

Call for Input

Title	Smoothing the Journey: engaging domestic consumers in energy flexibility
Publication date:	17 August 2023
Response deadline:	29 September 2023
Team:	Digitalisation and Decentralisation; Energy Systems Management and Security
Email:	consumerflexibility@ofgem.gov.uk

We are calling for input to gather information from stakeholders on how to unlock consumer engagement in domestic DSR through an attractive and simple customer journey. We would like views from people with an interest in helping consumers play their part in the transition to a net zero energy system. We would particularly welcome views from suppliers, flexibility providers, aggregators, providers of smart home and transport assets and consumer representatives. This document outlines the scope, purpose, and questions of the call for input and how you can get involved.

This document outlines existing workstreams reforming the market, governance structures and upgrading our infrastructure and systems to enable domestic DSR to emerge at scale. It then sets out an overview of some prior internal and external work which has considered domestic consumer engagement in DSR. The document then seeks input from stakeholders on our view that to unlock domestic consumer engagement in DSR, the customer journey should be attractive, simple, and seamless, and sets out potential factors in a customer journey which could make this a reality.

Once the Call for Input is closed, we will consider all responses. We may publish non-confidential responses and will share responses with the Department for Energy Security and Net Zero. We plan to hold workshops in the autumn with stakeholders on the findings of the Call for Input.

© Crown copyright 2023

The text of this document may be reproduced (excluding logos) under and in accordance with the terms of the Open Government Licence.

Without prejudice to the generality of the terms of the Open Government Licence the material that is reproduced must be acknowledged as Crown copyright and the document title of this document must be specified in that acknowledgement.

Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU.

This publication is available at www.ofgem.gov.uk. Any enquiries regarding the use and re-use of this information resource should be sent to: psi@nationalarchives.gsi.gov.uk

Contents

Title: Smoothing the Journey: engaging domestic consumers in energy flexibility	1
Contents	3
Executive Summary	4
1. Introduction	6
2. Emerging Market Context	9
Decarbonisation presents energy system challenges	9
Flexibility	10
3. Market reforms enabling domestic flexibility	14
Setting minimum standards for consumers and energy system protections in domestic DSR	14
Wider Market Reforms	15
Previous work on engaging consumers in domestic DSR.....	16
4. The Customer Journey in DSR: Building Consumer Engagement and Participation	19
<i>Levels of consumer engagement</i>	20
<i>Customer relationships</i>	22
The Customer Journey in DSR.....	25
Participation: An attractive proposition	25
Importance of a Simple and Seamless Customer Journey	27
Factors to consider in the domestic DSR customer journey	29
5. Conclusion	31
Appendices	32
Appendix 1 – Responding to this call for input	33
How to respond	33
Your response, data and confidentiality	33
Appendix 2 – Call for Input Questions	35
Appendix 3 – Privacy notice on Call for Input	36
Personal data	36

Executive Summary

How will consumers engage in our future flexible energy system? What is needed to enable a large proportion of consumers to become flexible energy consumers?

This document focuses on how to unlock domestic consumer engagement in flexibility and enable consumers to transition from passive billpayers to flexible energy consumers. Flexibility is expected to play a key role in the energy sector's transition to net zero, by helping to balance the challenges of increasingly intermittent supply and increasing electricity demand. Demand Side Response (DSR) is one form of flexibility which will be key in enabling demand to better correspond with supply. This publication focuses primarily on domestic DSR, which is at early stages of adoption.

Domestic DSR entails consumers adjusting their energy consumption in response to the needs and requirements of the energy system and being rewarded in return. Through large-scale consumer engagement in domestic DSR, consumers' increasingly electrified assets - such as EVs and heat pumps - can be beneficial assets to the energy system rather than adding further strain. This could be by shifting their energy consumption to off-peak times manually or automatically, and by participating in flexibility markets through a third party, known as a Demand Side Response Service Provider (DSRSP).¹

We anticipate that flexible energy consumers will engage in DSR in many different ways depending on their individual circumstances, preferences and method of engagement. Engaging in domestic DSR will require many consumers to change the way they have historically consumed energy. Given the scale of this change in energy consumption and the multitude of different options for how consumers can engage in DSR, there is a risk that the domestic DSR market will become overly complex for consumers to engage in. If domestic DSR is designed for and adopted by only a small subset of the market, we will miss out on the opportunity for a large proportion of consumers to benefit from DSR and the opportunity to save consumers billions of pounds in system costs and effectively set up the energy system for the future.

As such, we are calling for input on what is needed to enable a large proportion of consumers to transition to being flexible energy consumers. This publication builds on

¹ A Demand Side Response Service Provider is an organisation which provides a Demand Side Response Service, which entails the use of Load Control to provide a Service to help manage the Transmission or Distribution Network. Source: DESNZ (2022), [Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control - GOV.UK \(www.gov.uk\)](#)

previous work done by Ofgem, government and stakeholders on domestic DSR and puts forward the view that key to unlocking large-scale engagement is an attractive, simple, and seamless customer journey. Through this call for input, we aim to convene a conversation with all interested stakeholders on this topic to inform policymakers of whether facilitation or policy intervention is required to help make this vision a reality.

This document outlines existing work to reform the market and governance structures and upgrade our infrastructure and systems to enable domestic DSR to emerge at scale. It then summarises some prior internal and external work which has considered domestic consumer engagement in DSR. The document then seeks input from stakeholders on our view that the customer journey in domestic DSR should be attractive, simple, and seamless for consumers to engage in and sets out potential factors in a customer journey which could make this a reality.

1. Introduction

- 1.1 Our net zero and decarbonisation targets are clear. The government have committed to decarbonising our electricity system by 2035 and to reducing all greenhouse gas emissions to net zero by 2050.² These goals are stretching and ambitious, but necessary; achieving them is going to require a system and society wide effort. As the energy system transitions to a more modern, smart, and secure system, we must harness the opportunities of electrification and the growth of renewable technologies that will enable net zero – underpinned by digitalisation and decentralisation. Digitalisation will enable us to better monitor, measure and respond to activity in the energy system, and decentralisation will enable us to better integrate the increasing numbers of distributed assets and provide local solutions to local needs.
- 1.2 Creating a more adaptable, responsive and resilient future energy system will be key to decarbonising the energy sector. Flexibility is a key enabler for achieving these goals, providing opportunities to address system needs in more targeted, efficient, and cost-effective ways. A rapidly growing form of flexibility is DSR, which entails consumers adjusting their energy consumption in response to the needs and requirements of the energy system, while still enabling consumers to use the electricity they need. For example, this could entail consumers, either manually or automatically through a third party, shifting their electricity consumption away from times of peak demand in response to price signals and participating in flexibility markets. While DSR is not new, extending and expanding this form of flexibility will be critical in our future energy system, where supply will be more intermittent, and demand will be higher.
- 1.3 This Call for Input (CFI) focuses on domestic consumer participation in electricity DSR but we note that industrial and commercial DSR play a major role in providing DSR to the energy system.³ Today, domestic DSR is at its early stages and utilised by a small proportion of consumers, often on an occasional basis. We must grow the role of domestic DSR to something that is utilised by the majority

² GOV.UK, UK becomes first major economy to pass net zero emissions law: [UK becomes first major economy to pass net zero emissions law - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law); GOV.UK, Plans unveiled to decarbonise UK power system by 2035: [Plans unveiled to decarbonise UK power system by 2035 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035)

³ National Grid (2023), Future Energy Scenarios Data Workbook, Sheet FL.03: [Future Energy Scenarios | ESO \(nationalgrideso.com\)](https://nationalgrideso.com/future-energy-scenarios)

of consumers day-to-day, to ensure that a large proportion of consumers receive the benefits from DSR and that we seize the opportunity to save consumers billions of pounds in system costs and effectively set up the energy system for the future. This will require a change in the way many consumers interact with their electricity consumption, transitioning from the primarily passive billpayers of today to being flexible energy consumers. Today, most energy consumers have a linear relationship with their supplier where they pay for the energy they consume, and they may engage in the market to switch suppliers to the best tariff for their individual circumstances. As consumers transition towards being flexible energy consumers, their interactions with the energy system will evolve to the point where they could – through their assets and devices - respond to market signals and adapt their energy consumption patterns accordingly.

