considering these, our initial view is that where these are viable, they would be required in addition to the balancing and dispatch reforms.

What consideration has NESO given to moving GC closer to real time, given the EU's move to a 30 minute intraday cross zonal gate closure?	As outlined in the reasons for the proposed reforms in the CFI the volume of balancing actions the system operator will need to undertake after Gate Closure is due to grow significantly in the coming years. Without a more significant reform to dispatch arrangements shortening Gate Closure time will be difficult to manage from an operability perspective due to the number of actions that will need to be taken, but we are keen to hear more about the benefits of moving closer to real time in your responses.
Will industry get a chance to feedback on the final CBA before recommendations are made?	We will be engaging industry throughout the CBA process, including the industry expert panel. We will seek feedback on, and be transparent about, assumptions inputs and methodology, and results will be made public. We will provide more information about the CBA process, including engagement, in due course.
Are you considering what is not a BMU or has preferential treatment, e.g. inflexible nuclear, EfW, etc.?	Our assumption is that any change to the lower mandatory BM threshold would apply regardless of technology type. There is probably a distinction to draw between the visibility that the BM give through Physical Notifications, needed from all participants, and the element of the ability to re-dispatch, which relies on participants submitting usable Bid-Offer volume (and at a commercially accessible price)
Parties don't often trade by unit if they have more than one. Isn't unit trade only needed by NESO, for everyone else would just see increased costs?	The call for input includes two ways that unit bidding could be implemented, one of these includes parties continuing to trade on a portfolio level and then disaggregating this data for NESO. The other requires unit level trading but introduces a central market that could also improve liquidity, scheduling and trading opportunities for smaller parties. We're keen to hear more about the implications of these changes to market participants as part of the CFI
Are you/Ofgem/DESNZ considering time of use network charges as a signal - like the DNOs do?	Reforms to network charging are being considered within the Siting & Investment Levers workstream of RNP. Further detail will be available within the DESNZ Delivery Plan, to be publish shortly, and the already published OFGEM Call for Input on locational network charging.
Interconnector issues are noted, but no "brave" solutions put forward. Does NESO have some ideas, like	Our cross-border agreements are all tri-partite agreements with the specific interconnector and the connected TSO. This means

clear pricing rules for SO to SO actions, etc.?	that there is an array of different arrangements, depending on the rules and process of the specific interconnector and TSO. We have been and continue to work with all of these parties to try to improve arrangements, but they are all fundamentally subject to consensus and negotiation which makes alignment and improvement more difficult. It's worth noting that while improvements to interconnector re-dispatch are important and valuable, none of them can address the root cause which is the fundamental misalignment between the national wholesale GB price and the congestion withing our system. There will be always redispatch which we have to do with Interconnectors.
What's the timeline planned for the CBA?	We're expecting the CBA to take around 6 months. Further detail on engagement through the different stages of the CBA will be informed shortly through the NESO RNP website.
Should we consider using smaller plant via ancillary services markets rather than full BM access?	An element of the BM is about the ability to re-dispatch, and many of the Ancillary Services are indeed activated through the BM. However, this does not necessarily provide the same degree of flexibility and participation as being in the BM. Additionally, it is important to consider the visibility and other rules that come with the BM, like submitting and following Physical Notifications. We think that both elements are important, to give the right level of both visibility of and adherence to plans, and the access to re-dispatch. However, we are open to ideas on ways of implementing the lower BM threshold that balances providing NESO with the level of visibility and access required, against the potential additional burden and costs for smaller market participants and ensuring they can participate effectively in the BM.
Are changes in the 'ruled out' bucket like changing gate closure and a clearing price in the BM ruled out in all instances (including dispatch reform)?	Depending and the scale and nature of Dispatch Reform, this could be a route to shorter Gate Closure and a Pay-As-Clear BM. That would be contingent on a few important factors, like significantly reduced levels of re-dispatch and much more "homogenous" actions, where we're only having to

