Department for Energy Security & Net Zero

Smart Secure Electricity Systems (SSES) Programme

Government response to the 2024 consultation on energy smart appliance, licensing and tariff data interoperability proposals to support consumer-led flexibility

April 2025

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Ministerial foreword

Everyone knows that over the last few decades the ways in which we generate electricity have changed. But the ways in which we use electricity are also changing. Rather than manually switching devices on or off, we can choose to automatically shift our electricity for flexible devices use around, away from peak times, when electricity is more expensive, to quieter times, like in the middle of the night. These technological developments give the consumer greater choice about when and under what circumstances to use electricity.

This is consumer-led flexibility (CLF). This new, more flexible consumer-led energy system will also offer many opportunities to lower the bills consumers face. We already see individuals with solar panels and electric vehicles taking advantage of these technologies; for instance, an average-consumption household with an electric vehicle could save around £330 annually by smart charging on a time of use tariff when compared to a static one, and switching from a gas boiler to a heat pump on a smart tariff can generate up to £100 of savings per year. The government is determined to ensure it is not just those who are the best informed or better off who have access to these ways to save money. The government is determined to help more consumers acquire smart appliances and enable them to use to them to benefit from CLF if they so choose.

Fully harnessing the benefits of CLF – by building the right set of technical standards and requirements, by ensuring robust cybersecurity protections, and thereby giving consumers the confidence to jump into the smart market – is also key to driving the transition to homegrown clean power that we control as part of the government's Clean Energy mission and decarbonising the grid by 2030. Just as our mission is about our country having greater control over our energy supply, CLF is about giving consumers more control in how they use power and more ways to save money on their bills. This consultation response sets out the detail of how we intend to achieve this.

This detail is important, and I know it will be welcomed by our partners across the smart industry who have been integral to the government's policy development process. Their expertise has been critical to the credibility of more than one hundred technical policy decisions that are laid out in this document. And this expertise will be critical again when we consult in the coming months on the draft legislation, licences and energy code changes that will put a host of these policy decisions into law.

But this government also has a wider vision of the potential of CLF, and of how it can drive growth and lower energy prices in Britain. CLF will foster the best of British innovation, which is setting the pace internationally on smart technical standards, data optimisation and digital control systems. The smart electricity sector is an industry with a bright future in Britain. I am pleased that this government is driving it forward.

Michael Shanks MP, Minister for Energy

Executive summary

The Smart Secure Electricity Systems (SSES) Programme is creating the technical and regulatory frameworks to help consumers access cheaper electricity. Through optimisation of the charging of an EV, heat pump or battery, a consumer can choose for it to be charged, ready for when the consumer needs it, using cheaper electricity available outside of peak demand hours. The SSES programme empowers consumers to participate in Consumer-Led Flexibility (CLF), while also protecting them through consumer protection regulation.[1]

Following a consultation on the high-level principles and objectives underpinning this area in 2022[2], the previous government consulted on detailed policy proposals between April and June 2024[3]. This document summarises this government's decisions on each of the questions posed in the 2024 consultation, and sets out the next steps for delivery of standards and regulations based on these decisions.

Strategic context

CLF involves voluntary actions taken by energy consumers – or on their behalf, with consumers' consent, by Demand Side Response Service Providers (DSRSPs) – to shift some of their electricity use. The consumer is typically rewarded for this flexibility by enjoying lower tariffs or other rewards. The financial benefits of flexibility on offer to consumers reflect the benefits to the wider electricity system (which in turn benefits all consumers by lowering system costs).

CLF also reduces Britain's aggregate electricity use at peak demand periods, thereby minimising the amount of generation and associated network that needs to be built to meet peak demand. It can therefore help Britain to reach clean power in a more cost-effective way by reducing the need for new infrastructure. Alongside Ofgem's monitoring of consumers' approach to flexibility, government will ensure that sufficient consumer protection is in place for this growing sector. To date, uptake of flexibility services has been limited. However, with the growth in electrification of transport and heating, together with the introduction of market-wide half-hourly settlement, there is considerable potential for CLF growth.

Based on NESO and government scenarios for 2030, excluding electric storage heaters, we estimate that 10-12 GW of consumer-led flexibility capacity is possible by 2030[4]. Government expects electric vehicle smart charging to be a key driver of CLF capacity growth.

