ELEXON

27 October 2022

By e-mail to: netzeroreview@beis.gov.uk

Dear BEIS Net Zero Review Team,

Re: Net Zero Review

Thank you for the opportunity to respond to your Call for Input on the Net Zero Review.

Elexon is the Code Manager for the Balancing and Settlement Code (BSC), which facilitates the effective operation of the electricity market. We are responsible for managing and delivering the end-to-end services set out in the BSC and accompanying systems that support the BSC. This includes responsibility for the delivery of balancing and imbalance settlement and the provision of assurance services to the BSC Panel and BSC Parties (energy Suppliers, generators, flexibility service providers and network companies). We manage not just the assessment, but also the development, implementation and operation of changes to central systems and processes. In addition, our expertise is available to support the industry, government and Ofgem in considering future changes and innovation against the existing industry rules, for the benefit of the consumer. Elexon is a not-for-profit company, set up as an arms-length subsidiary of National Grid ESO (Electricity System Operator).

In addition, through our subsidiary, EMR Settlement Ltd, we calculate, collect and distribute payments to Contract for Difference (CfD) generators and Capacity Market (CM) providers, on behalf of the Low Carbon Contracts Company (LCCC). These services are provided to LCCC through a contract and on a not-for-profit basis. EMR Settlement Ltd is also the Nuclear Regulated Asset Base Model Revenue Collection agent for LCCC.

We have been instrumental in ensuring the BSC and accompanying systems evolve to deliver Net Zero solutions and facilitate innovation in the energy market. We recognise the significance and importance of the Net Zero Review and welcome the opportunity to share our comments, observations and suggestions. We do this from the perspective of having more than 20-years' experience of working alongside Ofgem, BEIS (and predecessors) and the energy industry and encompass a vast wealth of knowledge and experience through our team.

We have limited our response to areas where we feel we can add value. If you would like to discuss any areas of our response, please contact Mahamid Ahmed, Strategy & External Affairs Manager (Mahamid.Ahmed@elexon.co.uk).

Yours sincerely,

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Elexon's consultation response

4. What more could government do to support businesses, consumers and other actors to decarbonise?

The UK has made strong progress in decarbonising the electricity system over the last 30 years, with a significant programme of renewable energy projects, phasing out of coal and reducing gas-fired power in our energy mix.

In order to continue to decarbonise the energy industry and economy as a whole, Elexon believes the government could increase incentives for energy efficiency of homes and aid the development of a market for electricity demand reduction.

This is an area where we have provided feedback to BEIS in our response to the Review of Electricity Market Arrangements (REMA) consultation showcasing that, with Market-Wide Half-Hourly Settlement (MHHS)[1] and Smart Meter rollout, Elexon can facilitate and settle a market for electricity demand reduction. This market will ensure that aggregators and individual consumers can get paid for the avoided cost of electricity in circumstances where they reduce their demand in response to market signals. National Grid Electricity System Operator's (NGESO) Demand Side Flexibility (DSF) product/service, which is being trialled between November 2022 and March 2023 is another innovation that can stimulate Demand Side Response (DSR) from residential assets (both aggregated and non-aggregated).

We would like to highlight that working together with the industry, NGESO, and Ofgem, Elexon is already enabling DSR participation in the market by progressing and implementing a number of key modifications to the balancing and settlement rules:

- P375[2] 'Settlement of Secondary BM Units using metering behind the site Boundary Point' will enable smaller assets, such as electric vehicle (EV) batteries via Vehicle-to-Grid (V2G), smart grids, storage and community energy to provide balancing services to the grid
- P415[3] 'Facilitating access to wholesale markets for flexibility dispatched by Virtual Lead Parties' will allow greater provision of demand-side response (DSR) services, which help to lower demand during peak times. This will be through enabling the participation of Virtual Lead Parties (VLPs) in the GB wholesale market, offering services such as aggregated flexibility
- P376[4] 'Utilising a Baselining Methodology to set Physical Notifications' will allow balancing service providers to be fully recompensed for their actual change from normal usage and the benefit this change in consumption has on the system. Ofgem has approved P376 with an implementation date of 23 February 2023
- P441[5] 'Creation of Complex Site Classes' represents a small initial step developing DNO-led local markets. The modification proposes to recognise in the BSC arrangements settlement of local energy markets that currently fall into a 'grey area' of being neither formally recognised nor explicitly prohibited.