- 1.4 We expect there to be varied levels of consumer engagement in DSR as discussed later in this publication - there is no one size fits all definition of a 'flexible energy consumer'. Further, as a general rule we do not expect flexible energy consumers to be manually monitoring time-of-use (TOU) tariff prices and adapting their consumption accordingly. While some consumers may choose to engage in this 'hands on' way, we expect that the simplest and most common way for many consumers to engage in and benefit from DSR will be to enable their assets and devices to be automated. Automated DSR can be delivered in different ways - devices could simply come pre-configured with default time settings to consume energy outside of peak times; smart devices can also be set to optimise against TOU tariffs; or DSR can be managed remotely by a third party - whether by a consumer's supplier or an independent DSR Service Provider (DSRSP)⁴ - who can optimise against wholesale prices and participate in flexibility markets on a consumers' behalf.
- 1.5 To unlock the full value of domestic DSR, a large proportion of consumers will need to be supported and guided through this transition, so that they willingly and confidently choose to play the role of a flexible energy consumer where they are able to. A necessary precursor to consumer engagement is understanding

⁴ DSRSPs, as defined by government, are organisations who remotely control or configure electricity consumption or production (or contract with consumers for these purposes), typically to benefit organisations responsible for supply, balancing, transmission or distribution of energy. Source: Delivering a smart and secure electricity system: consultation on interoperability and cyber security of energy smart appliances and remote load control (publishing.service.gov.uk)

how we will communicate the case for change to consumers, who will communicate it and how consumers are given clarity and confidence when engaging with new products and services. Critically, we must also ensure that consumers are engaged in an accessible and equitable way and that the domestic DSR customer journey is beneficial to the consumer while being simple, seamless, and safe.

- 1.6 Ofgem has a duty to protect the interests of consumers and works to ensure they are treated fairly and can benefit from a cleaner, greener environment. We aim to protect, support, and enable consumers to play their role in decarbonising the energy system, at the lowest cost. Enabling domestic DSR to grow as we shift towards net zero is an essential part of this mission. Ofgem’s role within this includes working with government to identify and address barriers to consumer engagement in DSR and ensure consumers, both those engaging in DSR and those that are unable to, are protected.
- 1.7 This publication builds on previous work done by Ofgem, government and stakeholders on domestic DSR and the role of the consumer, detailed in the following section, and puts forward the view that the customer journey in domestic DSR should be attractive, simple, and seamless to enable consumers to transition into flexible energy consumers. Through this publication and subsequent engagement, we intend to gather evidence and input from all interested parties to build a shared understanding of consumer experience with domestic DSR now and a shared vision of what is needed in the domestic DSR customer journey to unlock consumer engagement. This evidence will inform policymakers of whether facilitation or policy intervention is required.
- 1.8 This publication is aimed at suppliers, flexibility providers, aggregators⁵, providers of smart home and transport assets, consumer representatives and other parties interested in helping consumers play their part in the transition to a net zero energy system.

⁵ An organisation that aggregates the controllable load of electricity consumers to provide a consolidated DSR service. DESNZ, Delivering a smart and secure electricity system: [Delivering a smart and secure electricity system: consultation on interoperability and cyber security of energy smart appliances and remote load control \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/92123/delivering_a_smart_and_secure_electricity_system_consultation_on_interoperability_and_cyber_security_of_energy_smart_appliances_and_remote_load_control.pdf)

2. Emerging Market Context

Decarbonisation presents energy system challenges

- 2.1 Decarbonisation and the growth of renewables underpin our efforts to reach a net zero energy system by 2035. However, this shift also presents system challenges which need to be managed and mitigated.
- 2.2 The decarbonisation of heat and transport is vital, as they account for 20% and 24% of our total carbon emissions respectively.⁶ Both are decarbonising rapidly and at an increasing rate through the proliferation of high electricity consuming low carbon technologies (LCTs), such as electric vehicles (EVs) and electrified heating systems including heat pumps. For example, the number of EVs in the UK is currently predicted to increase from over 1 million today to 11 million by 2030⁷ and the government has set a goal of deploying 600k electric heat pumps per year by 2028.⁸ This will significantly increase electricity demand in GB, with predictions that demand will increase by 50% by 2035⁹. This overall increase in demand and more pronounced demand peaks will put significant pressure on our electricity networks and require significant additional energy generation and investment in additional network capacity.
- 2.3 In parallel, we will increasingly rely on renewable energy to meet our decarbonisation goals. For example, the government aims to increase the UK's offshore wind capacity from 14GW in 2022 to 50GW by 2030¹⁰, and it is expected that solar capacity will increase from 14GW today to 70GW by the end of the decade¹¹. Unlike fossil fuel generation, such as gas fired power plants which can

⁶ Energy UK, Decarbonising heat and transport: [Decarbonising heat and transport - Energy UK \(energy-uk.org.uk\)](https://www.energy-uk.org.uk)

⁷ National Grid, ESO: Future Energy Scenarios for the next 30 years: [ESO: Future Energy Scenarios for the next 30 years | National Grid Group](https://www.nationalgrid.com/uk/eso/future-energy-scenarios-for-the-next-30-years)

⁸ DESNZ, Energy Security Bill factsheet: Low-carbon heat scheme: <https://www.gov.uk/government/publications/energy-security-bill-factsheets/energy-security-bill-factsheet-low-carbon-heat-scheme>

⁹ UK Parliament, Where will Britain's future energy supply come from?: [Where will Britain's future energy supply come from? \(parliament.uk\)](https://www.parliament.uk/business/committees/committees-a-z/commons-select/energy-and-climate/committees/energy-supply/)

¹⁰ The Crown Estate, UK Offshore Wind reaches new record high and is on track to generate enough electricity to meet the needs of nearly half of UK homes: [The Crown Estate launches Offshore Wind Report 2022 | The Crown Estate launches Offshore Wind Report 2022](https://www.thecrownestate.co.uk/news/uk-offshore-wind-reaches-new-record-high)

¹¹ National Grid, How much of the UK's energy is renewable?: [How much of the UK's energy is renewable? | National Grid Group](https://www.nationalgrid.com/uk/energy/how-much-of-the-uk-s-energy-is-renewable)

be turned on and off as needed, many forms of renewable generation provide an intermittent supply, generating electricity when the sun shines or the wind blows.

- 2.4 These changes to our energy system present a challenge for balancing supply and demand in the electricity system, as we will be moving from a system where supply could promptly be varied to match demand, to one where we will require demand to be more flexible to match more intermittent supply. To manage this challenge, we need to ensure that electricity demand can better correspond with less predictable supply.

