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Sent by email to: [flexibility@ofgem.gov.uk](mailto:flexibility@ofgem.gov.uk)

Dear Nina

### **The Future of Distributed Flexibility Call for Input**

Thank you for the opportunity to respond to Ofgem's 1 March 2023 call for input on the Future of Distributed Flexibility.

We welcome Ofgem considering measures to unlock flexibility from distributed assets through this call for input and the accompanying consultation on the Future of Local Energy Institutions and Governance. Existing small-scale distributed flexibility that could be contributing to the system via by optimisers and aggregators such as Centrica is effectively blocked from several markets. These barriers need resolving as soon as possible so that industry and consumers can participate fully, and flexibility markets are opened before the mass uptake of electrified low carbon technologies.

Key problems facing flexibility providers include: the administrative burden of participating in participating in multiple markets, a lack of standardisation and a risk that markets could diverge further, and a lack of clarity on how flexible assets can participate in local and national at the same time (i.e., stacking). These challenges are not new, having been raised by stakeholders for several years. The ENA's Open Networks Project made some initial headway in improving the landscape for local flexibility, but progress has slowed.

We broadly agree with the case for change set out by Ofgem in the call for input, and the need for an end vision. However, Ofgem has not described how the key enablers for distributed flexibility will be progressed before the outcome of this call for input can be implemented, or

equally the new market facilitator is in place. We believe Ofgem must provide a clear roadmap to the existing networks setting out how the key enablers must be delivered in the interim, as the Smart Systems and Flexibility Plan 2021 has not been enough to ensure delivery.

This response is non-confidential and can be published by Ofgem.

We respond to the individual consultation questions below.

## **Chapter 1 – The potential and challenges of flexibility**

### **Question 1: What do you think distributed flexibility could contribute to the energy system?**

The case for distributed flexibility is well established<sup>1</sup> and we largely agree with Ofgem's analysis of the expected benefits. Allowing distributed flexibility to access and stack value streams seamlessly will enable the transition to net zero at a lower cost, whilst supporting grid security. Opening markets to distributed flexibility allows residential consumers and businesses to benefit directly from contributing to grid stability.

Consumers must benefit from providing flexibility services. Key to this will be effective engagement with consumers on how they can contribute to the energy system. If anything, the call for input could benefit from more explicitly considering the needs of consumers throughout.

Distributed flexibility from larger Distributed Energy Resources (DER) is already contributing to the energy system but could contribute significantly more if network operators addressed known barriers and implemented solutions already put to them by industry<sup>2</sup>.

### **Question 2: Will a focus on CER flexibility also help enable other forms of flexibility?**

We understand the argument that structures that allow CER access to flexibility markets should also allow access to flexibility from industrial and commercial businesses and small and medium generation plant. Some of the barriers blocking DER access to the market match those that need overcoming for CER. However, there will be an opportunity cost for consumers if Ofgem fails to deliver 'quick wins' that could unlock additional flexibility from larger DER.

- **A focus on CER could deliver the enablers and digital infrastructure needed to scale residential and SME DSR.** A major barrier to DSR service providers scaling flexibility from CER, micro-business and smaller SMEs is the administrative burden – for example when registering and pre-qualifying assets with flexibility market operators. This barrier could become unsurmountable if DSR service providers must register customers with multiple DSO markets, all using different portals with different requirements.

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<sup>1</sup> The various electricity system flexibility modelling studies quoted on p15 (Imperial College/Poyry 2017; BEIS 2021; Imperial College/Carbon Trust 2021) demonstrate flexibility, including specifically demand side flexibility, could deliver £billions of annual savings from 2030 to 2050.

<sup>2</sup> For example, the work that the Association of Decentralised Energy (ADE) has been doing on baselining solutions for the ESO's new frequency response products.

- **A focus on CER must not distract Ofgem and networks from unlocking flexibility from larger DER – which can deliver earlier benefits for consumers.** A sole focus on facilitating CER flexibility risks distracting Ofgem and industry from implementing ‘quicker wins’ which could give other DER access to flexibility markets. The sooner this flexibility is unlocked, the sooner it can contribute to the system and ultimately benefit consumers by lowering system costs.

So, whilst we support Ofgem’s aims, the outcomes from this call for input must not be used to justify any further delays in opening the market to smaller non-residential flexibility. Barriers to non-residential flexibility must be removed as soon as possible, so that such assets can contribute to the system and British businesses can benefit from flexibility revenues and savings.

Ofgem must urgently focus itself and networks on delivering the enablers that are not only a precursor to a common digital energy infrastructure but could also immediately give networks access to commercial CER and DER flexibility currently blocked from markets. Ofgem must give clear direction to industry on how work on enablers will be progressed at pace, whilst Ofgem considers its next steps for this Call for Input and Ofgem’s Consultation on the Future of Local Energy Institutions and Governance.

