

Ofgem Call for Input – Smoothing the Journey: engaging domestic consumers in energy flexibility

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About Energy UK

Energy UK is the trade association for the energy industry with over 100 members - from established FTSE 100 companies right through to new, growing suppliers, generators and service providers across energy, transport, heat and technology.

Our members deliver nearly 80% of the UK's power generation and over 95% of the energy supply for 28 million UK homes as well as businesses.

The sector invests £13bn annually and delivers nearly £30bn in gross value - on top of the nearly £100bn in economic activity through its supply chain and interaction with other sectors. The energy industry is key to delivering growth and plans to invest £100bn over the course of this decade in new energy sources.

The energy sector supports 700,000 jobs in every corner of the country. Energy UK plays a key role in ensuring we attract and retain a diverse workforce. In addition to our Young Energy Professionals Forum, which has over 2,000 members representing over 350 organisations, we are a founding member of TIDE, an industry-wide taskforce to tackle Inclusion and Diversity across energy.

The Call for Input

Energy UK welcomes the opportunity to respond to this Call for Input on [Engaging consumers in demand side response \(DSR\)](#).

Members thank the Ofgem team for taking the time to come and speak to members on where this work sits in relation to connected work such as:

- the Government's work on regulating for smart energy technologies ([Smart and Secure Electricity System](#) - SSES);
- Ofgem's own work on distributed flexibility (enabling greater participation for DSR in current and future markets); and,
- the Government's workstream on the future of retail (including this recent Call for Evidence on [Towards a more innovative retail market](#)).

It is our understanding that this work is at an early stage but is intended to be both complimentary and to identify any relevant gaps (regulatory or otherwise). Whilst the SSES work will ensure that customers are protected, the focus of the Ofgem work is to ensure that as many customers as possible can benefit from the savings that DSR could bring.

Energy UK welcomes this focus but would highlight that whilst it is Ofgem's role to ensure accessible markets that can unlock the value of each MW, it is market participants that are incentivised to develop the customer journey and to maximise customer engagement. If markets can be unlocked to enable providers, then providers will compete to offer customers

attractive propositions. Energy UK has set out more detail on how the future retail market can put customers first in this new publication [Empowering people: Industry's vision for a customer-centric energy market](#).

Q1 – To what extent do you think we are reliant on domestic DSR emerging at scale in the transition to a net zero energy system?

As set out in previous Ofgem publications including the Smart Systems and Flexibility Plan and the more recent Future of Distributed Flexibility, unlocking distributed flexibility would reduce the cost of the energy transition. Without domestic DSR emerging at scale, the transition will have higher costs and take longer.

Modelling by Cornwall Insight for [Smart Energy GB](#) suggests the following single year savings for 2025, 2030 and 2040 for strong take-up of domestic flexibility:

- 2025: £21mn
- 2035: £4.6bn
- 2040: £14.1bn

The £14bn single year saving for 2040 breaks down as:

- i) [Lower wholesale electricity prices](#) - £12.3bn.
- ii) [Lower peak demand](#) - £1.2bn (avoided cost from generation - the reduction in peak consumption is equivalent to four new gas-fired power stations.)
- iii) [Lower peak demand](#) - £0.5bn (avoided cost on network assets – the reduction in peak demand could avoid the need to build additional expand the networks)

The higher savings anticipated by 2035 are based on the opportunity increasing with the higher deployment of smart products, including electric vehicles and heat pumps.

Q2 - Do you think consumers and the system will have greater benefits if DSR is provided as a household proposition or as a service through individual assets (EVs, Heat Pumps)?

Domestic flexibility markets are at a very early stage and as such, Energy UK would caution against intervention that stifles either model, or future market innovation.

Energy UK supports the ESO-led work to understand the technical parameters (e.g. on submetering accuracy) for aggregated domestic assets to provide network services. For example, the [ESO trial to increase EV volumes in the Balancing Mechanism](#).

The ESO's technical work here seeks to be agnostic on future business models and to enable sufficient interoperability to support different approaches. Ultimately, it may be better for the market to determine the appropriate balance between these two models based on the level of benefits they are able to deliver to the consumer.

Where competition is fair and consumer protection prioritised, the increased competition will accelerate change and increase the potential benefits for consumers. However, the rapid pace of change here means there is a risk that changes, including code modifications, are moving faster than the accompanying policy framework. This incremental change risks pre-judging the appropriate set of arrangements.