Flexibility

- 2.5 As a result of this balancing challenge, flexibility is playing an increasing role in the energy system as an essential tool to effectively manage these issues. As set out in the joint Ofgem and government 'Smart Systems and Flexibility Plan 2021' and government consultations such as 'Delivering a smart and secure energy system'¹², flexibility can significantly reduce the amount of new generation and network infrastructure investment needed by reducing peak load on the system and ensuring that our future energy system is efficient, adaptable, and resilient.
- 2.6 To achieve this, previous work by government and Ofgem suggests we may need the amount of low carbon flexibility in the energy system to increase from 10GW in 2021 to 30GW by 2030, and to 60GW by 2050.¹³ Flexibility can be delivered on both the supply and demand side¹⁴ - this publication focuses on the demand side, specifically domestic DSR. Industrial and commercial consumers already provide over 1.2GW of DSR to the system, but domestic and small non-domestic consumer participation is at early stages of adoption.¹⁵ Increased provision and use of DSR services, alongside the use of interconnectors and storage solutions,

¹² DESNZ. Transitioning to a net zero energy system: [Transitioning to a net zero energy system: Smart Systems and Flexibility Plan 2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/101422/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021.pdf); DESNZ, [Delivering a smart and secure electricity system consultation outcome: Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system)

¹³ DESNZ. Transitioning to a net zero energy system: [Transitioning to a net zero energy system: Smart Systems and Flexibility Plan 2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/101422/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021.pdf)

¹⁴ Supply side flexibility can be delivered through sources such as storage, interconnectors or low carbon flexible generation shortages. Demand side flexibility can be delivered through sources such as storage and DSR.

¹⁵ National Grid (2023), [Future Energy Scenarios | ESO \(nationalgrideso.com\)](https://www.nationalgrideso.com/future-energy-scenarios), Future Energy Scenarios Data Workbook, Sheet FL.03

could reduce the cost of managing our electricity system by £10 billion a year by 2050¹⁶, ultimately saving money for consumers.

- 2.7 Domestic DSR includes optimising when consumers use electricity against a TOU tariff¹⁷, sometimes referred to as implicit DSR, or consumers participating in flexibility markets, sometimes called explicit DSR, such as helping to address local network constraints. Without intervention and mitigation, the growth in domestic consumer adoption of electrified LCTs – such as EVs, heat pumps and battery storage - could present a challenge to the energy system by significantly increasing demand peaks. For example, if millions of EV users simultaneously charge their vehicles at the same time. However, if these LCTs operate as Energy Smart Appliances (ESAs), it will be possible to utilise their smart capability to remotely control their load¹⁸ and thus consume energy flexibly through DSR. In this way, these assets and devices can be beneficial assets for the system rather than adding further strain. Recognising this, government has already legislated to ensure private EV charge points have smart functionality¹⁹ and has set out their intention to mandate that all hydronic heat pumps, storage heaters and heat batteries up to 45kWh rated thermal capacity must have smart functionality.²⁰
- 2.8 At the early stages of the roll out of LCTs, their associated infrastructure and the design and development of DSR solutions, it is critical that we lay the right foundations today for domestic DSR, as its value and criticality for the energy system will only increase as we move towards net zero. These foundations need to be broad enough to enable and encourage as many consumers as possible to participate in DSR – including those with high electricity consuming ESAs today,

¹⁶ DESNZ, [Delivering a smart and secure electricity system consultation outcome: Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system)

¹⁷ Time of use tariffs (TOU) charge different rates for consumption at different times in a day. They can be static, meaning they charge a set rate at set time periods, or dynamic, meaning the prices charged in different time periods can vary.

¹⁸ Definition of an Energy Smart Appliance (ESA): “A device which is communications-enabled and capable of responding automatically to price and/or other signals by shifting or modulating its electricity consumption and/or production.” Taken from: DESNZ Delivering a smart and secure electricity system publication: [Delivering a smart and secure electricity system: Government response to the 2022 consultation on interoperability and cyber security of energy smart appliances and remote load control \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system)

¹⁹ GOV.UK, Electric vehicle smart charging consultation outcome: [Electric vehicle smart charging - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/electric-vehicle-smart-charging)

²⁰ DESNZ, Delivering a smart and secure electricity system – Government response: [Delivering a smart and secure electricity system: Government response to the 2022 consultation on interoperability and cyber security of energy smart appliances and remote load control \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system)

but also all the future consumers who will purchase and use EVs, heat pumps and other LCTs.

- 2.9 While consumers – including those without ESAs – will be able to participate in DSR and gain associated benefits of reduced system costs²¹, the biggest benefits will be felt by those with access to smart meters and ESAs, particularly those with access to EVs, heat pumps and storage. Not all consumers will have access to these assets – and it will take some time before they make up a significant proportion of the market. Consumers with access to these assets will stand to provide more flexibility and be rewarded accordingly. For example, modelling by the EV Energy Taskforce found that domestic EV charging prices will be 25% higher without smart charging.²²
- 2.10 If participation in domestic DSR becomes merely a niche product for a small subset of the market, we will lose the opportunity to save consumers billions of pounds on system costs and effectively set up the energy system for the future. If domestic DSR is designed for and adopted by a small subset of the market, we will also miss out on the opportunity for a large proportion of consumers to benefit from DSR, and risk creating a two-tier market where only a small subset of consumers would receive these benefits. To avoid participation becoming niche, we must consider the needs and use cases of all consumers and take this opportunity to ensure devices, systems and processes are able to support and engage all consumers in domestic DSR, so that its benefits can be maximised for the energy system of the future and for all consumers.
- 2.11 We expect automation to play a key role in enabling domestic flexibility to emerge at scale because it removes the need for consumers to proactively monitor prices and markets. Instead, automated solutions – provided by energy suppliers, ESA manufacturers or other third parties – will be key in simplifying DSR and reducing any additional burden that consumers may need to overcome to benefit from DSR services. Creating a competitive market where consumers

²¹ An example of consumers being rewarded for being flexible manually is the Energy System Operator's (ESO) Demand Flexibility Service (DFS), who found in their evaluation of household engagement in DFS that 51% of their survey respondents received rewards of £1-5 over the full winter period the DFS was run.

²² BEUC, New report on dynamic electricity prices: a potential opportunity for some consumers but be aware of the risks :[New report on dynamic electricity prices: a potential opportunity for some consumers but be aware of the risks | BEUC](#); EV Energy Taskforce, Charging the Future: [Charging the Future: Drivers for Success 2035, EV Energy Taskforce](#)

have choice in how they engage in DSR and can switch to the best DSR arrangements for their individual circumstances is also key to avoid consumer lock-in, and a significant part of that will be ensuring the provision of DSR is interoperable.

- 2.12 New business models and services are emerging in the market which automate domestic DSR for consumers, optimising the flexibility of their energy consumption for them against price signals and flexibility markets. Some energy suppliers and flexibility providers are already offering consumer DSR services and this market is expected to grow. For example, the ESO's DFS trial during winter 2022/23, through 31 energy providers and aggregators, gave consumers the opportunity to earn revenue by reducing energy usage during peak demand. 1.6 million households and businesses signed up and collectively they reduced or shifted peak energy demand by 3.3GWh.²³ We also expect to see further innovation in the retail market such as the emergence of more dynamic TOU tariff and type of use tariffs designed to work with particular ESAs and drive the adoption of ESAs, as considered in the government's recent call for input on facilitating greater innovation in the retail market.²⁴ Examples of these innovative tariffs include the Octopus Agile and Go tariffs and OVO's Charge Anytime tariff. However, TOU tariffs are not a new feature of the energy market, with static TOU tariffs having been around in the energy market for some years such as Economy 7 tariffs.²⁵
- 2.13 Given this is an emerging market with some consumers starting to participate in DSR, it is vital that we consider how to build on these foundations, encourage innovation and enable a large proportion of consumers to participate in DSR and ensure that, when they do participate, they can do so with clarity and confidence, feel protected and receive the benefits of their flexibility.