[1] Consumer-Led Flexibility (CLF) is often referred to in industry, as well as our April 2024 consultation package, as Demand Side Response or 'DSR'.
[2] 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] https://www.gov.uk/government/consultations/delivering-a-smart-and-secure-electricity-system-implementation
[4] https://www.gov.uk/government/publications/clean-power-2030-action-plan

Key Policy Decisions and Outcomes

The 2024 consultation package set out proposals in three distinct but interrelated policy areas – Energy Smart Appliances (ESA), Licensing and Tariff Interoperability. We received 97 responses to the consultation, which contained 126 questions, for which we are grateful. Before the question-by-question analysis, it is useful to highlight some of the key policy positions and decisions that government will take following this government response.

The government will, subject to Parliamentary approval, put forward secondary legislation on energy smart appliances within the next year. Once made, an approximately 20-month implementation period will allow industry to update production cycles before the regulatory requirements will be enforced. This implementation period will conclude by the end of 2027 at the latest.

Enforcement – which we expect to be carried out by the Office for Product Safety and Standards (OPSS) - will be undertaken using a similar approach to that established in the Electric Vehicle (Smart Charge Points) (EVSCP) Regulations 2021 while also providing for the application of the Consumer Rights Act (CRA) 2015 Schedule 5 investigatory powers, to further safeguard consumer interests. We will work closely with OPSS to establish robust enforcement provisions which will protect consumer interests in a proportionate manner. The enforcement regime, like the rest of the regulations, will be subject to consultation in draft form later in 2025.

This legislation will:

- establish a smart mandate for electric heating products in scope, requiring that they are placed on the market with smart functionality (consumers will always retain the option to use their devices in non-smart mode).
- incorporate, with some planned amendments, existing requirements regarding EVSCPs into a single set of regulations.
- contain a set of minimum requirements in relation to smart functionality, cybersecurity and grid stability for the smart electric heating appliances, EVSCPs and smart domestic-scale battery energy storage systems (BESS). The regulations will require compliance with provisions of the ETSI EN 303 645 standard for IoT cybersecurity and require devices to be configured to deliver in aggregate a randomised delay up to 10 minutes where there is a risk of herding.

We will take forward a second phase of legislation later in this Parliament. This second phase will further protect consumers who choose to participate in CLF by giving them the confidence that the ESAs they purchase can be used with different DSRSPs, should they decide to switch. The framework will require (as a minimum) ESAs to comply with an interoperability standard,[5] and DSRSPs to integrate with this standard, thus ensuring a base level of interoperability. We will balance consumer protection and market incentives for CLF services by establishing a technical governance group (which includes consumer interest advocates and industry

[5] In practice, this may be a single standard or a companion specification that references one or more standards.

representatives) to advise government and regulators as part of enduring governance arrangements.

To complement regulation of relevant ESAs, we will also, through a new load control licence framework, licence organisational load control activities. This will be a single load control licence that encompasses two separate activities: the control of load on an ESA through load control signals and entering into arrangements with consumers for their load to be controlled. The ESAs that will be in scope of the licence framework will be private Electric Vehicles (EVs) and EVSCPs, heat technologies within the scope of the smart mandate, and domestic-scale BESS, and, where appropriate, ancillary devices used to control load on these technologies. The aim of the load control licence is to provide consumer and electricity system protections that support and instil domestic and small non-domestic consumer confidence in the adoption of these technologies. To do this we are developing a set of minimum legal requirements that licensees will need to comply with and which Ofgem will regulate against.

The licence framework will be designed to ensure that consumers are treated fairly, offered simple and consistent complaints and redress processes, and can easily compare service offerings while ensuring they are not unfairly locked into contracts. We intend to include additional protections for vulnerable consumers to ensure they are given the necessary support in their adoption of these technologies. Furthermore, through the licence, organisations will be required to have the necessary cyber security and financial and management arrangements in place, as well to take account of grid stability considerations.

We believe it will benefit flexibility service consumers if the protections the load control licence provides align, where possible, with existing practices and protections consumers receive from other services, most notably associated with the supply of electricity to their premises. Ensuring administrative consistency and simplicity will be crucial for supporting consumers navigating the protections and for reducing administrative burdens on licensed electricity suppliers and Ofgem. Therefore, it is not government's intention to create regulatory divergences from electricity supply licence protections unless we believe these are crucial for acting in the interests of consumers and the market.