	resolve energy balancing in real-time rather than a whole mix of needs like energy, constraints, reserve, voltage etc.
Just to note BM access currently takes 9-12 months. When is work starting to improve that for those currently trying to get into the BM?	An update on this was given at the OTF on 18 March which covered the recent increases in volumes of registration into SORT and the impact OBP delivery will have in this area. A number of similar questions were raised at that OTF the answers to which are available on the NESO OTF webpage.
Let's say NESO recommends reversing p342 for example, does that then still require its own BSC mod to be raised, or is there then an expedited process? (	DESNZ are seeking to introduce primary legislation at the earliest opportunity to expedite implementation of these reforms by providing powers for both Ofgem and Secretary of State (if required) to amend the necessary codes and licenses.
With NESO now dictating where projects will be built via connections reform, what consideration is there for RNP not being locational at all? CR is new signal	Locational investment signals are being looked at in the Siting and Investment Levers workstream within RNP. As DEZNZ set out, this explores how to align various policy levers with the Strategic Spatial Energy Plan. The use of connections offers is one of these levers. The SIL work does not look at operational signals. However, the balancing, settlement and dispatch workstream does, as does the constraints management workstream.
Dual vs single cashout is critical to some of the incentives in a new market design. This are not considered in detail - this is a must. Ditto pay as bid?	We've noted in the appendix that we think that the combination of the proposed balancing reforms means that we can retain the single imbalance price, rather than reverting to a dual-price. Likewise, we do not think the conditions will exist to make a pay-as-clear BM economically rational, given the scale of re-dispatch and mix of different energy and system needs.
What evidence does NESO have that central/hybrid dispatch models would provide a net consumer benefit vs enhancing the existing self-dispatch framework?	We're still at the phase of exploring the potential benefits and challenges associated with Dispatch Reform. We recently published the results of some innovation projects which looked into things like Central Dispatch and co-optimisation, which identified significant potential savings, with a retained national price. We've been looking to our EU neighbours for insights on their approaches to "hybrid" dispatch, and are planning to do further work on this area.

	The innovation projects can be found here, under 'REMA Scheduling and Dispatch Assessment': https://www.neso.energy/what-we-do/rema-archive
On mandatory participation, what is NESO's view on options to lessen the initial and ongoing burden for those affected? Will these be included in the CBA?	We recognise that lowering the mandatory BM participation threshold will increase the burden on market participants. These impacts will be considered within the CBA and we are very keen to get feedback on the scale and breadth of these impacts via the CFI.
Who signs off the CBA? Will it include the wider RNP areas which impact constraint costs such as expedited network build?	NESO owns the CBA process, but we will engage industry comprehensively on the inputs, assumptions and methodology. DESNZ and Ofgem will sit on a steering group for the CBA, and will be the eventual decision makers. The CBA will include a robust counterfactual, to include all ongoing and future policy developments that are reasonable to expect. For less certain, but potentially significant other developments, e.g. different levels of network build, these can be picked up by sensitivities.
Why close trading at Gate Closure for renewables and NPTs, if keeping it open would improve NESO's visibility of updated generation and demand?	The challenge we are considering is that decentralised balancing by the market post-Gate closure can be welfare-enhancing under a system with low-constraints by reducing the volume of energy balancing actions. However, under a system with high constraints this can unintentionally exacerbate constraints and thereby increase the volume of balancing actions required. With the volume of constraints and redispatch expected, we think there is potential benefits in creating a clearer separation in balancing responsibility between the market ahead of time and NESO in real-time, to reduce the volume of unnecessary or counterproductive actions taken
Why does NESO care how parties have traded, surely your job just requires you know the physical positions and what physically parties plan to do?	Understanding how units have traded would give NESO a better understanding of how market participants are intending to dispatch, and a better understanding of the overall system length (i.e. expected Net Imbalance Volume) that PNs do not currently give us.