²³ ESO, Demand Flexibility Service delivers electricity to power 10 million households: [Demand Flexibility Service delivers electricity to power 10 million households. | ESO \(nationalgrideso.com\)](https://www.nationalgrideso.com/news/demand-flexibility-service-delivers-electricity-to-power-10-million-households)

²⁴ GOV.UK, Towards a more innovative energy retail market: a call for evidence: [Towards a more innovative energy retail market: a call for evidence - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/towards-a-more-innovative-energy-retail-market-a-call-for-evidence)

²⁵ Economy 7 is an electricity tariff offering cheaper rates for off-peak hours and more expensive rates during peak hours. Source: [Economy 7 consumer guide | Ofgem](https://www.ofgem.gov.uk/economy-7-consumer-guide)

3. Market reforms enabling domestic flexibility

- 3.1 Unlocking the benefits of domestic DSR requires the design and development of specific market reforms for domestic flexibility, as well as changes and progress in the wider energy system.
- 3.2 Within the domestic flexibility sphere, the following key reforms are required:
- The development of technical standards for ESAs that codify the functionality that ESAs should provide, for example, interoperability;
 - A regulatory regime for DSRSPs to protect consumers and the energy system; and
 - Increased consumer engagement in domestic DSR.
- 3.3 While all three of these must be considered, this publication focuses on the third, consumer engagement in domestic DSR. Beyond these, wider market reforms will also be needed to ensure that DSR can be aligned with and integrated into the emerging energy system, to enable its growth and maximise its potential impact.

Setting minimum standards for consumers and energy system protections in domestic DSR

- 3.4 The Department for Energy Security and Net Zero (DESNZ)'s Smart and Secure Electricity Systems (SSES) programme²⁶ is working to enable domestic DSR with the right level of protection for consumers. The programme will introduce product standards for ESAs and a new licencing regime around load control services, including consumer protections, data privacy, setting out cyber security and interoperability requirements to set minimum standards for the market and give consumers confidence that they are protected when engaging in flexibility. The outcome of this will be clear rules and guidelines on what an ESA is, how it is interacted with and how load is controlled. It will also set out what any DSRSP must do to provide a DSR service so that both consumers and wider energy system are not harmed.

²⁶ [DESNZ, Delivering a smart and secure electricity system: the interoperability and cyber security of energy smart appliances and remote load control - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system-the-interoperability-and-cyber-security-of-energy-smart-appliances-and-remote-load-control)

3.5 The SSES programme will build on existing principles and protections set out in the Supplier Licence Conditions²⁷ and the Smart Energy Code.²⁸ Ofgem is working with DESNZ on SSES policy development and is intended to be the regulator of the licencing framework.²⁹ In the meantime, industry is developing complementary standards to build consumer confidence in flexibility services, such as the proposed voluntary HOMEflex consumer code.³⁰

Wider Market Reforms

3.6 More broadly, we are working with government to transform the energy market design and arrangements to create a digital platform on which millions of ESAs can come online and join the energy system, to provide certainty and clarity on the role of flexibility within the future energy system and to remove barriers and level the playing field for DSR.

3.7 First, we are modernising infrastructure, by building a digital foundation to enable us to gather and measure data from across the energy system. We are ensuring we have the right data and digital infrastructure to ensure we can understand, monitor and predict supply and demand, through programmes such as the smart meter rollout and by introducing Data Best Practice guidelines.³¹ We are also considering what Common Digital Energy Infrastructure is needed to integrate multiple flexibility markets, so they are transparent, coordinated, and trusted, enabling the value of flexibility to be realised at scale.³²

3.8 Second, we are working to introduce empowering governance structures throughout the system at a national level, such as through the introduction of the Future System Operator and by reviewing governance arrangements at a local level.³³ This will facilitate the decentralisation of the energy system and ensure

²⁷ Ofgem, Licences and licence conditions: [Licences and licence conditions | Ofgem](#)

²⁸ Smart Energy Code: smartenergycodecompany.co.uk

²⁹ UK Parliament, Energy Bill: [Energy Bill \[HL\] - Parliamentary Bills - UK Parliament](#)

³⁰ HOMEflex: [HOMEflex \(flexassure.org\)](http://flexassure.org)

³¹ Ofgem, Decision on updates to Data Best Practice Guidance and Digitalisation Strategy and Action Plan Guidance: [Decision on updates to Data Best Practice Guidance and Digitalisation Strategy and Action Plan Guidance | Ofgem](#)

³² Ofgem, Call for Input: The Future of Distributed Flexibility: [Call for Input: The Future of Distributed Flexibility | Ofgem](#)

³³ Ofgem, Consultation: Future of local energy institutions and governance: [Consultation: Future of local energy institutions and governance | Ofgem](#)

stronger and clearer allocation of local responsibility in relation to energy for planning, market facilitation and operation.

- 3.9 Third, we are looking holistically to identify and address any technical or wider energy market related barriers, to ensure flexibility is integrated into the wider retail and other markets. For example, wider changes and innovation in the retail and other markets are expected to enable the introduction of TOU tariffs. This is being delivered through programmes such the Market-Wide Half Hourly Settlement Programme³⁴, as well as workstreams considering market reforms such as the Review of Electricity Market Arrangements³⁵ and reforms in the retail market.³⁶

Previous work on engaging consumers in domestic DSR

- 3.10 This publication does not exist in a vacuum but seeks to build on previous research and findings on engaging consumers in domestic DSR. Within Ofgem, we have used consumer research and leveraged our behavioural science expertise to understand the attitudes, behaviours, and intentions of energy consumers towards net zero and DSR.³⁷ The Behavioural Insights Team's '*How to build a Net Zero society*' report has further identified the individual, societal and institutional opportunities, and challenges in facilitating behaviours towards decarbonisation of home energy use and transport.³⁸
- 3.11 Externally, there are several studies and reports which have identified the need to improve communications with households about DSR as critical to enabling large-scale consumer engagement. For example, research as part of the HOMEflex project found that the most common concerns across groups were the complexity of the flexibility offers and how difficult it was for consumers to gauge their

³⁴ MHHS Programme: [Home - MHHS Programme](#)

³⁵ GOV.UK, Review of electricity market arrangements, consultation outcome: [Review of electricity market arrangements - GOV.UK \(www.gov.uk\)](#)

³⁶ GOV.UK, Delivering a better energy retail market: [Delivering a better energy retail market - GOV.UK \(www.gov.uk\)](#); GOV.UK, Towards a more innovative energy retail market: a call for evidence: [Towards a more innovative energy retail market: a call for evidence - GOV.UK \(www.gov.uk\)](#)

³⁷ Ofgem, Consumer Opinion about Climate Change and Decarbonisation: [Consumer Opinion about Climate Change and Decarbonisation | Ofgem](#); Ofgem, Consumer Survey 2021: [Consumer Survey 2021 | Ofgem](#)

³⁸The Behavioural Insights Team, How to build a Net Zero society: [How to build a Net Zero society | The Behavioural Insights Team \(bi.team\)](#)

potential level of financial benefit.³⁹ Specifically, reports have highlighted the need to clearly articulate to consumers what domestic DSR is, increase transparency on the benefits of DSR for consumers and the system, provide clear information on how they can participate and the choices available to them, and a need to build consumer confidence.⁴⁰ For example, The FES '*Bridging the Gap to Net Zero*' project considered equity in the transition to flexibility and found that there needs to be consistent messaging about energy flexibility supported by joined-up advice services nationally.⁴¹ Similarly, the ESO report on household engagement with DFS identified a need to improve advice for households, communicate widely the purpose and outcomes of DFS and, create transparency on rewards.⁴² Research on flexibility of specific appliances, such as by the EV Energy Taskforce, has also recommended that government and industry develop an extensive and consistent public information campaign to support consumer confidence and engagement with smart charging.⁴³ This research implies that there is a need to consider how to support consumers engaging in DSR.

