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Call for Input: The Future of Distributed Flexibility

EDF is the UK's largest producer of low carbon electricity. EDF operates low carbon nuclear power stations and is building the first of a new generation of nuclear plants. EDF also has a large and growing portfolio of renewables, including onshore, offshore wind and solar generation, and energy storage. With around six million electricity and gas customer accounts, including residential and business users, EDF aims to help Britain achieve net zero by building a smarter energy future that will support delivery of net zero carbon emissions, including through digital innovations and new customer offerings that encourage the transition to low carbon electric transport and heating.

We welcome the opportunity to respond to the 'The Future of Distributed Flexibility' consultation. We welcome Ofgem's Call for Input which is seeking consensus and buy in from industry before embarking on a potentially important intervention. We agree that in order to reduce the cost of meeting net zero, our energy system needs to be flexible and that it is important to remove barriers, to ensure that all flexibility providers can access these markets and are aware of the value-streams available.

We would like to highlight the following key points:

Supporting Infrastructure

To support consumer engagement in flexibility markets it is essential that the supporting infrastructure is delivered and is effective. This includes the Market-wide Half-Hourly Settlement (MHHS) and the smart meter programme. These are a prerequisite of CER.

Implement current flexibility programmes

It is crucial that existing flexibility initiatives are not delayed. A number of market improvements are already in train with the Energy Networks Association's Open Networks Programme. This includes developing standardised products and contracts, stacking rules and primacy rules. We welcome the acceleration of these activities, rather than wait for a common digital energy infrastructure to be in place.

Economics of distributed flexibility

It is important for Ofgem to assess the relative scale and benefits of different types of flexibility providers, from grid connected to distributed technology through to flexibility in consumers' homes. This will then enable Ofgem to optimise and make decisions on the overall flexibility market framework. There are likely to be lessons learned from experiences in other countries as well.

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Governance

This consultation sets out considerations on delivering a common digital energy infrastructure which also covers institutional roles and financing approaches. The Business-as-Usual archetype is what would evolve organically from the current approach if no strategic intervention occurred and assumes that markets lack any consistent means of co-ordination. This is to be used as the counterfactual yet Ofgem's consultation running concurrently to this on 'Future of local energy institutions and governance' proposes a reform package to deliver more effective arrangements to deliver more accessible, transparent and coordinated flexibility markets.

Furthermore, this consultation proposes changes to the governance framework and therefore it is important that the Government and Ofgem set out clearly the regulatory framework landscape within which all the entities will operate and seek to implement changes of energy policy. It is important that there is visible progress in delivering the FSO in 2024 alongside a regulatory framework to give stakeholders confidence that it will have the bandwidth and capability to take on further roles.

Should you have any queries or wish to discuss our response, please contact me or Natasha Ranatunga at Natasha.Ranatunga@edfenergy.com.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Mark Cox'.

Mark Cox
Head of Nuclear & Wholesale Policy and Regulation

Attachment

Section 1 - The imperative, potential, and challenges of flexibility

1. What do you think distributed flexibility could contribute to the energy system?

With high the expected growth in intermittent renewables generation and increasing electrification of heat and transport there will be increasingly variable electricity generation and demand patterns. Flexibility, whether transmission connected or distributed, has the potential to materially reduce the cost of the overall power system by helping to make the most of the renewable resources. This in turn will reduce the amount of new generation, storage and network infrastructure that has to be built.

2. Will a focus on CER flexibility also help enable other forms of flexibility, especially distributed flexibility?

We agree with Ofgem that a market designed around consumers is likely to encourage their engagement with the market. However, to support this material progress is needed on the necessary infrastructure including smart meter delivery and settlement systems including market-wide half hourly settlement. It will also be important to understand how CER flexibility fits within the overall future retail market.

So, while we agree a focus on CER flexibility may enable the acceleration of distributed flexibility to the energy system more generally it is important to not lose sight of the need to facilitate flexibility market in the meantime.

Ofgem should not solely focus on CER flexibility as DERs have different characteristics and attributes which will enhance flexibility. DER covers a diverse category of flexible assets from medium sized solar farms, wind farms or batteries, commercial EV fleet charging, through to industrial and commercial demand-side response from equipment or buildings. We believe that there are sufficient differences between CERs and DERs that they may be progressed separately to ensure that the deployment of DERs is not hampered by issues pertinent to CERs.