A wider holistic review is therefore recommended to determine the best arrangements to ensure fair competition and an appropriate balance of consumer protection whilst supporting customers to maximise their potential savings and revenues from DSR. These arrangements would support the market to determine the appropriate balance.

Q3 – How do you envision consumer relationships and engagement will change through the introduction of DSR?

As DSR gives providers a means of helping customers to cut bills and or earn revenue, it provides a way to differentiate the customer offer, thereby increasing and deepening customer engagement. Research into last winter's [Demand Flexibility Service](#) (DFS) suggests that customers reported an improved awareness of their energy usage and the impact that different behavioural changes can have.

Q4 – How do you think consumers should be engaged on the nature and value of DSR? Do you think different consumer archetypes need to be engaged in specific ways, if so, which archetypes and how?

As highlighted at the start of this response, whilst Ofgem has a mandate for consumer outcomes and customer protection, it is for providers to work out how best to motivate different groups of consumers.

The ability of providers to forecast demand, model customer behaviours and translate this into attractive products will be integral to their future success here. As such, detailed insights are commercially sensitive. However, there is broad agreement that it is useful to group customers along a push- pull continuum of engagement.

'Pull' customers are early adopters who are interested in technology, and have invested in one or multiple more smart products, such as an electric vehicle. These engaged customers want detailed information and are happy to invest time in understanding how to optimise their equipment.

At the other end of the spectrum are 'push' customers. Those less engaged customers will typically be less interested in how the equipment works and want to maximise their savings in the simplest way possible. Products and marketing approaches for these customers will need to prioritise simplicity and ease of use. Within this wider group of less engaged customers, there are likely to be customer segments (those that do not engage with digital services or are nervous of new technology), that will be harder and potentially more expensive to engage. Whilst services will evolve to serve these segments, there is a risk that, in a rapid scale-up, these customers could get left behind.

There is a potential role for the regulator/ other to mitigate this risk by making it easier to engage these customers. The key recommendations here are to build trust in the sector and develop/ support a shared narrative on the role of DSR and its potential benefits.

Energy flexibility is a new concept for most customers and the benefits can be difficult to communicate. Having a shared narrative to underpin consumer understanding, common definitions and a shared approach for calculating and communicating benefits (for example CO2 savings) will support providers to have meaningful conversations, and avoid inflated claims ('greenwashing'). A foundational understanding, backed by Government and the regulator would also reduce the potential for miscommunication or politicisation of messaging.

Energy UK's members have illustrated this with reference to industry examples.

i) ESO Demand Flexibility (domestic DSR pilot)

This example shows where a shared narrative has successfully increased take-up across a range of customers. The ESO achieved this by working collaboratively with industry to

develop a broad set of communication principles on how to explain the service and its benefits. These principles then drove a successful media campaign.

Providers were contractually required to adhere to these principles and misalignment from providers was addressed. Whilst the ESO is not consumer-facing, it went to some length to develop a consumer-facing webpage for the service to host both the shared narrative and a list of approved providers. This built consumer trust and provided a single landing pad for media, providers and consumers. This integrity of messaging help prevent mixed messaging from media and providers.

ii) Smart Energy GB (Smart Meter Programme)

Energy UK members cite Smart Energy GB as an example of a less successful approach. Members felt that, whilst they had supported the concept, the implementation has not achieved what it had set out to do, partly due to a lack of a clear, coherent and compelling narrative. This was viewed as having hampered take-up and added to costs. Members also highlighted that it resulted in mixed messaging between different bodies with roles in the roll-out (for example. the Citizen's Advice service) which further diluted the messaging.

Both examples clearly illustrate the centrality that a compelling, shared narrative can play in what is, essentially, a change management programme.

Q5 – What will the primary motivators be that will encourage consumers to engage with DSR? Do you think these motivators will differ depending on consumer group?

As the DFS last winter and associated [research](#) into customer attitudes and motivations highlighted, customers respond in different ways and to different motivators. This highlights the need to avoid early intervention into the emerging market.

The financial driver is seen by industry to be the key driver for most customers in the DFS. DFS, as an out-of-market service providing additional capacity to cover possible scarcity, offered far higher prices (£3kWh) than are available in everyday balancing markets. Getting an equivalent level of engagement for in-market BAU services will therefore depend on the success in making both ESO and DNO markets/ products stackable – or the revenue will not be sufficient to engage consumers.

With the DFS, the financial driver was viewed by providers as the primary motivator. It was noted that there were a range of ways of providing financial benefits – from cashback to money off bills to vouchers and loyalty points. The market is at too early a stage to draw strong conclusions on the relative merits.