- 3.12 Research has also highlighted the need to remove barriers and mitigate risks for certain consumer groups in order to maximise participation and has considered the use of innovation to help low income and consumers in vulnerable circumstances participate in domestic DSR, such as DESNZ's *Inclusive Smart Solutions Programme*.⁴⁴ This demonstrates the need to consider how different groups of consumers can engage in DSR and what is needed to support those consumers when engaging.

³⁹ Centre for Sustainable Energy, HOMEflex Qualitative Research: [HOMEflex Qualitative Research: Domestic energy consumers' needs and concerns about assurance and protection in flexibility markets](#)

⁴⁰ ESO, Demand Flexibility Service (DFS): [Demand Flexibility Service \(DFS\) | ESO \(nationalgrideso.com\)](#); Citizens Advice, [Demanding attention - Managing risks with demand-side response, to improve consumer experience tomorrow.pdf \(citizensadvice.org.uk\)](#); The Association for Decentralised Energy, Let's talk about FLEX: [Lets Talk About Flex DigitalRep FINAL-min.pdf \(theade.co.uk\)](#); Carbon Trust: [Flexibility in Great Britain | The Carbon Trust](#); EV Energy Taskforce, Charging the Future: [Charging the Future: Drivers for Success 2035, EV Energy Taskforce](#)

⁴¹ ESO, Bridging the Gap to net zero: [Bridging the Gap to net zero - FES](#)

⁴² ESO, Demand Flexibility Service (DFS): [Demand Flexibility Service \(DFS\) | ESO \(nationalgrideso.com\)](#)

⁴³ EV Energy Taskforce, Charging the Future: [EV Energy Taskforce: charging the future](#)

⁴⁴ DESNZ, Flexibility Innovation Programme: Inclusive Smart Solutions Programme: [Inclusive Smart Solutions: market engagement event, 8 December 2022 \(publishing.service.gov.uk\)](#)

- 3.13 This publication seeks to build on these previous workstreams to bring together their findings and recommendations and follow on from them to build a collective vision on how to engage consumers in DSR.

4. The Customer Journey in DSR: Building Consumer Engagement and Participation

- 4.1 The transition from domestic consumers being passive billpayers to flexible energy consumers in domestic DSR will see consumers take on a wider role in the energy system than they have done so previously. Whether this is through behavioural changes in energy usage, through the introduction and uptake of smart tariffs or through consumers engaging with broader provisions and services through DSRSPs; the end result will be consumers who are more responsive and adaptable market participants than they have been previously. While innovations in the way these services are provided, such as through automation, will be key, this shift presents a potential challenge that may need to be overcome, based on current consumer engagement and behaviours.
- 4.2 Historically, many consumers have not regularly switched between relatively simple energy tariffs, despite switching offering the potential to save consumers hundreds of pounds a year. For example, in July 2021, a consumer on a default tariff could have been able to save up to £279 a year simply by switching their energy tariff.⁴⁵ However, in a survey undertaken in August-September 2021, 49% of consumers said they had not switched their energy tariffs in the preceding 12 months.⁴⁶ This demonstrates that more cost-effective solutions are not necessarily attractive propositions where accessing those products and services requires engaging with a more complex process. Research from behavioural economics suggests that increasing complexity can actually make consumers more likely to avoid choosing between products.⁴⁷ The Behavioural Insights Team's EAST framework suggests that to encourage a behaviour, it should be easy, attractive, social, and timely.⁴⁸ As such, taken together, this suggests that there is a risk that consumer engagement with new products and services that

⁴⁵ Ofgem Retail Market Indicators. 'Retail price comparison by company and tariff type'. [Retail market indicators | Ofgem](#). In July 2021 the average standard variable tariff among 'Large legacy suppliers' paid via direct debit was £1137.92. The cheapest tariff among all suppliers was £858.59.

⁴⁶ Ofgem Consumer Survey 2021: <https://www.ofgem.gov.uk/publications/consumer-survey-2021>

⁴⁷ See e.g. Dowding, K., & John, P. (2009). The value of choice in public policy. *Public Administration*, 87(2), 219-233. <https://doi.org/10.1111/j.1467-9299.2008.01732.x>

⁴⁸ EAST: Four simple ways to apply behavioural insights (2014), The Behavioural Insights Team: <https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/>

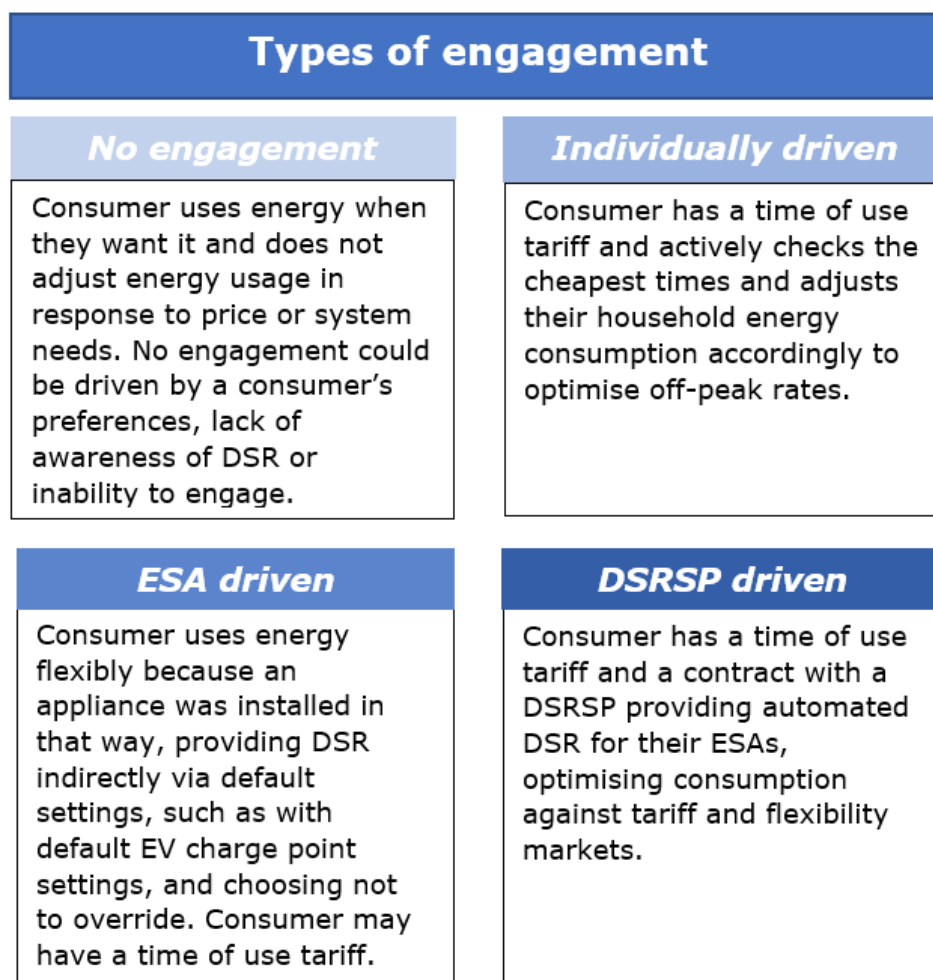
facilitate domestic DSR may be lower than required without the provision of appropriate incentives, support, or information in place to support consumers.

