National Grid ESO - Operational Forum 2020

National Grid ESO Ops Forum - Questions and Answers

Below are the questions and answers from the Operational Forum held in November 2020

	Question	Response
1	On the Constraints breakdown slide in the Balancing Costs section there was a category called Sterilized HR totaling £87m. What is this	Headroom represents spare capacity on operating generating units which the ESO can potentially access to meet its reserve requirements. Headroom may become inaccessible due to transmission constraints in the case of generators located behind an export constraint boundary. The cost of replacing this 'sterilized headroom' can contribute materially to overall constraint costs. If an action is taken to completely replace sterilized operational margin, then the costs are assigned to constraint costs.
2	What physical steps are needed to provide Super SEL? Are these one-off capital investments or do they incur operating costs as well? And what are these costs?	The stations will consider where any capex costs are required to amend the operating configuration/capability of their units. When units are operating at Super SEL, they are generally less efficient than when operating at their normal SEL or may require additional maintenance, and so the cost of these could be considered in the provider's price for the service. NGESO do not make any capital contribution for any changes needed to plant.

	Question	Response
3	What parameters are considered for voltage and stability offers? is it purely price or is location? Are these decisions made on a day ahead basis?	For management of Voltage we have zones where we have a requirement for dynamic capability, which currently is provided by additional units. The decision will be based on the least overall cost to meet the requirements in those zones. After this we will see the residual stability requirement which is remaining and again meet this on lowest overall cost. These actions highlight the need for the work we are driving through the pathfinders where we are seeking providers in different locations to be able to meet the system requirements perhaps without the energy component which at these low demand points we may not require.
4	How does turning back IC exports help inertia	We are focused on ensuring the RoCoF relays on the system do not operate. This is driven by the inertia of the system and the size of credible losses on the system. We take actions on the I/C to reduce the size of losses. This is the most economical method as reducing the infeed size by 1 MW is equivalent to having to add 20 MWs worth of inertia.
5	With the benefit of hindsight, what different actions would you have taken at the planning stage before handing over to the Control Room?	Generally, there would not have been any significant differences. Had the lower demand outturn been forecasted, this may have triggered the need for procuring some ODFM.
6	How much does uncertainty of forecast embedded output affect downward margin reqs?	The uncertainty of forecast embedded output (or BM wind forecast) does not affect the downward margin requirement. This is because the any increase in embedded wind would also have an increased amount of BM wind that might increase the downward requirement can be mitigated by reducing the BM wind output.
7	Was ODFM the most economic option at the time? why was it preferred versus bidding down wind outright on the BM? (on days where ODFM was exercised) (edited)	ODFM was used to secure the system in scenarios whereby we anticipated that insufficient downward flexibility available in real time. In making that assessment, we used the best-case data available to us at the time as to what options would be available to the control room in real time
8	Would pumped storage continued to be used to manage downward margin going forward? How would this interact with the recent Reserve from Storage in BM trials?	Pumped storage and any battery capacity will continue to be used for downward margin based on their cost. For both of these one of the issues is knowing the capacity that is available and when to most economically use it

