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Digitalisation and Decentralisation; Energy Systems Management and Security
Ofgem
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5 May 2023

Dear Doug,

Re: Future of distributed flexibility 2023 call for input

Regen is a centre of expertise in the net-zero energy transition, with over 150 member organisations, including sustainable energy developers, local authorities, and community groups. We welcome Ofgem's call on distributed flexibility and its role in the UK's power system. Our "A day in the life of 2035" work showed the importance of flexibility for future energy systems. We recognise that this call is part of the wider smart energy system agenda, which sets out a vision for flexibility. With the focus of this call on operationalising flexibility through market design, more clarity is needed on what flexibility means *in practice*, for customers as well as the system.

In this letter we outline four key recommendations:

1. Ofgem should embed justice and equity metrics into the design and evaluation of flexibility scenarios and mandate retailers to report on how flexibility payments are distributed according to key socio-demographic indicators.
2. Ofgem must address the risk of a digital divide. This includes (a) supporting greater levels of public engagement, (b) understanding the barriers to engaging with digital technologies, (c) supporting the development of solutions to overcome these barriers, (d) building diversity into accountability of energy data governance and decision making, and (e) putting processes in place to recognise, quantify and evaluate the impact of biases inherent in data and its use.
3. Ofgem should undertake wider public engagement on customer energy resources and flexibility. This includes providing opportunities for public deliberation and input into policy development.
4. Ofgem must create an innovation culture within the sector. This includes (a) supporting bi-directional learning by embedding research within projects and portfolios, (b) reviewing how and for whom innovation works, (c) ensuring projects share insights that support wider learning, and (d) redefining what failure means.

The call positions CER owners (through aggregators) as informed individuals, aware of the values, options and liabilities of different markets, and able to make choices about how to participate and manage risk. It also sets out expectations around how CER owners are remunerated.

These assumptions about the nature of consumer engagement ignore wider behavioural and societal aspects of participation, including fair access and benefits.

Understanding the vision for what flexibility looks like for customers in terms of the nature of their engagement, and the customer journey that takes them from where they are today to where they need to be in the future, is critical yet lacking. This is important for Ofgem to consider in developing infrastructure to deliver a flex-centric energy system and outlined briefly here.

1. Equitable access, benefits, and burdens from flexibility

Across the UK, some households will be less well equipped to provide demand side flexibility¹. This may be due to lifestyle factors (e.g., shift workers with fixed schedules, people with young children), health factors (e.g., those requiring energy intensive medical equipment), socio-demographic factors (e.g., lower levels of understanding or capacity to act), or technical factors (e.g., smaller total demand).

Current approaches reward households based on the size of their savings. This targets incentives towards those who are more able to take part. These tend to include wealthier, more educated people, with higher or more flexible demand (e.g., due to ownership of clean energy technologies such as PV, heat pumps, EVs). Such an approach couples together benefits and participation. This means that households who are unable to take part are also excluded from seeing any benefit.

In this call, Ofgem suggests that the costs to pay for the common digital energy infrastructure could be socialised. This means that households who do not own CER assets will pay for those who do have them to benefit. This unevenness - with burdens held by the many but benefits realised by the few - is unfair. While Ofgem recognises that CERs are generally only accessible for affluent customers, their proposed approach to addressing this relies on financial incentives. Past work shows that incentivising clean energy technologies can widen socio-economic inequality rather than address it.

We understand that Ofgem is not responsible for retail business models. However, Ofgem has a responsibility to protect customers and ensure they are not left behind in the energy transition.

Recommendation 1: Ofgem should embed justice and equity metrics into the design and evaluation of flexibility scenarios and mandate retailers to report on how flexibility payments are distributed according to key socio-demographic indicators.

2. Digitalisation and customer protection

Distributed flexibility necessitates a future that is dependent on data and data sharing. A lack of joined-up data creates challenges for smarter system operation. This has led to stakeholders calling for an “open data” approach with more cohesive storage, management, transparency, and governance. We recognise the steps already taken to support “open data”, but more action is needed. It is important to ensure that people know what data is available, how to access and use it, and what functionality it can – and can’t – provide.

At present, this “know-how” is relatively exclusive to higher-level policymakers, and technology and energy companies. There is little opportunity for direct public access or use. The disconnect and opaque nature of energy data governance – and of the companies tasked with collecting, managing, and operationalising data – poses a stark imbalance in influence and opportunity in this sphere.