To minimise administrative burdens, we are keen to minimise the risk of unwarranted divergence of practice and interpretation of consumer protection requirements over time between the electricity supply and load control licences. We are considering the best means to effect this, including assessing the viability of simply referring to relevant electricity supply licence conditions in the load control licence rather than drafting wholly new equivalent provisions. At the same time, we are also mindful of newer, non-energy supplier entrants to the load control market, and the load control licence is intended to be a set of minimum protections to support consumer confidence in the market rather than as a regulatory barrier to growth and innovation in the market. Government has launched a Licensing Working Group to support the development of draft regulations and help determine the licensable activities and draft licence conditions that will further be consulted on before being implemented.

All load controllers within the SSES programme licensing scope i.e., load controllers managing domestic scale EV chargers, heat pumps, BESS etc. managing under 300MW of load will be

required to meet specific cyber security licence conditions via the Load Control Licence. For load controllers managing equal to or above 300MW of load, we additionally intend to bring them within scope of the Network and Information Systems (NIS) Regulations as Operators of Essential Services. This will mean the detail of their cyber requirements will be housed in the NIS Regulations (and we will set this out in accompanying guidance to the Load Control Licence so that this transition is clear to load controllers). Load controllers in scope of the Load Control Licence and/or NIS Regulations will need to meet a Cyber Assessment Framework (CAF) profile that is proportionate to the potential risk they pose to the electricity system.

We can also confirm our minded-to position for Elexon to deliver the necessary enduring governance functions to maintain and supervise these standards and requirements through modifications to the Balancing and Settlement Code. In 2025, we plan to conduct a further consultation on Enduring Governance. This will include consulting on our minded-to position of Elexon delivering SSES governance through modifications to the Balancing and Settlement Code and providing more details on the functions to be delivered.

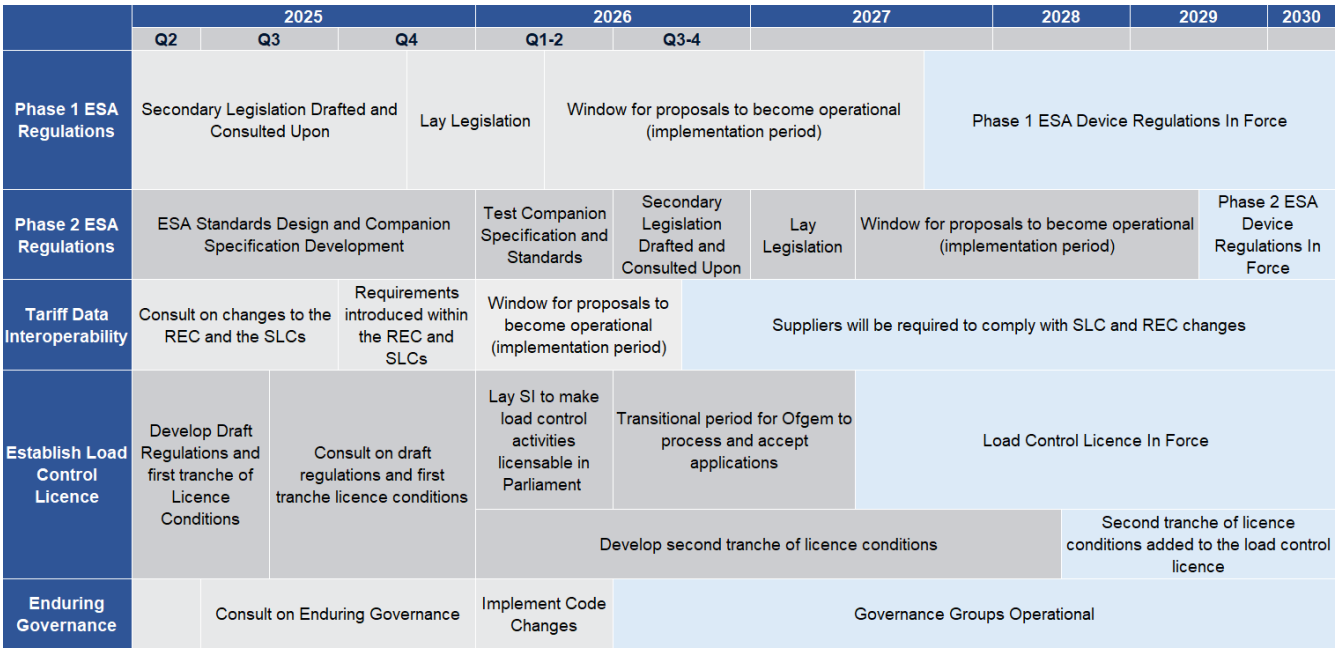
We are also committing to proceeding with Time-of-use Tariff Interoperability which, by mid to late 2026, will require energy suppliers to comply with a tariff data specification set out in the Retail Energy Code so ESAs can easily receive and respond to tariff information. These proposals aim to unlock tariff optimisation services, which will give consumers further opportunities to save on their energy bills.