## **Chapter 2 – An approach pivot: The case for change**

### **Question 3: Is there a ‘case for change’ and a need for a common vision for distributed flexibility?**

Yes, Ofgem must urgently give clear direction to the energy networks that both the necessary enablers and common functions (described on p34) must be delivered at speed. Ofgem must consider how it can enforce delivery of these enablers and functions, give those voluntary mechanisms, such as the Open Network project, have only had partial success. Ofgem should set back-stop dates for the delivery of the key enablers.

One of the main barriers to our current participation is the lack of standardisation across DNOs, their different systems and evidence that DNOs are planning to diverge further on flexibility market design. Flexibility service providers, such as Centrica, need to be able to scale activities ready for the mass uptake of smart low carbon technologies. This will be challenging without common processes and an agreed common end-vision.

Since 2016, we have been calling for greater standardisation of DNO processes and other enhancements to open local flexibility markets to small, aggregated flexibility, including residential DSR. The ENA Open Networks project has made notable progress and did respond to our requests in several areas – for example by working to make its standard flexibility contract more ‘aggregator friendly’ – but progress slowed for various reasons such as:

- ‘lower-hanging fruit’ quick wins completed
- Open Networks having to work to speed of the least advanced DNOs
- implementation of Open Network guidance not always being enforceable
- reduced resourcing of Open Networks, potentially due to DNOs being focused on RIIO-ED2 development
- Open Networks appearing to struggle with more contentious issues in the absence of clearer direction from Government and Ofgem e.g., on potential conflicts of interest.

For the last couple of years, Ofgem has appeared less present in Open Networks activities which could have benefited from having more guidance and leadership from the regulator.

Finally, some elements of the RIIO-ED2 framework incentivises divergence, as DNOs are individually rewarded for innovative propositions. Additionally, it is still rare to see the results of consumer-funded innovation projects proven to support commercial flexibility being rolled out across the networks as business-as-usual.

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

We agree with many of the themes in the call for input. Chapter 2 clearly describes the elements that need to change. Building on our response to question 3, we think that Ofgem must take immediate action to accelerate delivery of the enablers. This should be done now – ahead of any transfer of the ‘flexibility market facilitation’ role to the FSO or decision on next steps for this call for input. Ofgem should give clear leadership on how this work should be taken forward in the interim. This could use and build on the existing Open Networks 2023 work programme, which in response to stakeholder feedback has been re-focused to target the delivery of specific outcomes.

Key asks to help industry scale demand side response (DSR) services are the creation of a single location where aggregators can register and pre-qualify assets for all markets and agreeing common APIs. We’re pleased these are both on the list of functions Ofgem considers key for a common digital infrastructure.

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

We have seen the most progress in the areas where Ofgem or Government gave the regulated networks clear direction on what was needed to facilitate the development of flexibility markets. The clearest example of this is Ofgem’s Data Best Practice Guidance and the associated licence conditions. We can’t say that data provision by DNOs is perfect, but we did see significant improvements in availability and standardisation in time for the start of RIIO-ED2.

Conversely, where Ofgem was not clear on what DNOs had to deliver to ensure neutral DSO functionality and facilitate the development of robust flexibility markets, we have seen slower progress and even signs of further divergence.<sup>3</sup>

We agree that certainty of an end vision should help accelerate enabling work. Ofgem also needs to ensure it is enforceable, meaning Ofgem has the power to act if the regulated infrastructure providers are not delivering what they need to do to support the end vision.

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<sup>3</sup> For example, different DNOs adopted different DSO strategies in their RIIO-ED2 Business Plans and as noted by Ofgem in the Call for Input, UKPN and NGED subsequently published consultations suggesting differing future approaches to local flexibility procurement.

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

For a full 'common digital energy infrastructure' this is difficult to answer, without knowing what the end vision is, or the associated milestones, costs, and dependencies – or what new delivery and governance mechanisms are needed.

What we can say is that several no-regrets activities should be started now. These should include the development of:

- a common registration and pre-qualification platform, and
- common APIs across all functions.

## **Chapter 3 – What that future could look like**

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

As minimum a common digital energy infrastructure must build on the 'key enablers' to deliver:

- common APIs,
- central registration of market participants
- central registration and pre-qualification of flexibility assets
- digital contracting (based on the enablers of standardised contracts and products)
- a centralised digital solution to resolving inter-market conflicts (based on the enablers of agreed primacy rules)
- access to visibility of market actions and decisions (current and historic)

The three key reasons why we need a common digital energy infrastructure to look like this are to:

1. reduce the administrative burden of entering smaller assets into multiple different markets
2. allow aggregated assets to stack value streams in multiple markets – which has the double benefit of giving CER-owners maximum benefits from offering flexibility and at the same time allowing network operators to maximise the flexibility available from available
3. delivering a transparent and non-discriminatory solution to the inter-market conflicts, where the outcome is visible to market-participants.