Levels of consumer engagement

4.3 We expect flexible energy consumers to vary in the extent and the way in which they engage with DSR, reflecting consumer preferences and individual circumstances as well as the different business models which emerge in the domestic DSR market. Figure 1 illustrates examples of different types of engagement, which are not exhaustive or mutually exclusive, but present examples of what engagement profiles could look like. Regardless of whether a consumer has ESAs or a contract with a DSRSP, they could choose to engage in DSR by switching to a TOU tariff and manually adjusting their household energy consumption in response to price signals. An illustrative example of the different ways a consumer with an EV could engage in DSR using automation is:

- A consumer who purchases and installs an EV charge point after purchasing an EV could engage in DSR by not changing the default smart charging settings on their EV charge point.
- The consumer could also choose to switch to a TOU tariff and set their devices to optimise against that, benefitting from charging their EV at cheaper rates.
- The consumer could then build on that by entering into a contract with a DSRSP to automate the optimisation of their EV charging against price signals and flexibility markets. In this instance, the consumer would receive some form of reward in return for the flexibility they provide both in terms of charging their EV at the cheapest time and for participating in flexibility markets.

Figure 1: Diagram illustrating examples of different types of consumer engagement in DSR



- 4.4 Given these varied potential types of consumer engagement in domestic DSR, it’s important to consider how consumers will engage and the level of engagement needed. We expect that automation through a DSRSP will be the simplest method for consumers to engage in flexibility and will deliver high levels of flexibility to the energy system, but key to enabling that is consumer trust in those services automatically shifting their energy consumption for them, which is a key aspect of the government’s SSES programme.
- 4.5 Different consumer archetypes are likely to have different experiences of and access to DSR, and some have inherently inflexible energy consumption (low flexibility capital). This could be as a result of individual circumstances such as a lack of digital access, vulnerability, accessibility or lifestyle which could make engaging in DSR more challenging. As such, we must also consider how to enable

these domestic consumers to engage in DSR where appropriate and mitigate potential detriment for those consumers who are unable to engage.

Customer relationships

- 4.6 In addition to the variation we expect to emerge in how a flexible energy consumer engages with DSR, we expect domestic flexibility to be delivered through various commercial models. There could be scenarios in which multiple stakeholders own a piece of the customer journey, requiring join-up between the various parties to ensure a smooth consumer journey, otherwise resulting in a more complex and fragmented experience for the consumer. Figures 2, 3 and 4 below show examples of potential customer relationships which could emerge as a result of different business models, rather than particular levels of consumer engagement given there could be different levels of engagement within each potential relationship.
- 4.7 There are many ways that domestic consumers could engage with DSR, and this is not an exhaustive list. For example, a retail energy supplier could themselves play the role of supplier and DSRSP, managing their customers flexibility by remotely optimising their ESAs against a TOU tariff and also participating in flexibility markets. Alternatively, consumers could make independent arrangements with their supplier for their tariff and with a DSRSP to manage their flexibility or have contracts with multiple DSRSPs for their specific ESAs – for example, one arrangement for their EV and another for their heat pump. Consumers could also participate in domestic DSR through bundled products within which DSR is only one aspect of the offer, such as original equipment manufacturers (OEMs) who sell the consumer an ESA and take on the role of a DSRSP for the consumer for that ESA – for example an EV manufacturer who sells the consumer an EV, and agrees to provide additional benefits or a cost reduction if the consumer makes their EV available for DSR.
- 4.8 A variety of solutions and business models within the market is beneficial and will give consumers more choice, encourage innovation and competition which should ultimately give consumers better outcomes. However, it's important to consider what aspects of the consumer journey should be streamlined or standardised in order to give consumers a seamless and consistent experience.