We note that in the last several years there were a number of reviews, reforms and industry-wide programmes launched by BEIS and Ofgem, some major ones include:

[1] The Market-wide Half-Hourly Settlement (MHHS) programme will deliver a more accurate and timely settlement process for the wholesale electricity market, enabling a flexible energy system with more low carbon generation by maximising opportunities provided by smart metering - FAQs - MHHS Programme

[2] P375 'Settlement of Secondary BM Units using metering behind the site Boundary Point'

[3] P415 'Facilitating access to wholesale markets for flexibility dispatched by Virtual Lead Parties'

[4] P376 'Utilising a Baselining Methodology to set Physical Notifications' - Elexon BSC

[5] P441 'Creation of Complex Site Classes'

- Future System Operator (FSO) transfer into public ownership
- DNO to DSO transition and local balancing markets development
- Energy code reform: governance framework
- Review of DCC licence arrangements
- Reforming the Framework for Better Regulation
- Energy Digitalisation Taskforce recommendations
- Energy retail market strategy
- BEIS Committee Call for Evidence into the Cost of Energy Review
- BEIS Review into Energy Regulation

All of these initiatives are looking to bring changes to the energy markets. We believe there needs to be industry-wide prioritisation of the ongoing changes in order to focus all market participants to deliver the changes and programme critical to achieving net zero and maintaining security of supply at the necessary level at the same time.

5. Where and in what areas of policy focus could net zero be achieved in a more economically efficient manner?

There are several ongoing market-wide initiatives and reviews in the energy policy and regulation space, which are designed to drive and enable the transition to net zero. Given the truly unprecedented situation with energy prices and the ongoing pressure on all energy market participants, we believe the below initiatives, when implemented, will make a significant contribution to net zero:

1. Local flexibility markets enabled by the DSO transition
2. Utilising (or learning from) existing mechanisms, processes, systems that deliver value
3. Rationalising and simplifying complex arrangements to speed up change process
4. Timely delivery of MHHS

In addition, we believe data and digitalisation are key enablers of all of the actions above. For example, our Insights Solution will continue to make more BSC data available to organisations at no charge, and our Kinnect platform will further digitalise our processes and allow our data to be more accessible. Our data is considered open and is available through the Balancing Market Reporting Service (BMRS) and follows the Ofgem Data Best Practice guidelines. We are also an active stakeholder in the Energy Digitalisation Taskforce (EDiT) and Ofgem's data and digitalisation workstream.

We believe that the development of local flexibility markets, by accelerating the Distribution System Operator (DSO) transition, can reduce costs for consumers by preventing the need for excessive network investment both at distribution and transmission level. We note that £890 million has been confirmed under the RIIO-ED2 Draft Determinations to enable Distribution Network Operators (DNOs) to deliver DSO operated networks during 2023-2028.

In our response to Ofgem's Call for Input on the future of local energy institutions and governance, we suggested that cost effective solutions based on existing processes and systems need to be considered in order to standardise and simplify market functions and deliver consistent experience to all market participants.

When looking at the electricity networks, there must be a focus on reducing cost to consumers and, where possible and cost-effective, allowing flexible assets (storage, DSR etc) to replace the need for extensive network investment. Further, TNUoS and DUoS charges should be reformed, by having sharpened locational signals within them to re-balance the economic attractiveness of renewable assets to locate closer to demand, and also spur demand-side innovation

Further, as Ofgem and BEIS conduct their review of Energy Code Reform, we reiterate the need for rationalising and simplifying currently complex code arrangements across all energy sectors to achieve Net Zero in a more economical and efficient manner. Importantly, rationalising the codes through code consolidation, we believe, could enable a faster code change process in order to reflect the changes in the wider energy market.

In our view, MHHS, alongside the smart meter rollout, when completed, should be a significant driver to increase demand side flexibility participation in the market. Ofgem estimated that MHHS would deliver net benefits to GB energy consumers in the range of £1.5bn-£4.5bn over the period 2021-2045. Without the industry-wide implementation of MHHS, the benefits of the smart meter roll out will not be realised, it is therefore a key programme in achieving the Net Zero objective.

6. How should we balance our priorities to maintaining energy security with our commitments to delivering net zero by 2050?

We outlined our thinking and ideas in full in our recent response to the REMA consultation[6]. We outline some key ideas below.