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

We believe a minimum of the Medium is needed to deliver the required functionality. We are concerned that Thick would take too long to deliver and the complete centralisation of processes could limit the consumer benefit and choice that could be provided by innovating aggregators and optimisers.

**Thin** – The Thin archetype represents little improvement on the BAU counterfactual, beyond adding in open, standardised APIs. Common APIs are vital for scaling distributed flexibility

and should be being developed now. Existing platforms such as Piclo and NGED's Flexible Power already provide some of the 'directory' functions envisaged for Thin.

**Medium** – The Medium archetype appears capable of providing the core functions Ofgem lists on page 34 – such as digital contracting and digital registration. Its success will be dependent on rapid delivery of the key enablers, as well as common digital infrastructure Medium will be based on. Medium would be most adaptable to future market developments, especially innovation by commercial optimisers. By refraining from fully centralised dispatch, Medium should be able to facilitate co-optimisation of purchasing decisions by networks, whilst allowing flexibility providers the freedom to commercially optimise their own portfolios.

**Thick** – We do not support the full thick model for two main reasons:

- **Time and cost to deliver:** Recent comparable IT project by network organisations such as National Grid ESO have overrun. We agree that Thick would be complex and require significant time and cost to deliver. We also agree that it would be highly dependent on external initiatives such as the delivery of low voltage (LV) visibility and other delayed projects implementing the Energy Data Task Force (EDTF) recommendations.
- **Central dispatch/co-optimisation:** The scope of co-optimisation intended under the Thick model is unclear. If co-optimisation implies that the platform makes all dispatch decisions and all optimisation activity is taken away from commercial DSR service providers, then we do not support this approach as it would stifle existing investment and innovation. DSR service providers (i.e., aggregators and optimisers) are already innovating in this space and best placed to engage and promote flexibility with consumers.

We do however support the type of co-optimisation due to be facilitated by National Grid ESO's Enduring Auction Capability (EAC) platform, which will allow market participants in the ESO's new response markets (dynamic containment, dynamic regulation, and dynamic moderation) to stack batteries in more than one response market at the same time.

## Chapter 4 – Delivery considerations

### Question 9: Should a common digital energy infrastructure be new-build, or should it build-out from existing infrastructure?

We don't have access to sufficient information to say whether it could be built-out, but some existing systems that could be considered as an alternative to new-build sit with National Grid ESO, for example the ESO's Single Market Platform for registration and onboarding. Elexon's systems should also be looked at to see if these offer any potential for build-out.

We believe Ofgem should engage further with the ESO and Elexon to understand if any of their platforms could be extended. A cost-benefit analysis for both options – new-build or build-out from existing infrastructure – and a combination of the two.

Private infrastructure to be considered as part of a 'build-out' review, includes the existing power exchanges in the UK and Europe, as well as local market platforms such as EPEX SPOT's Localflex, Piclo and NODES.

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

A delivery model must deliver pace, transparency, stability, accountability (including on costs) and be responsive to stakeholder needs. See also our response to Q11.

Ofgem should consider examples of past and current delivery performance under the potential delivery models:

- **Mandated central entity** e.g., ESO/FSO – the ESO has a history of delayed IT programmes, notably the now defunct Electricity Balancing System (EBS) programme. Recent IT programmes have also had delays, impacting launch dates for new response and reserve products
- **Open tender** e.g., DCC – based on concerns we have on the cost accountability and delivery performance of the DCC we do not recommend repeating this model.
- **Code body** – Elexon, administrator of the BSC, is not mentioned anywhere in the Call for Input but is a generally well-regarded entity in respect of energy market governance and digital infrastructure.

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

A good financially delivery model will need a combination of: an appropriate ownership model, good governance of decision making by the delivery entities' Boards, and a strong and engaged regulator.

**Appropriate ownership model**

- A not for profit and industry led organisation is more likely to deliver for consumers and flexibility providers in a fair and transparent way, rather than one that is more focussed on the highest return for shareholders.

**Good governance of decision making by Boards of the delivery entities**

- The objectives of the organisation must be driven by the needs of consumers and flexibility providers, not shareholder returns.
- Decisions must be made to meet net zero objectives.
- Flexibility providers must be consulted on projects, programmes and changes that directly impact their business model or customers.

**Strong and engaged regulator**

- Ofgem must be engaged, challenging, and setting incentives for areas key to consumers and flexibility providers.
- Regularly attending or chairing industry meetings, including being vocal about what the vision, policy, and obligations of each party.

I hope you find this response useful. If you would like to discuss anything in further detail, please contact me at [helen.stack@centrica.com](mailto:helen.stack@centrica.com).

Yours sincerely

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