

National Grid ESO
Faraday House
Gallows Hill
Warwick
CV34 6DA

claire.dykta@nationalgrideso.com
nationalgrideso.com

27 July 2023

Dear Rachel,

RE: Reforming the Balancing Mechanism and reducing costs for consumers

Thank you for your letter regarding reforming the Balancing Mechanism (BM) and reducing costs for consumers. We have committed to being able to run the power system with zero carbon emissions by 2025 and recognise the importance of low carbon technologies in achieving this goal. Part of our licence obligation is to act in an economic and efficient manner and we hold ourselves accountable for this through all our markets and services.

The transition to the operation of a zero carbon electricity system by 2025 presents challenges, which we are proactively addressing through an ambitious suite of reforms across the ESO. As part of this transition, and recognising the importance of low carbon technologies, ESO have undertaken the following actions, and more, to support specifically battery storage entering the market:

- A new suite of frequency response markets has been developed which are currently accessed only by, and have seen a significant increase in activity from, battery storage;
- Storage Stakeholder Forum within our Balancing Programme established, to aid our engagement and understanding of potential issues faced by storage participants in operational dispatch timeframes;
- Implementing trials to improve optimisation and dispatch of battery assets; and
- Updating of our legacy dispatch tools, with proven positive change in storage dispatch.

The above changes and increase in capacity, has resulted in the use of battery storage changing dramatically in the Balancing Mechanism (BM), with the volumes being dispatched showing an average month on month increase of 174% over the past year.

We are cognisant of the appetite for additional information and transparency of our operational actions, including dispatch of assets. To this end we have regularly engaged with parties, through our dispatch transparency events (most recently held on 2 June 2023¹) and have produced several datasets published on our Data Portal, including our dispatch transparency dataset. Part of our monthly incentive reporting to Ofgem and the external industry includes a metric (1E Transparency of Operational Decision Making) which gives further information and assurances around the dispatch of assets within the BM.

¹ [Dispatch Transparency Event 02/06/23 Slidepack](#)

We have engaged extensively with the storage market over the past year through industry organisations, in stakeholder groups and through one-to-one conversations. Through this we have heard concerns directly from the sector and in response we have prioritised planned work to optimise the utilisation of battery assets in the BM. One example of this approach is including the Bulk Dispatch Optimiser tool in the first release of the new Open Balancing Platform, due to be released from December 2023.

The Bulk Dispatch Optimiser tool enables the dispatch of multiple small assets to meet operational requirements. Currently 2-3 instructions per minute can be issued to individual units, given the manual entry nature of current systems. With the Bulk Dispatch Optimiser tool, up to 300 instructions could be issued multiple times per hour. Depending on control room operational need, over 550% more instructions could be sent in the same time period if required and enabled by participants.

We have already made additional, incremental changes to our legacy dispatch systems to improve dispatch options in the control room prior to this December 2023 release and we have seen a change (increase) in battery dispatch following these changes being implemented.

We know that further improvements are required to enable full potential of these storage assets in system operations and this is reflected in our plans. Some of this work relates to improved dispatch functionality for the control room such as the Bulk Dispatch Optimiser. But there's also a need for new/additional situational awareness including data for state of charge and fundamental changes to how we make decisions to operate the system within the safety limits.

We propose to establish a Storage-specific conversation under the Markets Forum to set out the ESOs strategy to fully integrate storage within our markets and services. This will provide one consolidated view of our plan, progress against it, and transparency of the operational decisions we make and why. It will address the current barriers for storage, future dispatch improvements, what to expect when the Bulk Dispatch Optimiser goes live, the data need for increased situational awareness and state of charge, and a review of how ESO treats flexible assets. The result of this conversation will be a roadmap for change, agreed by both industry and the ESO, resulting in greater transparency for current and future market participants and investors.

We note that many of the questions outlined in Regen's correspondence are also the subject of ongoing conversations between the ESO and other flexibility providers. We continue to work with all technologies to progress similar roadmaps through Power Responsive and our wider Balancing Market Roadmap.