Next steps

The government positions and decisions that are set out in the following chapters provide detail on the key policies SSES will deliver in the short and medium term. A high-level SSES Programme timeline to 2030 is also set out below.

We remain committed to working with the grain of industry. In addition to the planned consultations included in timeline below, we will continue to engage stakeholders via a range of working and advisory groups.

This plan is indicative, and subject to Parliamentary approval of legislation, but provides a clear roadmap for delivering on our objective of facilitating a thriving and competitive CLF market.



Later in 2025 we will consult on:

- Draft regulations for Phase 1 ESA device regulations
- Minimum Viable Product tariff data standards in the Retail Energy Code (REC) and associated Supply Standard Licence Conditions (SLC) changes[6]
- Enduring governance
- Draft licencing regulations and first tranche licence conditions

By early 2026 government will also:

- Legislate to establish Phase 1 ESA device regulations
- Introduce tariff data standard requirement to the REC and supply licence

[6] In line with our statutory duties under the Energy Act 2023, we will consult with GEMA, holders of licences being modified and other relevant parties.

Energy Smart Appliances

The ESA consultation set out detail on policy regarding (1) establishing minimum requirements for cyber security; (2) establishing minimum requirements for grid stability, and (3) introducing the "smart mandate" to heating technologies. The consultation also sought views on longer-term frameworks for ESA standards and associated governance.

First phase regulations: overview

This section specifically sought views regarding the timing according to which regulatory requirements would be introduced. It also sought views on questions about metering policy and accuracy in relation to ESAs.

Question 1 - Do you have a view on the lead time industry will require to implement the first phase regulations as proposed in this document?

Question 2 - Do you agree with our plan to proceed on the basis of phasing ESA device regulations as set out above whilst committing to keep this approach under review?

Question 3 - Do you have a view on when the smart mandate for heating appliances should be implemented? Please provide evidence to support your answer.

Question 49 - Given the additional detail provided in this chapter, do you believe that the proposed 24-month period between when the first and second phase regulations come into force is appropriate?

Summary of responses

Question 1 sought opinions on the lead time for implementing the Phase 1 ESA device regulations. Out of 72 respondents, 28 were in favour of the proposed 12–18-month implementation period. 20 opposed it and 24 respondents were neutral. Of those agreeing with the proposed implementation timelines, 8 were ESA manufacturers/distributers; the majority of these favoured 18 months. Of those who disagreed with the timelines, 14 were ESA manufacturers/distributers. 12 respondents stated that a minimum 24-month implementation period should be put in place whilst the remaining respondents (8) either pushed for a longer implementation period or did not propose a suitable timeline.

Out of 65 respondents, 51 agreed with our proposed phasing of ESA device regulations (Question 2); 14 respondents disagreed. A key theme across many responses centred on the need to provide industry with a clear indication of the likely content of phase 2 requirements as early as possible, and that these should be a continuation of phase 1 requirements where feasible. This was to allow manufacturers to build on phase 1 requirements and avoid the need for complete redesigns.

Question 3 sought opinions on the timing for the implementation of the smart heat mandate. There were 66 responses; 28 were in favour of the proposed 12–18-month implementation period for heating appliances. 23 disagreed and suggested that extra time is required. 15 provided neutral responses without specifying a timeframe but highlighted the need for clarity from government. Of those that agreed, there was consensus that the smart heat mandate should be introduced as soon as possible to make potential flexibility visible and limit disparity in the consumer experience. However, 18 months was widely considered a more practical timeline than 12 months due to the product development work required. Many noted the already growing market for smart heating appliances and supported a swift implementation, within the 18-month timeframe, to ensure timely introduction of phase two for all ESAs.

Those that disagreed with question 3 highlighted the need to consider manufacturers' research and development timelines. 9 respondents favoured a 2–3-year implementation period from when technical requirements are confirmed, whilst a minority (5) advocated for an extended 3–5-year implementation period. The remaining respondents (9) pushed for longer lead times but did not specify an alternative timeframe. A minority suggested that introducing a backstop would be appropriate, either from 2029 or two years from the implementation date, plus allowing sufficient time to cleanse the supply chain of products not suitable to be updated for smart compliance. 7 respondents preferred a single-phase approach starting in 2028 to avoid manufacturers incurring costs for an interim solution and to provide long-term clarity of the regulations, reducing confusion for manufacturers and consumers. Additional common themes included aligning with the EU smart mandate and other relevant government interventions and policies.