Figure 2: Possible Customer Relationship A – Maintaining the status quo

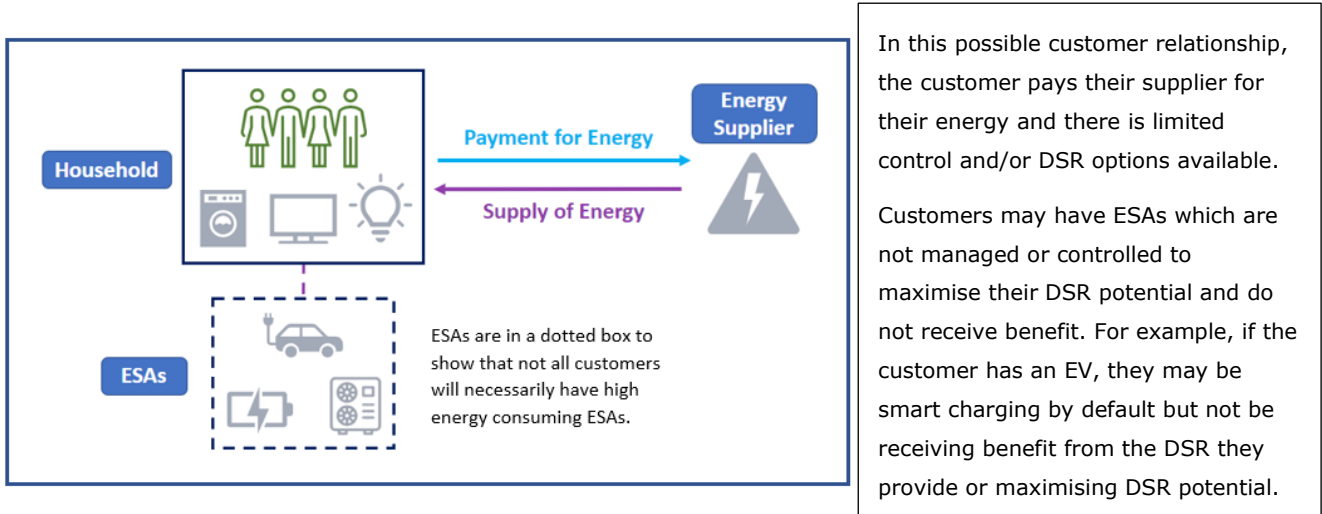


Figure 3: Customer Relationship B – Participating in DSR through the supplier

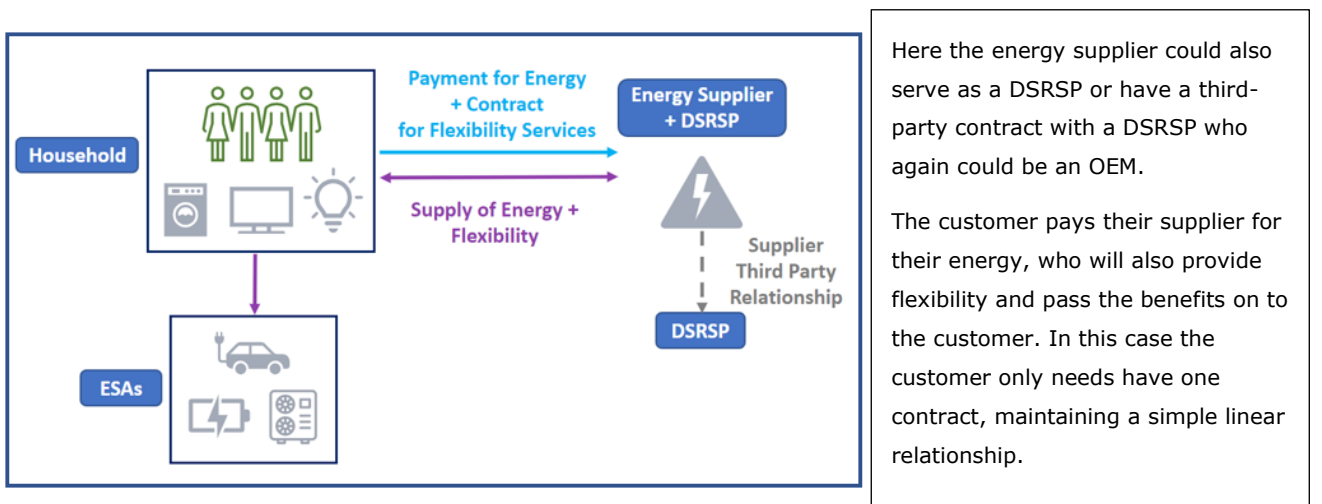
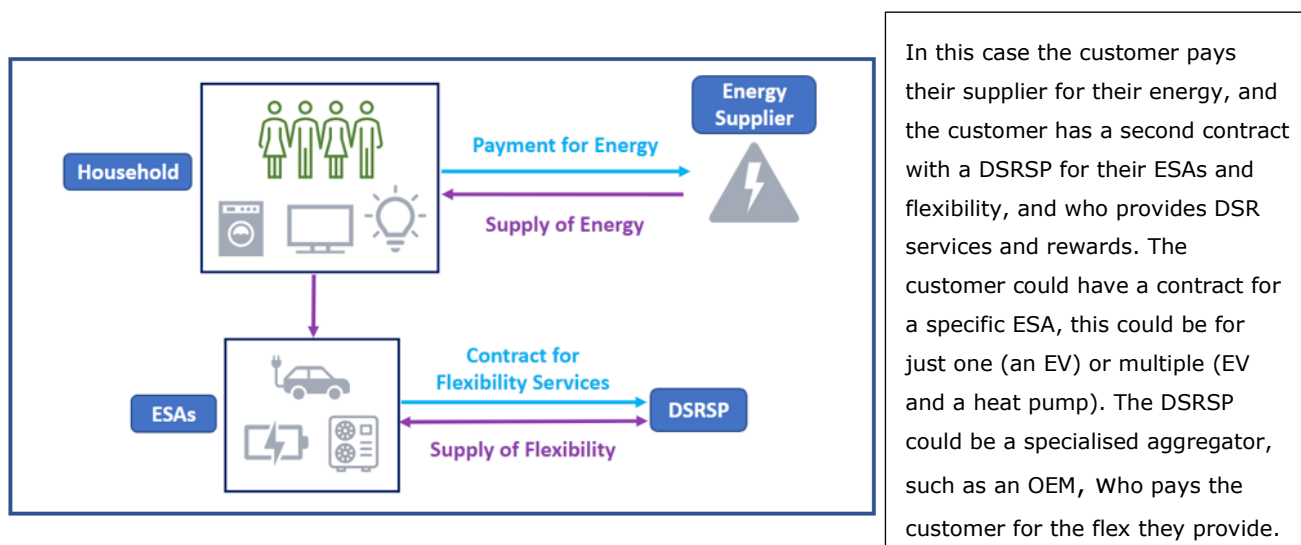


Figure 4: Possible Customer Relationship C – Participating in DSR through a separate DSRSP



4.9 Given the complexity both in terms of the potential different levels of consumer engagement in domestic DSR and the varied commercial models through which consumers could engage, in our view it is important to consider what is required in the short, medium, and long term in the domestic DSR customer journey to enable a large proportion of consumers to engage.

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?

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)?

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

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?

The Customer Journey in DSR

- 4.10 While it is not Ofgem’s intention to design the customer journey in domestic DSR, we believe the customer journey is key to unlocking consumer participation in this complex landscape and we want to ensure that the emerging customer journey is designed with that broadest set of users in mind, so that any domestic consumer pursuing DSR is supported and enabled to do so.
- 4.11 The customer journey can be split into three stages, and customers can only effectively engage and the benefits of DSR can only be reaped if all of these are in place:
- *Building interest* – this is about where consumers learn about domestic DSR from and why they should engage;
 - *Activating participation* – this is about how to initiate consumer engagement; and
 - *Sustaining participation* – this is about how to maintain consumer engagement.
- 4.12 As previously noted, DSR is not a ‘one-size fits all’ proposition, nor should it be, given that different groups of consumers will have different assets, needs and levels of engagement; we also note that this is an emerging market so the options available to consumers are likely to increase. Given this, our focus is not to define what this process should look like at each stage, but rather to establish whether the market is appropriately considering the needs and requirements of all consumers within each stage of the journey in order to ensure that DSR is developed and designed to be a sustainable and lasting proposition.
- 4.13 There are two factors which evidence suggests are critical to driving engagement across all three phases of the customer journey:
- participation being an attractive proposition; and
 - a seamless and simple user journey.

Participation: An attractive proposition

- 4.14 The Climate Change Committee (CCC) state that 62% of actions required to achieve net zero will require some form of consumer or societal behaviour
-

change.⁴⁹ Such behavioural change is required for engagement in domestic DSR, and to incentivise this behaviour change, participation should be viewed as an attractive proposition rather than a punitive mechanism, so consumers are positively motivated to participate in and benefit from the net zero energy system we are building. There are many reasons why one may decide to engage in energy flexibility and as such, it is important to consider what motivates different groups of consumers to engage, not just today, or for a short while, but for the long-term.

- 4.15 Participation in domestic DSR should be an attractive proposition at each stage of the customer journey. For example, at the 'building interest' stage where a consumer starts being interested in domestic DSR, it is important to consider how and where consumers access information on DSR and the choices available to them, and how to set out a compelling case that will motivate consumers to participate. Then, during the 'activating participation' stage, consumers should initially have a positive, rewarding experience. And in the 'sustaining participation' stage, while it is for the market to determine how to develop, refine and adapt commercial models in domestic DSR services, it is essential consumers having a positive and fulfilling experience which maximises appetite to continue participating in the long-term. A critical aspect of this stage will also be having effective consumer protections in place to build customer trust in DSR services and avoid challenges in onboarding customers if early adopters have a poor experience.
- 4.16 Moreover, throughout the customer journey, it's important to consider the rewards which motivate consumer engagement in domestic DSR. Given the wide range of business models which could emerge in DSR, reward mechanisms are likely to vary from direct financial rewards to being a part of bundled products or services, for example 'free' EV miles in return for participating in DSR or credits toward other products and services. However, evidence suggests that financial benefits from participation in DSR, while an important factor, is not the only motivator in participation. For example, evidence from the DFS evaluation suggests that factors such as financial benefit (savings or rewards), wider system gains and balancing the grid were the motivating factors for consumer

⁴⁹ The Behavioural Insights team, How to build a Net Zero Society: https://www.bi.team/wp-content/uploads/2023/01/How-to-build-a-Net-Zero-society_Jan-2023.pdf

participation, although this varied depending on the type of household.⁵⁰

Therefore, identifying the key motivators for consumers to participate in domestic DSR is key to framing engagement in domestic DSR as an attractive proposition for consumers.