Environmental or altruistic (e.g. reducing system stress) motivations are also important. To maximise the opportunity here, it will be important that providers have a clear and trusted means of calculating and communicating these benefits (for example, how DSR can reduce system costs and how this can reduce bills). As with our response to Q4, this suggests that common communication resources would be of value here.

A high deployment of DSR will require both clear and consistent support/ messaging from Government and Ofgem to consumers and support/ incentives for them to invest in low carbon technologies to support load shifting.

Q6 – To what extent should system wide benefits provided by DSR be shared amongst all consumers, even those who are less engaged or do not participate in DSR at all?

DSR reduces costs for all consumers, not just those who participate directly. These savings will be passed on to all consumers via reduced network and balancing costs, and reduced wholesale costs.

It will be important that Ofgem, as the Regulator, and all industry parties communicate effectively to customers that all consumers stand to gain from DSR, not just those who are willing and able to shift their demand.

[Cornwall Insight modelling](#), referred to in our response to Q1, suggests that compared to a scenario with no DSR, strong take-up could cut wholesale electricity costs even for those who don't participate by 38% by 2040. The same modelling suggests that active participants would gain further reducing their costs by around 52%.

High volumes of DSR would depend upon households investing in smart products (electric vehicles, heat pumps, domestic batteries etc) to increase their ability to shift their consumption. These private investments will reduce the investment required for additional generation, a cost that would otherwise be socialised amongst all consumers. To support customers to invest, it is important that the market sends strong signals to customers to invest and participate (and to reduce the risk of these private investments). Ensuring that suitable finance products are available for customers who would like to invest but do not have the upfront capital would support higher take-up of DSR, lower system costs and a more equitable transition.

Q7 – How can the customer journey in domestic DSR be made simple and seamless?

The customer journey in the retail market is an important market differentiator and as such, commercially sensitive. However, friction in the following areas could be improved:

Under the Supplier Hub model, non-suppliers working in this space need to access customer data (for example at the boundary meter). Whilst this works reasonably well, if domestic DSR is to scale-up, there is scope to streamline the process for getting and approving consent.

Work by the ESO technical working groups in this area, for example, aims for all devices to be technically interoperable. However, the way that the devices onboard customers and register devices may be different as the technical specification, [PAS 1878](#), leaves it up to each service provider to define their process. In practice, this could make it confusing for customers. In contrast, the Retail Energy Code sets out a clearly defined approach for how suppliers should interact with each other during a change of supplier. Adopting a similar approach here would make it simpler for customers.

It will also be important that when a customer changes supplier that it does not disrupt existing arrangements on site – for example, an existing data sharing agreement with aggregators working from a submeter. This is already an issue with DSR in industrial and commercial sites where a change in supplier can disrupt the data access agreement. To prevent this, there would need to be a mechanism to transfer the existing data sharing agreement from the existing to new supplier. It may be that further work is required to understand the appropriate treatment of domestic customers in this space, given the inherent differences compared to Industrial and Commercial DSR participants.

A related point of friction is ensuring that smart products have sufficient functionality to engage in markets without increasing costs beyond an acceptable level. Here there is a need for an industry consensus on the level of submeter accuracy required for market access, and on the need to ensure that network procurement and product regulation allows for this but does not increase costs beyond what can be justified. An example here is the cost of compliance with the [Metering Instruments Regulation](#) where this will not benefit consumers.

This needs to be urgently progressed to reduce barriers to DSR and a risk of stranded assets. This Energy UK recommends a review of requirements for electric vehicles [here](#).

Data will be an important issue here. The EU Data Act (summary [here](#)) is designed to remove data barriers to Internet of Things (IoT) devices, and may include useful approaches that could be adopted in Britain. It echoes many of the themes from the Government Digitalisation Taskforce – ensuring that the user is in control of their data, ensuring that asset providers do not prevent users for accessing data on their appliance etc.

Targeted notifications using customer data has also shown to be an effective way of increasing both participation and volumes in domestic demand response programmes. This was seen in both last winter's DFS and in this [case study](#) from Ohm Connect and Sense, which shows how providing real-time, appliance-level insight can increase load shifting.

Q8 – Do you agree that these factors are important in ensuring an attractive and simple domestic customer journey in DSR is realised? Are there any other factors that should be considered?