19 respondents out of 60 agreed that a 24-month period between phase 1 and 2 regulations coming into force was appropriate (Q49), whilst 20 disagreed with this proposal and 21 respondents remained neutral. Those agreeing with the 24-month period did so on the basis of government's commitment to developing the technical framework (the subject of Questions 38-52) coordination with industry and other relevant stakeholders to ensure the changing needs of the sector are fully taken into account. Those disagreeing with the proposed 24-month period cited concerns surrounding the dependency on the creation of standards, reform of PAS 1878 and other technical documents which, some stakeholders suggest, can often take a lot longer to develop than planned. Other concerns centred on the possibility of phase 2 regulations including significant changes requiring brand new product design and development, in which case the proposed 24-month period would be problematic for manufacturers.

Government response

The government is mindful of responses, particularly from appliance manufacturers, to the effect that a longer implementation period than the initial proposal of one of 12-18 months is necessary to allow product design cycles to incorporate new regulatory requirements.

We therefore propose that the requirements introduced by the 1st phase ESA regulations will apply to devices placed on the market 20 months after the regulations are made (when the SI is signed and becomes law, though not coming into force at that point), or if sooner, by the end of 2027. This period, which is longer than the 12-18 month range set out in the consultation,

balances the need to allow manufacturers sufficient time to take account of new regulatory requirements with the need to ensure sufficient requirements are in place to mitigate the rising cyber security risks and proliferation of electric heating technologies, both of which are expected to increase significantly through 2027. While our intention is to allow a longer implementation period, we consider that addressing these cybersecurity risks takes priority. The regulations are subject to Parliamentary approval; given that Parliamentary timetables are difficult to predict with accuracy, and if a 20-month implementation period would not see 1st phase regulations coming into force until post-2027, we will set an implementation period that terminates by the end of 2027 at the latest, to ensure that minimum cybersecurity standards are in effect by the beginning of 2028.

The government welcomes the broad consensus in favour of phasing regulatory requirements whilst noting the almost even split between those agreeing (19 respondents), disagreeing (20 respondents) and remaining neutral (21 respondents) on the 24-month proposed period in between Phase 1 and 2 regulations taking effect. We will accordingly proceed with the approach as currently proposed and estimated – with a period of c. 24-months between Phase 1 and 2 regulations taking effect - whilst reiterating our commitment to working on the basis that 2nd phase regulation should build on 1st phase regulation where possible to avoid any need for brand new product design development as far as is feasible. We will keep this approach under review as the implementation of the 1st phase ESA regulation begins, and as the wider technological environment evolves – including the development of technical standards – and will reassess timelines where necessary.

Question 4 - Would you support the introduction of a metering accuracy requirement to the effect that all ESAs should have a means to measure their import/export consumption to up to or better than 2% nominal accuracy?

Question 5 - If you are a manufacturer, would requiring a nominal 2% accuracy requirement impact your business or products? If yes, please outline the impacts and the costs and benefits with as much detail as possible.

Question 21 - Do you agree with government's proposal that electric heating appliances must be able to estimate their power consumption, with the manufacturer free to choose the estimating (calculating or measuring) approach?

Question 22 - Do you see any difficulty with the position that government is proposing? Please provide evidence to support your answer.

Summary of responses

Questions 4, 5, 21 and 22 have been grouped together since they each cover metering policy matters.

In relation to question 4, 44 respondents answered in favour of the proposal to introduce a metering accuracy requirement for all ESAs to have means to measure their import/export consumption to up to or better than 2% nominal accuracy. 19 responses disagreed with this proposal. A significant minority (12) of respondents, particularly those against the proposal,

stated that a 2% accuracy requirement would increase costs and that these would likely be passed onto the consumer, though several of these respondents stated that this cost would likely ultimately be worth it. 11 respondents wanted HMG action to align with other existing standards or legislation – including, for instance, COP11 or the Measuring Instruments Regulations 2016 (MIR) – and in general expressed a desire for coherence in this space.