- 4.17 It is also important to consider segmentation of and fairness in the type and level of rewards which different consumer groups will be able to access in DSR. Given that consumers with high energy consuming ESAs such as EVs and Heat Pumps may stand to gain the most potential rewards from engaging in DSR, it is important to consider the level of reward consumers without these assets will have access to and the impact this could have on their motivation to engage. When considering rewards, it is also important to understand whether consumers who are unable to engage are disadvantaged and if so, how this can be mitigated.
- 4.18 Our view is that for domestic DSR flexibility to grow to the level required, participation in DSR must be viewed as an attractive proposition to the consumer at all stages of the customer journey. We are interested to know industry's views on how to make participation an attractive proposition for all groups of consumers.

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 archetype?

Q6 – To what extent should the 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?

Importance of a Simple and Seamless Customer Journey

- 4.19 Our view is that a simple and seamless customer journey in flexibility, alongside it being attractive and including consumer protection when engaging in DSR services, is key to achieve the transition to being flexible energy consumers for a large proportion of domestic consumers. Given that there will be different customer journeys in domestic DSR for different groups of consumers, business

⁵⁰ ESO, Household engagement with the Demand Flexibility Service 2022/23: <https://www2.nationalgrideso.com/document/282981/download>

models, and levels of engagement, it is important to consider how to make the customer journey simple and seamless at every stage of the customer journey to enable the transition to becoming flexible energy consumers.

- 4.20 A simple and seamless customer journey means ensuring that participation in flexibility is presented, designed, and delivered in a way that makes sense and is easy to follow at each stage of the customer journey for as many consumers as possible. For example, in the 'building interest' stage it is important to have common understanding on how the importance and benefits of DSR will be communicated to consumers. For example, this is supported by the findings of the HOMEflex Qualitative Research, which found that participants struggled to understand the technicalities of flexibility services discussed and some participants questioned the value of flexibility services as an approach to tackling energy issues, emphasising the need for clear and accessible information on DSR services.⁵¹ In the 'activating participation' stage, one factor which could make it simple and seamless for consumers would be the ability to easily compare their options for engaging in DSR and choose the one which best suits their individual circumstances. An example of a tool facilitating this in the retail energy market is price comparison websites.⁵² In the 'sustaining participation' stage, important factors could include the accessibility and ease of use of a DSRSP service, such as the way that changes are communicated and introduced, or issues are resolved.
- 4.21 While different consumers will have different needs and enablers to engage, without clear understanding of how the end-to-end domestic DSR customer journey will be simple and seamless for consumers, the customer journey could be fragmented and difficult for consumers to participate in.

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

⁵¹ Centre for Sustainable Energy, HOMEflex Qualitative Research: [HOMEflex Qualitative Research Report - Centre for Sustainable Energy \(cse.org.uk\)](#)

⁵² Ofgem, Switch supplier or energy tariff: [Switch supplier or energy tariff | Ofgem](#)

Factors to consider in the domestic DSR customer journey

4.22 When considering how to ensure the end-to-end customer journey in DSR is both an attractive proposition and is simple and seamless for consumers to engage with, the following factors could be taken into account:

- **Clarity:** Consumers must have a clear understanding of what DSR services are being offered in the market. This includes:
 - *Accessible information:* Consumers should be able to easily access information on domestic DSR services, including on what DSR services are, what participation entails, how they may benefit the consumer and the wider energy system, and the options available to participate in DSR. Messaging to consumers regarding DSR should be consistent and standardised to avoid confusion.
 - *Ease of Use:* Consumer participation in DSR must be user-friendly and accessible for a broad range of consumers.
- **Confidence:** Consumers must have confidence when engaging in DSR, including:
 - *Control:* Consumers must be able to determine when they do and do not engage in DSR.
 - *Choice:* Consumers must have choice in the DSR market. This includes the ability to switch flexibility providers.
 - *Consistency:* The customer experience of a service provided by a DSRSP must be consistent, so consumers know what to expect each time.
 - *Protection:* Consumers must be protected when engaging in DSR. This includes considerations such as complaints handling procedures and protections for consumers in vulnerable circumstances, which are being considered by the DESNZ SSES programme.
- **Compelling proposition:**
 - *Incentives:* Consumers must have suitable and appropriate incentives to make participation a compelling proposition both to activate participation and sustain it.

4.23 We are seeking stakeholder views on the factors set out above and want to understand whether there are additional factors to consider in the customer journey, as well as identify any barriers to them being realised in practice. Moreover, we are interested to hear stakeholder views on how these factors can be realised in the context of different business models for the provision of domestic DSR. We are also interested to understand stakeholder views on whether the factors above should apply to the customer journey for all consumer archetypes or whether there are additional factors to consider for certain groups.

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?

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

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?

5. Conclusion

- 5.1 We know that flexibility will have a significant role to play in the future net zero energy system as energy demand grows through the increasing electrification of heat and transport, and as more intermittent renewable energy sources come online. Enabling the growth of domestic DSR is key to balancing supply and demand on our future energy system. In turn, enabling domestic DSR requires market reforms and the introduction of regulation to protect consumers and the energy system. Alongside this, the growth of domestic DSR in order to deliver the potential benefits for consumers, reduce system costs and set up the energy system for the future, is dependent on a large proportion of consumers participating, which requires significant change to the way they engage with the energy system. This publication is centred around how to achieve consumer uptake in domestic DSR.
- 5.2 The purpose of this CFI is to gather information from stakeholders on how to enable a large proportion of consumers to transition from being passive billpayers to flexible energy consumers, and to gather feedback on our view that an attractive, simple, and seamless end-to-end customer journey is key. This CFI also aims to gather information from stakeholders to identify any barriers to this being realised and potential solutions, to inform policymakers. Through this, we aim to convene a conversation with all stakeholders on how to make the vision of large-scale domestic consumer engagement in DSR a reality.
- 5.3 Following this publication, we will carry out a series of workshops in the autumn centred around the responses to this CFI. If you are interested in participating contact us at consumerflexibility@ofgem.gov.uk.

Appendices

Appendix	Name of appendix	Page no.
1	Responding to this call for input	33
2	Call for input questions	35
3	Privacy notice on responses	36

Appendix 1 – Responding to this call for input

How to respond

- A1.1 We want to hear from anyone interested in this call for input. Please send your response to consumerflexibility@ofgem.gov.uk by 17:00 on Friday 29th September.
- A1.2 We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.
- A1.3 We may publish non-confidential responses on our website at <https://www.ofgem.gov.uk/energy-policy-and-regulation/engagement/calls-input>.

Your response, data and confidentiality

- A1.4 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.
- A1.5 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.
- A1.6 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions

and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on call for inputs, see Appendix 3.

- A1.7 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.
- A1.8 We may share non-confidential responses, including any personal data that may be contained within them, with the Department for Energy Security and Net Zero.

Appendix 2 – Call for Input Questions

Through this call for input, we are seeking evidence on the following questions, as outline in Chapter 4.

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?

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)?

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

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?

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?

Q6 – To what extent should the 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?

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

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?

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

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?

Appendix 3 – Privacy notice on Call for Input

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the call for input.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, “Ofgem”). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the call for input process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a call for input.

4. With whom we will be sharing your personal data

We are not intending to share your personal data with other organisations unless legally obligated to do so. We may share non-confidential call for input responses, including any personal data that may be contained within them, with the Department for Energy Security and Net Zero.

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for six months after the project is closed.

6. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas

8. Your personal data will not be used for any automated decision making.

9. Your personal data will be stored in a secure government IT system.

10. More information: For more information on how Ofgem processes your data, click on the link to our "[ofgem privacy promise](#)".