As domestic DSR will be unfamiliar to most customers, it will be important to build trust. A Code of Conduct that is supported by industry can help here. The Association of Decentralised Energy has developed a new Code of Conduct for the Domestic DSR sector called [Homeflex](#) that could help with this.

Clear backing from Government and Ofgem for DSR and its role in lowering system costs will also be important. Clearer messaging from Government on smart meter take-up (including an integrated approach to embedding it in relevant regulation – such as for new buildings) could further reduce issues experienced in the Smart Meter Programme. This is critical to enabling many of the business models that will deliver increased quantities of DSR.

Delivery of Market Wide Half Hourly Settlement (MHHS) and better price signals to encourage behaviour change (currently constrained by price regulation), will also act as an enabler for developing services and business models.

Q9 – What barriers do you see to these factors in the domestic DSR customer journey being realised in practice

Enablers: DSR scale-up will be dependent on the successful rollout of both the smart meter programme and MHHS. The regulator's role in ensuring that these programmes stay on track for timely deliver will be important to the speed and scale of delivery.

Market access: Currently the main ESO markets in this space – the Balancing Mechanism and Capacity Market - are difficult to access for non-conventional assets such as distributed flexibility. There are multiple reasons for this including design, IT capability, and administrative requirements. Energy UK welcomes efforts made by the ESO, such as the anticipated December release of the Open Balancing Programme (which will enable the control room to dispatch and optimise smaller assets), and the current trial of a reduced metering requirement to support participation of EV volumes into the Balancing Mechanism.

However, members feel that Ofgem could do more in its role as the regulator to increase the access of existing and new markets to distributed flexibility. While there is support for new digital infrastructure here, members highlight that near-term change could be accelerated if there was a concentrated focus on making existing ESO and DNO markets more accessible. The change required here is wider than IT changes, and includes the need for effective product design and delivery of enablers.

Revenue stacking: As individual markets will not provide sufficient revenue to motivate customers, providers will need to stack revenues across multiple markets to create attractive propositions. To support this, stacking (supported by clear primacy rules) needs to be the default for all network services. In this winter's iteration of the DFS, stacking is not permitted with either the Capacity Mechanism (which will exclude significant industrial and commercial volumes) or DNO flexibility markets.

Facilitating learning: DFS provided valuable insights into how domestic customers may be willing to change their behaviour - but within an unusual context (that Britain could face power cuts). The industry needs better information on customer willingness to participate, and on price discovery. This will require iterative learning from providers – putting products into the market then innovating based on the response. This requires both time and an assurance that a sufficient range of opportunities will be available for providers to 'hang' products off. This is not compatible with the current approach (DFS, for example) which requires providers to recruit customers at short notice for a limited period. If there are no clear follow-on opportunities by the close of the service (for example a summer 'Turn Up' programme), providers will not be able to sustain the engagement and will need to begin from scratch when the next opportunities arises.

Members would support a more agile process to innovation - small scale 'learning by doing', rather than limited pilots, and then a faster process for translating the findings into BAU.

Q10 – What do you think is the role of government, Ofgem, industry and stakeholders in enabling an attractive and simple customer journey in domestic DSR?

Members were supportive here of both the Government and Ofgem actions. There was support for the Government's approach to regulation with the [Smart and Secure Electricity System](#) (SSES) work. It was generally felt that the Government had effectively set out the policy intent in this area.

Where there has been a mismatch or shortfall, is in work on the market enablers to allow DSR/ distributed flexibility to participate in ESO and DNO markets (from MHHS to asset meter quality to standardising DNO markets). This sits within Ofgem's remit of ensuring competitive markets but until recently had not received sufficient attention. Members are pleased with the new focus from Ofgem and hopeful that the granular focus on the DNO market enablers will start to reduce friction here in the near-term. Members would like to see Ofgem continue to focus efforts here, rather than on mandating consumer journeys.

Whilst all members would like change to go faster, it was noted that the various pieces (for example, the SSES work and retail market enablers such as MMHS) need to be aligned. Members view the next two years as a transitional phase as markets start to better align and permit more revenue stacking.

Members highlight that DSR at scale would require consumers to invest in low carbon technologies. As this could offset investment in additional generation and networks, it is important that customers are supported (by advice, engagement, and access to finance), to take-up these technologies.

Members also noted that it can be hard to keep up with the DESNZ and Ofgem workstreams and team structures but noted this has improved recently. They highlighted that where Government and Ofgem can flag key announcements or consultations in advance (e.g. 3 months ahead), it helps them to prioritise resources.