Ofgem Consultation on The Future of Distributed Flexibility

equiwatt's response

equiwatt welcomes the opportunity to respond to Ofgem's Consultation on the Future of Distributed Flexibility given the urgency to accelerate and support the energy transition, the need for a smart and digitalised system that is better suited for distributed assets, and to tackle the current difficulty to participate in flexibility services.

Our response is grounded in our experience as a smart energy platform and pioneering residential Demand Side Response through early trials since 2017 and as a solution rolled out to the public in 2020.

equiwatt was a partner in the last phase of Project Local Energy Oxfordshire (Project LEO), a UKRI funded project from November 2022 to March 2023, and an approved provider to National Grid's Demand Flexibility Service. At the end of last year (2022), equiwatt was awarded funding from the Department For Energy Security and Net Zero (DESNZ) through the Energy Entrepreneurs Fund (EEF9) and the Net Zero Innovation Portfolio (NZIP).

Section 1

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

Accelerating the transition to achieving a decarbonised energy system by enabling and engaging consumers to be active participants in the energy system. As it is pointed out in the document, enabling assets that would otherwise be parasitic to support the grid and being paid/rewarded for it and/or enabling savings that would be enjoyed by all consumers.

It can reduce system deficiencies and energy waste, such as wind curtailment. It can also support better planning and operations at a local level in a more cost effective and less polluting way.

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

Yes. Furthermore, we believe CER flexibility should be allowed to thrive independently in the early days of innovation.

Competing with larger flexibility assets who have years of experience will keep stifling innovation of CER flexibility and not create a fair market since CER flexibility has a much lower carbon footprint than contingent coal power stations/gas peaker power plants. CER flexibility should be

given the opportunity to prove its model with its own market mechanisms, incentives and policies, rather than reuse existing BAU mechanisms.

equiwatt has faced many challenges because the current market and conditions are built for old systems and needs. To mention a few:

The high transaction costs. Many flexibility markets, even if they are opening up to smaller providers and lower minimum capacities, still favour larger assets. The processes are also made for larger assets/small portfolios in which some complexities are not present (for instance in baselining and settlement calculations) but not for smaller assets/multiple portfolios with hundreds/thousands of assets. This means the processes are very time consuming to navigate through.

Other challenges include: market liquidity, low and inconsistent revenue streams, fragmentation of markets, different requirements and methodologies for each flexibility buyer including baseline methodologies and procurement processes, complexity in general and non stackability of ESO/DSO services.

Section 2

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

Yes, we strongly agree there is a case for change to accelerate the development and maturity of decentralised flexibility, and equiwatt also agrees that the solution must be user-centric and digital.

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

Increased education for consumers on their role to support the energy transition and the grid and what the benefits are to them in the short and long term. This needs to be backed up by the strong and robust support of a trusted actor who gives credibility and assurance to users.

The residential and small businesses sector still requires incentivisation beyond BAU and merit order in electricity market procurements as it is not mature enough.

A more standardised market with far greater cooperation between ESO and DSOs and between DSOs, one that allows processes, like provider registration and assets qualification, not being duplicated for each flex buyer, and where there is a standardised library of baselines suitable for each type of asset/flexibility.

Support interoperability with standards and protocols designed to create a level playing field, not existing ones that favour large, centralised, more polluting assets.

An environment/system that still allows innovation and dynamism. Continued encouragement of innovation in energy technology but with more emphasis on smaller, dynamic companies that are specialised in their areas but often don't have the resources to successfully apply for grant funds and meet the required style and criteria that larger organisations are able to have experienced teams on. Small companies also lack the credibility and backing to be considered or accepted as a consortium, or the investment to scale (needing scale to get proper investment and needing investment to create scale, results in a chicken and egg situation).

As an example, the design of the DFS only considered one large provider, an energy supplier, and no other parties were invited to take part in the design and steering group even though there are companies, like equiwatt, that already had significant expertise, smart platforms, enabled automated participation and had been rewarding residential users already. As a result, there were many issues and efficiencies that could've been thought of and handled better if a committee of smaller parties was represented.

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

Yes it can help, as long as it is not too rigid and inflexible and more a wireframe with the most important aspects to be achieved kept at first priority.

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

In our opinion it should be implemented as soon as possible. The design refinement with industry engagement should commence as soon as possible after the archetype/vision is agreed.

Section 3

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

We think BAU is not and should not be an option.

As a small organisation having to deal with multiple transactions and high transaction costs, the Thin archetype does not tackle the duplication of processes and exploration of different markets individually.

We also consider the Thick archetype not to be the way forward as it would be a barrier to innovation and evolution and the time and costs that it would take to get there would be too much and not worth it for the proposed optimisation that would not be guaranteed due to other complexities and conflicting goals of industry actors.

We think the Medium archetype or something in the middle of Thin and Medium archetypes would be the best scenario (the main downsides of Medium archetype are the time and risk to implement).

A directory and some common services, the most mature ones with a coordinated environment for registration, procurement, dispatch and settlement, but with scope for innovators to add new services into the framework as they develop them.

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

The main downsides of the Medium archetype are the time and risk to implement it but if enough experienced parties from different backgrounds (technical, commercial, regulatory, social, etc) are brought together for a well represented committee, it has a chance to deliver what the current entities are failing to achieve in the pace that is required.

Section 4

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

We don't have a strong view on the delivery model. But there are already existing technologies/platforms that have experience with distributed markets either in the UK or other countries that can serve as a starting point and be built upon.

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

We don't have a set in stone view on the delivery model, however a more public governance approach or multiple mandated parties brought together to collaborate would help reduce conflict of interests and impartiality, and could provide greater accountability and transparency. A public governance model would more likely provide equitable distribution of benefits and costs, including those who may be marginalised or vulnerable. It may be better at fulfilling the 'leave no one behind' mandate.

At its core, the public governance approach SHOULD adopt an agile government approach from the beginning, applying principles of GovTech, agile software development to government operations. This emphasises collaboration, flexibility, and responsiveness and would attract brilliant talent who are often put off by the slowness and bureaucratic nature of public governance.

We agree that the FSO should not be the only one owning and responsible for the common digital energy infrastructure given the impartiality of it being a flexibility buyer.

Something we consider very relevant, that is also in the scope of the Local Energy Institutions and Governance consultation, is the role of the FSO which does not have a local presence and expertise. Open competition for licenses for either single or various market facilitators that have the experience of distributed flexibility markets should also be considered.

It could be worth exploring the implementation of something like a DNO ENWL Customer Engagement Group. An overarching group, this would help create an independent customer engagement group to challenge the leading organisation to ensure that the delivery covers the needs and preferences of all types of current and future customers.

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

We don't have a strong view on this.