Among other ideas, as a first step, in the electricity market, we believe, a reform is needed to the Capacity Market (CM) to enable the participation of low carbon flexible assets such as storage and DSR, by reforming the penalty regime and also secondary trading. Such a reform will optimise the CM by creating more opportunities for low carbon capacity to participate in auctions, and also reduce the need for CCGTs or coal plants to provide the capacity required in the auction. We are therefore looking forward to and are supportive of both the Capacity Market Penalty Regime reform and REMA review which is looking at options of the CM reform.

The current regime incentivises provision of capacity during a Stress Event, via the use of penalties. Whilst this scheme acts as a fall back for a low probability stress event scenario, it does not go far enough to help ensure that scenario does not occur. We support a greater focus on incentivisation via specific options for flexibility and technology type linked to the cleared auction price, such as through a centralised reliability option with strike price adjustments.

A potential reform of the Capacity Market should also consider the following factors to increase low carbon flexibility and, therefore, security of supply:

- Develop mechanisms to enable different technology types to participate in auctions
- A resource requirement, which considers both the location and fuel type
- Encouraging visibility of capacity on the grid
- Include dispatch time in the future design of contract awards

In addition to those reforms mentioned here, we believe that there should be a greater emphasis on reform of Secondary Trading. Currently, Capacity Providers are able to trade obligations in and out, but there is little to no incentive to provide visibility that the capacity is actually available. Further, there needs to be actual performance assurance of parties involved in secondary trading to ensure that, should it be required, they are able to provide the flexibility and capacity they are obligated to.

29. How can we ensure that we seize the benefits from future innovation and technologies?

We are working with a range of innovators through our market entry process and through our Electricity Market Sandbox[7]. The Electricity Market Sandbox enables limited pre-competitive trials of potentially innovative products or services in a live market environment.

Based on our experience, we believe that interactions with central market services and systems need to be simple, straightforward, uniform and enabled by modern technologies. In our view, this would enable a faster trailing of the new technologies and business models and an expedient move from a trial into a commercial deployment phase.

Another important element to capturing the benefits from future innovation and technologies is having energy data readily available for existing and new market participants and innovators. The MHHS programme will allow innovators to seize the benefits from granular data and is aimed to encourage participation from consumers in the electricity market. For example, the

[6] Elexon's response to the Review of Electricity Market Arrangements - Elexon
[7] Derogations from the BSC using the BSC Sandbox - Elexon BSC

MHHS roll-out will enable the introduction of new time-of-use tariffs and new products and services that allow customers to move consumption away from peak demand periods, thus, helping customers control their spend on energy. All these new types of activity and greater interactions with the market will be facilitated by suppliers and aggregators/DSR providers and other innovative software and technology companies that are already developing solutions and products in this space. All of these mechanisms will make data more available, which will enable consumers to seize the benefits of innovation and technology.

We strongly believe that any new proposed changes to the electricity market need to take into account and build on MHHS to make the market more open to innovation and provide stronger signals for consumers.

Elexon believes that innovation across the market needs to accelerate – for example, in generation and retail, there should be:

- Retail: Customers must feel their energy supplier is giving them a dynamic offer with time of use tariffs (i.e. EV charging) which will be enabled by MHHS. There have been great examples of this in the market, by for example Octopus Energy's Agile which is a 35p/Kwh flat rate tariff and Octopus Home which enables users to access their smart meter data in real time and has one million users, this is critical in allowing those without smart appliances or EVs to participate in flexibility and DSR.

- Generation: In generation, there should be consideration given to moving legacy Renewables Obligation (RO) generators across to CfDs, thereby eliminating the extra subsidy the RO generators collect (noting however, that such a change would be dependent on the strike price and longevity of the contracts). That option could be furthered by either encouraging or enforcing new renewables and low carbon flexible generation projects to be built and operated on the basis of long-term CfD contracts. The current market arrangements allow CfD holding generators to have revenue certainty and enable a pay-back to consumers when the wholesale price is high. We would support reforming CfDs (for both new and existing generators) by setting a minimum and maximum strike price so that the CfD is more reflective of market conditions and offers greater protection against price cannibalisation. This will enable renewable generators to have revenue certainty and spur innovation in renewable deployment technology – this alongside innovation in grid connections and frequency response (i.e. providing inertia in other ways than using a CCGT).