	This is important as, due to the reducing share of the market which submit PNs, they are no longer as good an indication of the overall market position. Visibility of traded positions would address this gap, allowing us to better understand whether the system is short or long. Key interaction here is lower BM threshold, as this would bring more of the market into submitting PNs
Some of these proposals are impacting the wholesale market, rather than just balancing-which organisation has responsibility for the wholesale market (Ofgem?)	The RNP programme is a joint project between DESNZ, Ofgem and NESO. We are working together to develop the reforms.
This sounds like NESO are going to create an energy balancing issue to solve a short-term ops issue, could you stagger reforms? Starting with BMU threshold?	We recognise there is a potential risk of increasing the volume of energy balancing actions as the market is less able to reach an efficient energy position, however, this needs to be balanced against the volume of constraints expected, which is now the key driver of balancing actions. That is because reaching a more efficient national energy position may not always be welfare enhancing under a constrained system. The CBA will be exploring this trade-off, as the reforms should not just shift costs elsewhere, but rather than reducing costs overall
PNs= traded position - is it proposed that this apply to supplier BM units aswell? Or just generators?	The proposal is that it will apply to both generation and demand, and we look forward to hearing feedback through the CfI what the potential impacts of this could be, which will also be assessed through the CBA.
Has NESO engaged with Ofgem to determine whether Ofgem already has sufficient information gathering/investigative powers under relevant licence conditions?	We are engaging with Ofgem as one of the RNP partners on all of the reforms and they are feeding in whether these reforms would be desirable for their investigative powers and information gathering.
Would lower BM barriers require new units to be active in the BM?	By active we assume that mean in terms of participating in balancing through actioning of BOAs. If units do not wish to be active, they can submit bid/offer prices that make it unlikely they will be accepted. There is still great value to NESO for having greater visibility of assets through the submission of PNs.

Will each trading party need to inform the PN submission party every time their traded position changes for BMUs with multiple off-takers?	No under the current proposal only the FPN is required to match the traded position, with no changes to PNs.
Do you have a view on BM requirements for demand as well? Or in a separate market rather than full BM?	Our starting point is that the reduction in mandatory BM threshold would apply to all BMUs. For demand this would mean the obligation to submit PNs would apply to smaller portfolios than currently. We recognise the different characteristics of demand and welcome further ideas on how to best address the challenges outlined in the CFI.
Are we revisiting cash-out of supply and generation separately? It was a big issue at NETA, but market structure has significantly altered.	No this has not been considered in our assessment. However, we welcome any views on this.
A lot of these have come with "obviously big impact to liquidity". How will NESO model these impacts, the corresponding costs and system risks?	This will be undertaken as part of the CBA and implementation assessment. These products will be conducted in collaboration with industry. Through the CfI, we want to hear your thoughts on how the reforms impact you and use your expertise as we develop the reforms.
The demand side is largely missing from the proposals - is this intentional or to be considered later?	The impact to demand has been considered within the development of the proposals and will be assessed in more detail in the next phases of work. We welcome further input specific to demand to ensure a comprehensive assessment.
Has NESO examined lessons from other EU TSOs on publishing more granular imbalance data/forecasts to help participants respond more effectively to system need?	We have been discussing this issue with several EU TSOs, including the Netherlands, Belgium and others. There are instances where NIV chasing can be helpful, typically on uncongested systems, at times when the market length is clearly in one direction or the other, and when the size of the response to market length is predictable. There are also instances where it can be unhelpful, typically on congested systems, when NIV is close to zero and over-corrections from NIV chasers can lead to oscillatory behaviour, affecting system frequency, and when the size or timing of NIV chasing is unpredictable, again affecting system frequency.

Some of the reforms proposed are incompatible with the IEM. What weight does NESO place on this?	We will be considering interaction with the IEM rules as we assess the reforms. We acknowledge that some of the reforms present compatibility issues with IEM entry but also recognise that status quo arrangements also create compatibility issues.
Why aren't NESO proposing shorter SPs and shorter gate closure period?	As outlined in the reasons for the proposed reforms in the CFI the volume of balancing actions the system operator will need to undertake after gate closure is due to grow significantly in the coming years. Without a more significant reform to dispatch arrangements shortening gate closure time will be difficult to manage from an operability perspective due to the number of actions that will need to be taken but we are keen to hear more about the benefits of moving closer to real time in your responses.
From NESO's perspective, negative prices are bad; paying for bids. But for consumers they are good (free power). How will NESO look beyond its own costs?	In the wholesale market, a negative price means the generator paying money to the consumer because they want to generate; this saves consumers money (depending on the other monetary flows of CfDs etc, which consumers ultimately pay for too) In the BM, paying a negative bid price means we pay the generator not to generate; this represents a cost to the consumer (who ultimately pay for the balancing costs). Even if the BM action is for demand turn up, at a negative price this just means that some consumers (paying for BSUoS) are giving money to other, flexible consumers; there is no net saving across all consumers, just a net transfer between different end consumers. We must replace the bid-off energy too, to restore the overall energy balance, so there is an additional payment for the offers to increase generation or turn down demand elsewhere. The CBA will consider both change in system costs (cost to supply energy) and total social economic welfare, therefore it will take a view of costs for the industry and consumers.
I don't think NESO has any idea of how painful MHSS has been to want to then move it to 15 minutes!	NESO recognises the challenges associated with implementing MHHS. While we are aware of the potential impacts that a Shorter Settlement Period may have on market participants and