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9	To confirm, ODFM will not be returning?	We are considering the need case for a commercial solution to access additional downward flexibility for 2021, in advance of reserve product reform in 2022 which will deliver an enduring commercial solution to downward flexibility. However, our main routes to accessing flexibility remain the BM, and we would encourage parties to investigate accessing the BM through the VLP or Supplier routes.
10	That (the question on small wind) sounds like you cannot manage lots of small plants, how are you going to address this going forward, when will this be done - where is it being discussed	This is an area that we have been looking into now for some time now. Historically we haven't needed to access the smaller plants that often but with wider access work and the number of smaller BMU that have started to come through we are developing several different tools to help us dispatch more units together.
11	Why aren't interconnect exports accounted for in the peak demand forecast if cold periods affect multiple neighboring countries	A number of reason but interconnector flows are primarily driven by price and so we expect to see imports based on forecasted within the GB market compared to continental Markets. Within the published outlook report we look back at previous years of Interconnector flows
12	What is the current expectation for IFA 2? I read today it may be delayed	This was answered in presentation slides; we will keep track of any changes that happen regarding timelines
13	On days where TRIAD likely, what additional GW of generation do you anticipate responding this Winter Outlook period?	We are focused on ensuring the RoCoF relays on the system do not operate. This is driven by the inertia of the system and the size of credible losses on the system. We take actions on the I/C to reduce the size of losses. This is the most economical method as reducing the infeed size by 1 MW is equivalent to having to add 20 MWs worth of inertia.
14	With IC decoupling could the flows potentially go the wrong way or not flow as happened before coupling? What will you do if this happens	we have a reasonable amount of certainty on interconnector flows, so we aren't expecting to see any exports at peak times. we have a range of tools and services available to make sure that we can manage any potential issues
15	Does your forecast of interconnector flows in terms of price differential include or exclude the payment of transmission fees on those flows after 1st January?	It does not include any changes to I/C payment arrangements

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16	How can we monitor ifa2 progress?	Everyone is obsessed at the OTF on IFA 2 progress, check their website I think http://ifa2interconnector.com/latest-news/
17	Following Ofgem's decision on regulatory treatment of storage (i.e. considered subset of generation), are TOs still able to develop synchronous compensators?	This is a question for the TOs but we are aware of the interaction with products like Stability and are raising it in discussions with Ofgem.
18	Will the new CMP product be compliant with EBGL Article 18 and Article 26 as well as the Clean Energy Package requirements?	Compliance with EBGL articles is something we will work through as we develop. EBGL focuses on Balancing Capacity and Balancing Energy Products, CMP will be a system service.
19	What drives the requirement for additional reactive power support in the Pennine region?	Reactive requirements set against a series of different demand and generation availability backgrounds
20	Not all the stability requirement was tendered in phase 1, will the volume that was not procured be re tendered in the near future	Stability Phase 2 procured secured a volume of service against a national need driven by inertia. Phase 2 is focusing on procuring Short Circuit Level in Scotland. Phase 3 will be driven by the remaining requirements across England and Wales but is unlikely to be the only route through which we ultimately meet this requirement.
21	Could you please provide more detailed information on Stab Pathfinder Phase 3? With RoCoF costs growing, shouldn't this work be accelerated	ALOMP is focused on reducing the RoCoF costs and aligning everyone through the FRCR on ensuring the right level of cost vs security, more to come later!
22	What considerations have been taken into account for the current proposal of the constraint management service? Is it still a pre-fault service?	The key consideration was the responses to the RFI where it has become apparent that our requirement could likely be fulfilled though the development of a shorter term market for assets that are already connected to the network.
23	Has NGESO thought more whether inertia should be bought in similar manner to capacity in the capacity market, whilst recognizing flexibility when not in merit?	We are committed to investigating a market-based approach to stability, and are in the process of scoping a potential innovation project in this area.
24	Why are you not embracing using existing reactive power products such as changing the tender timeframes for enhanced relative power?	We will review existing reactive power product like ERPS to understand whether there are problems and what are the specific reasons causing the problem, this will be part of our problem review with internal and external stakeholders