Should you have any additional questions please do not hesitate to contact myself on 07824383808 or at claire.dykta@nationalgrideso.com

Yours sincerely



Claire Dykta

In response to the specific asks in your letter:

- 1. Greater urgency from ESO on ensuring low carbon flexible assets are effectively dispatched in the BM.**
 - a. Confirmation from the ESO that the new battery zone in the BM will be part of the OBP release 1 and not a stretch target as communicated to ESN members.**

Following feedback from industry during our Balancing Programme event in June, we have reviewed our delivery roadmap and are now prioritising the inclusion of the Battery zone for Release 1 in OBP for December 23.

- b. Prioritisation of the planned grid code change to improve parameters for batteries in the control room (Max delivery offer/bid) asap. Batteries only visible for 15 minutes in ENCC due to parameters set by control room 5 years ago.**

We know that in order to optimise any asset in our Control Centre we need the right data to make operational decisions. Following our recent Storage Stakeholder Forum, we are taking a proposal for Grid Code changes to support new parameters for limited duration assets such as batteries to the Grid Code Development Forum on 2 August.

Following discussions and feedback on the ideas shared there we put forward a Grid Code modification.

- c. Use of interim measures until skip rates are able to fall to much lower levels with system improvements, to allow for effective dispatch of batteries in the meantime – similar to what was achieved three years ago when ESO announced savings of £700,000 in less than 10 days with just 110MW.**

We continually review the measures that we have in place around our dispatch options, including the opportunity for trialling new ways of working and optimising.

Previous trials have helped shape our plans around the legacy system changes, and our Balancing Programme changes to date. At this point in time we do not believe there is benefit in previously used interim measures (such as additional resource) given the additional complexity that this will introduce in system operation.

- d. Urge also Ofgem to make ‘effective dispatch of low carbon flexible assets’ a key performance metric for ESO and the FSO**

Please see response to ask 2.

- 2. Clear and accurate published data from ESO on the dispatch of batteries versus other technologies (such as GGCTs). This should include metrics such as Accepted MWh vs Available MWh for bids and offers and % of BM dispatch volume per technology to give a better indication of how the market is functioning.**

We have three metrics in our monthly incentive reporting which focus on operational decision making and zero carbon operability. Metric 1E: Transparency of Operational Decision Making², 1F: Zero carbon operability indicator, and 1G: Carbon intensity of ESO action. Our incentive report and these metrics are reported monthly on our external website and provided to Ofgem and our Performance Panel as part of our RIIO2 Business Plan 2 reporting.

² [How we're performing under RIIO-2 | ESO \(nationalgrideso.com\)](https://www.nationalgrideso.com)

We continue to explore other options for greater transparency in this area, and potential tool developments. We will take these particular suggestions above on board and look to provide greater insight into this area through our incentive reporting narrative and other forums and/or datasets.

3. A meeting with ESN members and the ESO Balancing Transformation Team, Control Room, and market development reps to discuss the current BM dispatch issues, dispatch transparency data set and reason codes to lead to collaborative work on solutions.

We have spent significant time updating our dispatch transparency tool and continue to engage with asset owners at various workshops. We would be happy to continue to develop this tool with industry and value the engagement we get from your members – we see battery storage as playing a crucial role in the future electricity system. The ESO is continually driving for optimal dispatch at best cost for consumer, while taking into account system conditions and technology constraints limiting situational awareness.

We value engagement with ESN and your members. While we're happy to continue to engage ESN through our quarterly meetings, we consider that the issue deserves wider attention with all parties involved. To this end we propose to establish a Storage-specific conversation under the Markets Forum to set out the ESOs strategy to fully integrate storage within our markets and services. This will provide one consolidated view of our plan, progress against it, and transparency of the operational decisions we make and why. It will address the current barriers for storage, future dispatch improvements, what to expect when the Bulk Dispatch Optimiser goes live, the data need for increased situational awareness and state of charge, and a review of how ESO treats flexible assets. The result of this conversation will be a roadmap for change, agreed by both industry and the ESO, resulting in greater transparency for current and future market participants and investors.