	system balancing, we are keen to use the CFI to gather detailed feedback on the scale and breadth of these impacts. All insights received will be fully considered as part of the CBA.
Are there indicative implementation timeframes for hybrid dispatch?	Currently in early stages of assessment.
Would cash out still be at a single national price and, if so, don't portfolio effects still apply even under unit bidding?	Yes, the single imbalance price would mean imbalance across a portfolio can net off. Unit-bidding is intended to enable enhanced market monitoring, particularly for constraints, and improve pre-gate closure visibility
Doesn't NESO have hybrid dispatch already through the use of Sch7 and PGBTs?	While NESO does take some actions ahead of gate closure today, in hybrid dispatch this would be more formalised and holistic, bringing together actions for constraints, reserve, voltage, energy etc. in one place. Also, when taking actions ahead of time, you must consider the impact on the wholesale market and are likely to need to include protections to prevent parties from trading away positions agreed with NESO.
Cost/benefit of balancing and settlement reforms may depend on wider changes like reforms to CfD and CM. When will these interactions be considered?	All CBAs will need to be 'whole system' and look at any impacts on wider markets and policies, including government investment policy. We would welcome your thoughts on these impacts, through the CFI or otherwise.
Would contracts=FPNs with a gross pool and financial trading? How would/could this be enforced?	Any new market design would be underpinned through changes to market rules. There will likely be licence and code changes required to implement the reforms that are decided upon.
The argument for the need for dispatch reform (i.e., the reforms don't address redispatch) also means that unit bidding doesn't contribute to the challenges?	We see unit bidding as potentially having value by improving market monitoring, as well as enabling PN matches trading position to provide greater unit level information on a unit level and there is contributing to addressing the challenges. It may lead to a reduction in redispatch required but we still foresee need to reduce redispatch further to address operability concerns and costs to consumers.

What consideration has there been of the benefits of wider reforms for operational challenges such as introducing Deemed CfDs?	CFD reform is being looked at as part of the wider RNP Programme, and there should be an update from DESNZ on this in their upcoming Delivery Plan.
Has thought been given to moving more network costs and balancing costs onto the generators?	As part of the RNP programme OFGEM have recently published a Call for Input on Locational Charges and Regulatory Siting Levers.
Under the big-bang gross pool option for unit bidding, is NESO also considering co-optimised balancing services within the pool?	While gross pool unit bidding would be required to enable co-optimised balancing services within the pool, NESO views that this would be a form of hybrid dispatch and are considering as part of the Dispatch Reform work.
Do potential changes to dispatch not create huge risk to generation/storage behind constraints thru lower volumes of output, just as zonal pricing would have?	There is potential opportunity as well as potential risk. Our analysis actually show improved use of storage assets and the opportunity to get additional revenue across all markets. In general, our assumption whilst investigating dispatch reforms is that a single national price and firm financial access is retained, and therefore make whole payments could be made to units that have reduced volumes to due constraints. The quantitative analysis published on our website still shows a net benefit in this scenario due to more efficient scheduling of resources.
There should be an opportunity to consider these proposals alongside DESNZ's 'Delivery Plan' and to understand the timelines they are considering for these.	We understand and are sympathetic to this request and would hope that the Delivery Plan timelines will allow for this. If that changes, we will speak to stakeholders about the impact and act accordingly.
Given NESO is the proposer of these reforms, how can it provide an impartial recommendation? Hard to imagine you saying not to do all your own ideas.	We will only make a positive recommendation if the CBAs, implementation and impact assessments stack up, and we will be engaging on these assessments to ensure they are objective, robust and whole system.