Furthermore, it will be important to understand how consumers would be protected from the risks of participating in a smart energy system. Arrangements will need to be developed that are fair in sharing the benefits of consumer flexibility not least with those less able to engage with the market.

Section 2 - An approach pivot: The case for change

3. Is there a 'case for change' and a need for a common vision for distributed flexibility?

Yes, we believe that there is a 'case for change' to create a consistent, low-friction environment for decentralised flexibility. Ofgem states in its Call for Input that there many heterogenous CER across the country's six distribution networks and seventeen current markets – this is inefficient.

4. What is your vision for how to accelerate the delivery of accessible, coordinated and trusted markets for distributed flexibility?

Smart meters are the foundation of an accessible smart energy system for CERs. Coupled with the delivery of the Market-wide Half-Hourly Settlement (MHHS) programme these are key enablers of a move to a smarter, more flexible energy system.

Furthermore, the development of standardised products and contracts, stacking rules and primacy rules are also integral to the acceleration of accessible, coordinated and trusted markets for distributed flexibility.

Essentially, we support the concept of ensuring common access to and operational coordination across energy markets for flexible assets so that the system and consumer value of flexibility can be unlocked.

We welcome providing CERs with the opportunity to choose and benefit from smart energy products and services and would welcome clarity on how Ofgem envisages how CERs will be informed and engaged in order to participate at scale in a smart energy system. Any work to enhance accessibility needs to be combined with proactive communications from Government and/ or Ofgem on smart energy in order to promote effective engagement and be part of a clear vision for a future retail market.

5. Will certainty of an end vision help accelerate enabling work and make it cohesive?

We believe that it is important for there to be a central co-ordinator that actively seeks to coordinate and deploy the in-flight market changes and standards.

6. When should a common digital energy infrastructure be in place? And therefore, when should development begin?

Development of a 'thin' archetype that would assist market buyers and sellers of distributed flexibility to understand the landscape of markets and assets available could be developed immediately. The effectiveness of the thin archetype will also be dependent on delivery of standardised products and contracts, stacking rules and primacy rules.

Section 3 - What that future could look like

7. What should a common energy digital infrastructure look like, and why? Please consider the archetypes or develop your own proposition.

At this stage we believe that deploying in-flight programmes should take priority over the development of a common energy digital infrastructure as it would deliver value quicker. Embedding the building blocks of smart meters, MHHS, standardised products, contracts, stacking rules and primacy rules will ensure the acceleration of accessible, coordinated and trusted markets for distributed flexibility.

8. What is your view on the desirability and feasibility of the archetypes or your own alternative proposition?

There may be merit in developing the 'medium' archetype once smart meters, MHHS, standardised products, contracts, stacking rules and primacy rules are in place. The creation of a singular and scalable digital location where multiple markets are visible and coordinated under a known governance framework, means that parties are able to retain their own market designs, platforms, and systems. Therefore, the costs associated with adopting a medium archetype are likely to be minimised if all parties do not need to undertake significant IT infrastructure development.

The 'thick' (central platform) archetype that encompasses all activities from exploration to settlement across all markets is not expected to be deliverable within 10 years. Within this timeframe the flexibility market may have developed to the extent that a central platform is not necessary, and consumers may face unrecoverable sunk costs.

Section 4 - Delivery considerations

9. Should a common digital energy infrastructure be new-build, or should it buildout from existing infrastructure?

The foundations of any common digital energy infrastructure is dependent on the deployment of the building blocks identified above. At that point it would be feasible to assess whether a common digital energy infrastructure be new-build, or whether it should buildout from existing infrastructure.

10. What are the important areas for consideration when designing institutional delivery models for a common digital energy infrastructure?

There needs to be clarity on the roles, responsibilities and governance when designing institutional delivery models for a common digital energy infrastructure.

Ofgem has identified there is a possible role for the Future System Operator (FSO). The regulatory framework landscape within which the FSO will operate needs to be set out clearly - including the roles, responsibilities and governance framework of the FSO, Ofgem and Government - in order for us to assess whether the FSO is a suitable candidate.

11. What are the important areas for consideration when designing financial delivery models for a common digital energy infrastructure?

We agree that when considering financial delivery models the following needs to be assessed: who pays versus who benefits; the balance of public and private risk, subsidisation versus profit as well as revenue models.

Ultimately, Ofgem needs to undertake a cost benefit analysis to ascertain that bringing forward a common digital energy infrastructure does not create more costs than the value it should bring in.