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25	The reactive power roadmap was promised by the EDO in spring last year - why the 18-month delay?	There has been much work going on as we are working on numerous strategic projects and we needed to learn from those first. We are planning to take the approach mentioned in the slides to identify what activities are required on the roadmap, and this will be an interactive exercise to update with latest problems, learning from existing activities, and plan next steps
26	Would the costs include payment of TNUOS and BSUOS over the period (up to 45 years)?	We would expect all costs associated with a solution to be included in its bid price, including cost of energy, connections, additional network investment etc.
27	There is not currently a level playing field as ESO ignores synch comp paying TNUOS	We are trying to ensure there is as level a playing field as possible but there will always remain some valid differences between network and non-network solutions. This will be considered in more detail in the implementation phase (if implemented) and we will continue to use learning from our pathfinder projects to support development of early competition.
28	Ref SQSS: Aug 19 event included consequential / domino-effect losses which outstripped Largest Loss MW holding. Will this risk be satisfied in these changes	The Cost vs. risk analysis looks at any changes
29	Will the new operational standard increase the amount and cost of the actions you take to manage frequency?	Likely to move away from bids on specific large loss risks and instead hold more response to cover larger losses, inc. consequential loss of DER
30	Can LFDD risk be reduced by more sophisticated active DNO Voltage Control as a last resort? e.g. advanced tap-change functionality developed in Project CLASS	The ESO is interested in all potential mitigations and welcomes input highlighting new risks
31	Appreciate it is a bit early, but is your current understanding that, all things equal, the new methodology will increase the volume of the requirements?	Likely to move away from bids on specific large loss risks and instead hold more response to cover larger losses, inc. consequential loss of DER
32	Dynamic Containment: Max duration is 15 mins. Do you stop after 15mins? How long a break can you then take until you need to be able to deliver again?	There is no recovery period as the SEM rules to allow Providers time to recover energy position following event.
33	When will DM and DR be available	Will come back to the market when we look to launch those- Provider engagement is planned to start in the New Year

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34	Why can't you provide the price cap after the tender round as you do with Phase 2	We are currently reviewing the initial findings from the delivery of DC to look at possible improvements going forward. This will be captured as part of this review
35	What are the performance penalties for DC	Weekly penalties depending on Performance score, details of performance monitoring are published in the DC service terms
36	Given the restriction on assets to aggregate at GSP for DC, is this the nail in the coffin for sub-1MW batteries looking to participate	We are continuing to look at how to work with providers regarding aggregation of assets for DC.
37	Why are the week ahead caps so much lower than the caps for DC and months ahead FFR?	Caps for unit size have been removed and procured volume increased in some EFA blocks for the weekly auctions
38	Where are the DC results published	DC results are published on the NGESO portal
39	Is grid keeping the £17 as an administered price cap? There doesn't appear to be any provider view of the price setting	We assess all our procurement decisions to ensure the most economic outcome for the end consumer, and as with all our decisions keep our assumptions under review
40	Will Reserve from Storage be developed within the Frequency team? If so, is there any update on progress/next steps?	We will be publishing the results of the flexibility trial later this month - this will provide the findings of the trial and potential next steps working with industry. The outcome from this will feed into the requisite market improvements and developments
41	Are there any plans to allow assets which are subject to ANM conditions in their grid connections Just following up on the ANM Q: please note there are many Storage development sites in SSE regions, and ANM conditions are standard for all SSE connections.	Not currently but will be a consideration when developing services further. Lots of work here in going here regarding AMN with Open Networks, in addition to this there's the innovation project which the ESO are actively participating in looking into this.
42	Why is black start still super secretive... when most providers list it on their public accounts and Wikipedia pages	Providers should not advertise that they have Black start contracts. The confidentiality of these agreement is a requirement of BEIS
43	Are you able to say anything about the sorts of technologies which have been successful in the SW and Midlands BS tender?	Sorry we can’t say anything on the technologies