Where NESO is commissioning or undertaking CBAs, when it has a strong view of what it would like the outcome to be, how does it ensure these are objective?	As mentioned, we will be engaging industry on the assumptions, inputs and methodologies for the CBAs, as well as implementation and impact assessments.
Unit Level Bidding Option 2 is somewhat reminiscent of the old pre-NETA pool. More detail is required, but market today is very different. Would this work?	We're looking forward to understanding more detail on where there might be difficulties for unit bidding for our current market participants as part of the CfI. Some EU markets currently have unit bidding and we are working to learn lessons from these experiences. Beyond the EU gross pool markets are in use in the US, Australia and elsewhere.
If you lower the BM threshold would these new BM units need to comply with Grid Code (if they don't have an aggregator/VLP)? Huge cost!?	As part of the assessment of this reform we will be considering the obligations that smaller BM units would be required to comply with and the possibility of different routes to participation. We recognise the need to find the right balance between the potential benefits and the implementation burden. We welcome ideas in this area via the CFI.
if hybrid dispatch is voluntary / not for all assets, and there is some form of compensation for this - does this start to look similar to a Constraint Market?	Our current thinking is that any reform to dispatch arrangements would need to apply to all market participants; if only some assets are included, it risks fragmenting the market(s) and causing inefficiency and incoherence. In terms of compensation, we're working on the assumption of a national price and firm access, or "top-up payments" that would result in the equivalent revenues/profits for parties so that their investment decisions are not undermined
Does NESO realise that the trading period post-GC is the most liquid, fair and price-competitive? Is this noted somewhere?	Yes, we are aware. We expect that the liquidity to move earlier, not to disappear entirely. This will be a key part of the CBA work where we will need to understand the impact on liquidity and market behaviour, and as such we are looking for feedback and evidence via the CFI
Does NESO want to receive PNs that equal traded position or just FPNs?	Just FPNs, requiring matching ahead of time could distort how market participants create and submit their PNs.

Physical trades have no location. They are delivered by notification into cash-out. How can they provide more granular locational information?	By linking trades to specific units, that would give the locational information to the trade.
If NESO thinks IC agreements are hard because tripartite, why is instead pushing reforms that affect hundreds of parties instead?	We're pursing changes in both areas, not just one. ICs alone aren't the cause (or solution) of all issues, nor are domestic GB assets and rules; again, it's a combination of both. The difficulty we were trying to highlight with ICs the lack of consistency due to the processes and rules at the other end; GB is bound by one common set of codes domestically (BSC, Grid Code etc.), which gives that consistency. However, that is not to say that change is necessarily easier.
My question on liquidity modelling and associated costs/risks was not when, but how. How will you model them please?	We do not have a defined methodology. The purpose of the Call for Input and our continued engagement with industry is to get your input and suggestions on what we should be considering in our assessment and how we should approach the modelling methodology.
Is the proposal for 15 minute SPs, maintaining gate closure frequency (option 3) to allow for intertemporal considerations across multiple settlement periods?	Option 3 is intended to mitigate the potential intertemporal challenges for assets with long notice to deviate from zero times from a shorter balancing window, and the length of time the control room has to manage redispatch volumes. This needs to be considered against the potential drawbacks from maintaining a longer balancing window on the benefits of a shorter SP.
Should we also not keep parties who are "skipped" financially whole as well? Critical if forcing parties into the BM.	We recognise the need to balance the benefits of this reform with the implementation costs and commercial risks that parties will be exposed to. We will be considering ways to reduce these costs and risks as part of the next phase of work.
Will objectivity of CBA extend to 3rd party support, noting perceived conflicts of interest with recent C-Dispatch studies published by NESO?	The CBA will be conducted by a third party, with NESO oversight. Industry will be able to directly feed into the CBA methodologies, assumptions and sensitivities development, etc to ensure it is robust. NESO is an impartial and independent body, the assumptions and methodology for the dispatch assessment work are transparent (and which included industry input). If you have any specific concerns about conflict of

	interest or assumptions/methodology used, then please share this with us.
Please would you elaborate on your planned work with DSOs and the expected impacts on local markets and DSOs?	The interaction with DSOs and local markets will be a crucial part of the CBA, implementation and impact assessment work. We are engaging the DSO and distributed flexibility communities and are keen to see feedback and evidence on this via the CFI.