Reflecting this imbalance, there is a social divide in understanding about data rights and use. People who are well educated, younger, and middle-class tend to be more confident about energy data. This helps them engage with digitalisation, reap benefits and make more informed decisions. People in more vulnerable groups (the elderly, people with disabilities, and those in fuel poverty) tend to be less engaged and less well-versed. As such, they are at greater risk of data misappropriation.

¹ Powells, G., & Fell, M. (2019). Flexibility Capital and Flexibility Justice in Smart Energy Systems. Energy Research and Social Science.

Likewise, policymakers in the UK tend to be from white, educated, middle-class backgrounds. This lack of policy representation from vulnerable, marginalised communities poses risks. Without appropriate care and deliberation, energy system digitalisation could exacerbate existing justice issues.

Data, and how it is interpreted, is susceptible to human, social, and procedural biases. If left unchecked, this can lead to unintended negative outcomes. What data is collected, how it is gathered, used, and governed, and by whom, all have crucial bearing on policy and social outcomes.

Recommendation 2: Ofgem must address the risk of a digital divide. This includes (a) supporting greater levels of public engagement, (b) understanding the barriers to engaging with digital technologies, (c) supporting the development of solutions to overcome these barriers, (d) building diversity into accountability of energy data governance and decision making, and (e) putting processes in place to recognise, quantify and evaluate the impact of biases inherent in data and its use.

3. Meaningful and well-designed public engagement

Public trust in energy utilities is generally low, and awareness of flexibility (and how to deliver this) is not well understood. Meaningful and well-designed public engagement strategies can help. They can build support, raise awareness, and increase trust². They can also lead to better quality outcomes, as the public can offer valuable perspectives that may not otherwise be considered.

This is particularly true for determining what a ‘fair’ approach to flexibility means in practice. This includes how it is delivered, and how benefits and burdens are distributed. However, traditional approaches to engagement are limited, and rely on informing and educating. These practices are non-inclusive, one-way linear information exchange, and are not particularly empowering. They also come too late in the process, and focus on teaching people how to use solutions that are already developed.

More effective engagement gives people a chance to develop, discuss, and share informed opinions. This happens through well-crafted deliberative processes, such as Citizens’ Juries. Involving people in policy making results in better policies. Policies created with public interest and input at their core do better at stimulating support and building trust.

Recommendation 3: Ofgem should undertake wider public engagement on CERs and flexibility. This includes providing opportunities for public deliberation and input into policy development.

4. A culture of innovation and learning

An energy system with full chain distributed flexibility presents a very different model from what exists today. Failure is inevitable if we expect to converge on the “best” common vision for distributed flexibility on the first attempt. Issues we are not yet aware of may arise, or contexts may shift, as we transition. Failure is an important part of the innovation process.

However, regulation and policy focus on linear processes and the avoidance of failure. Without the political permission to talk about failure we won’t learn how to do things better. This will limit our ability to innovate.

Policy and regulation must be more responsive to insights and evidence from trials or innovation projects. Yet many trials and projects are not evaluated for the purposes of learning, and hesitant to share “failures” as this may risk future funding.

² Roberts et al. (2023). Moving from ‘doing to’ to ‘doing with’: community participation in geothermal solutions for net zero – the case of minewater geothermal. Earth Science, Systems and Society. In press.

Recommendation 4: Ofgem must create an innovation culture within the sector. This includes (a) supporting bi-directional learning by embedding research within projects and portfolios, (b) reviewing how and for whom innovation works, (c) ensuring projects share insights that support wider learning, and (d) redefining what failure means.

In summary, we welcome the focus Ofgem is bringing to the demand side through considering how CERs may participate in distributed flexibility markets. However, we would like to see more thought given as to how to ensure more equitable access and benefits, support customers with digital advances, provide better and more meaningful engagement opportunities, and embed a culture of agility, learning and improving.

We would be happy to discuss these comments further with Ofgem and other stakeholders. If this is of interest, please do not hesitate to get in touch.

Yours Sincerely

A handwritten signature in black ink that reads 'Rebecca Ford'.

Rebecca Ford

Head of Demand and Flexibility

Email: rford@regen.co.uk

CC:

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