	Question	Response
44	Are most of Black Start providers on the transmission network at the moment, what type of tech is it? what volume? does it limit their everyday availability?	Sorry we can't say anything on the technologies
45	How will distributed black start work on the day when PSTN is moved to VoIP with VoIP and mobile services not being reliable in black start no power situation?	Black Start cannot rely on PSTN for voice communication. It is currently the backup voice solution. We are looking at ESN (Emergency Services Network) being used as backup to replace PSTN and the need for other means of communications that are independently power resilient. These include the private telecoms networks owned by the network operators that meet the power resilience requirements (e.g. OpTel owned by NGET). Our functional requirements design for resilient & cyber-secure telecoms can be found in our latest report, to be published on our webpage mid-December. Also included are indicative costs to implement these designs. Solutions for cost effective, resilient, reliable and cyber-secure end-to-end telecoms for ESO/TOs/DNOs/DERs will be different for each network operator because it will involve extending existing telecoms infrastructure.
46	How will reliability of several distributed suppliers that need to work together be compared with single transmission connected provider?	The aim of the project is to develop and hopefully demonstrate the concept of black start from DER, and if successful, that will include developing proposals for assessment and rollout. Interaction of any future service with existing provisions will be assessed as part of this.
47	Where is the tool that will let the market see all the actions the ESO is taking in real time?	We don't have that visibility yet so our commitment at the moment is to provide the explanation of the reasons at day plus 1
48	Does it only produce a result a day later or are you just sharing data later?	It is timing of the working day, we receive the data internally at the end of the day, analyze it and then publish it in the website within a working day
49	How will actions be categorized? currently...we have different flags so what more will it give..(I like it plan)	We are looking to categories based upon meaningful reasons. We are looking to publish a note to industry soon to give more insight into categories
50	Significant amount of actions on ICs (and growing). Does this data feed into your thinking on long-term system planning (e.g. NOA recommendation on IC levels)?	Yes

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51	What is the maximum contract length for the various bilateral contracts?	We currently have some evergreen Optional Bi-lateral contracts that can be utilized
52	The trades you publish on data portal are they the same as being published on https://trades.nationalgrideso.com/ ?	Yes
53	And will you publish the interconnector trades requirements on data portal too? Not just the trades	Yes
54	Will the BSUoS forecast to be published this month include a view of costs arising from the network maintenance planned for the winter period?	The BSUoS Forecast always includes our best view of expected costs due to outages, network conditions expected weather etc. Obviously due to timescales things can change but the forecast is reflective of our best view at the time.
55	Can you please publish the cost boundary locations on slide 105	This has been published as part of the Slide pack
56	Hornsea on 30 October and associated with 9/8/2019 disruptions. A coincidence or should we be more concerned? What actions are being taken to mitigate?	This is being investigated and will be covered in the weekly transparency forums
57	Regarding Western Link trip, frequency recovered from 49.71Hz within 10 seconds - what provided this response given that DC is 49.6Hz? Importance of dFFR?	DC's main activation point is 49.8Hz so would have delivered contracted capacity for this event
58	Can you publish output from your frequency response and dynamic containment that delivered response during this Hornsea trip? As in, second by second data	We are looking to publish this as part of the investigation report. This will be covered in the weekly transparency forums
59	What was the proportion of response from dFFR and Dynamic Containment for trip of Western Link on 25/10?	We are investigating this event, and this will form part of the analysis, This will be covered in the weekly transparency forums
60	Can you publish output from your frequency response and dynamic containment that delivered response during this Hornsea trip? As in, second by second data.	We are investigating this event, and this will form part of the analysis, This will be covered in the weekly transparency forums
61	How long was the Western Link out of service?	Service was fully restored by the end of the day
62	hvdc needs to be as transparent as assets in remit	We will take this feedback onboard
63	How long will the maintenance take on the norther networks causing the Scottish/north constraints right now/ BSUoS is getting high.	The outages in NW England are to deliver reinforcement of the B7a boundary as recommended by NOA, as well as essential maintenance. This work is planned to continue until 18th Dec.

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64	Is the reserve reform intended to just replace what was STOR or is it intended to displaced reserve actions taken in the BM?	The reserve reform product scope is looking at outside gate closure timescales, so it's looking at reserve product where we have secured the capacity ahead of time. It's looking at STOR, Fast reserve ad ODFM replacement. It is not looking at things that are instructed but products utilized within gate closure time
65	With April 2022 launch in mind can we see a project plan to understand key actions and critical path to ensure we the industry can participate	We will share the project plane as soon as we are able to.
66	Is there any further update on TERRE and are the implications of a no-deal Brexit being considered	The ESO is considering the OFGEM letter and will be responding in due course
67	NGESO have recently taken to Twitter for communicating energy margin issues. Any reason? Rules & procedures already exist to communicate any issues	The NGESO uses twitter as an additional media for communication along with existing rules and procedures