Related to this, 6 respondents flagged a need to reform MIR and specifically to drop the external display requirement as being out of date, or else for HMG to define clearly what meters would fall within the scope of MIR. The same number of respondents stated that mandating MIR would be a positive outcome, and 5 respondents also noted that PAS 1878 requirements in this space would also need to be updated. 4 respondents noted that increased measuring accuracy requirements would be a benefit for the consumer. 3 respondents flagged a need to update the EVSCP Regulations, given that the measuring accuracy requirements in those regulations were now out of date.

In relation to question 5, a majority of respondents were manufacturers that noted likely increases in costs. A minority of respondents who were not manufacturers stated that the benefits of more stringent metering accuracy standards would outweigh the costs. 9 respondents flagged that they would definitely incur higher costs in the event that 2% measuring accuracy was required. 6 respondents noted that their processes were already compliant with MIR and so there would be no impact on their costs. 7 respondents provided figures setting out the potential range of additional costs per device.

In relation to question 21, 38 respondents disagreed with the current metering proposal for heat devices, 9 were neutral, whilst 25 agreed. Of those that disagreed, the majority cited strong concerns about consumers being locked out and stranded assets being unable to participate in future markets due to insufficient accuracy requirements. There was broad agreement that metering would be the most suitable option to measure power consumption. Some respondents criticised look-up tables as there are negative impacts of extrapolating performance data based on ideal conditions, noting that it is also likely that all ESAs will eventually need to have 2% accuracy and should be compliant with the MIR and the BSC Code of Practice 11 (COP11). 6 respondents called for consistent metering requirements across all ESAs whilst 10 respondents advocated for a standardised approach for industry to avoid undermining the value of the data and to facilitate comparisons for regulators, consumers, and installers.

Conversely, 25 respondents supported the ‘estimation’ of power consumption using look-up tables and allowing manufacturers to choose the approach. This would provide flexibility for manufacturers and requiring an accuracy better than 10% will add additional costs to devices. However, it was noted that a minimum level of accuracy with agreed parameters is necessary to avoid potential gaming.

In relation to question 22, 30 respondents further highlighted issues with the metering proposal for heat devices. There was broad agreement that look-up tables and estimations do not provide enough accuracy and cannot be considered equivalent to metering - this will undermine trust and fail to measure the true value of CLF. Respondents required clarity around

the acceptable error tolerance and noted that a 10% value is incompatible with the Balancing and Settlement Code requirements such as P375 and HH settlement. There was consensus that a measurement solution at 2% gives a level playing field across manufacturers and provides consumer certainty.

There was also broad agreement that for current and future use cases, robust and enduring CLF markets will need accurate means for remuneration, compensation, and balancing or will risk consumers being locked out. There is difficulty in the compatibility of this requirement with more dynamic tariff structures such as TOUT or real-time pricing. Concerns were raised about potential manipulation by parties in the flexibility chain if the process relies solely on manufacturer assurance, citing a need for independent governance and oversight. Additionally, they pointed out discrepancies with EVSCP regulations and advocated for metering requirements consistent with COP11/MIR.

Government response

We welcome stakeholder engagement on these questions. The Department for Business and Trade (DBT) will soon publish a consultation on the principle of reforming the display requirements of the Measuring Instruments Regulations 2016 (MIR). This consultation will include proposals to permit the use of remote displays as an alternative to in-built physical displays for active electrical energy meters that are being used for trade within ESAs. We acknowledge the significant concerns raised by industry regarding the proposal for heating appliances to 'estimate' power consumptions thereby allowing use of look-up tables. We agree that this will not be a suitable mechanism for devices to use as the CLF market evolves and higher levels of accuracy are required.

Based on both stakeholder feedback to the SSES consultation, and following wider stakeholder engagement with DBT on this issue, government is minded to require that – from the end of 2027 onwards – ESAs within the scope of the phase 1 regulations, including EVSCPs and relevant heating appliances, must include a device meter, and that this device meter must comply with MIR Class B requirements for active electrical energy meters.

Doing so will ensure that consumer interests – specifically, access to flexibility markets without requiring device retrofit – are protected by a longstanding set of regulatory requirements that are also well-known to manufacturers. MIR Class B compliance will also ensure that these devices are by default capable of measuring the electrical energy consumed to 2% accuracy, ensuring that consumers with such devices will be able to participate in the highest value forms of DSR, without the need to retrofit their devices to comply with MIR requirements. The consequent cost savings will likely exceed a marginal increase in producer costs.

We are mindful that the exact terms of MIR Class B compliance, including the external display requirement, will be subject to public consultation, and that DBT will then review responses and consider whether a reform of MIR requirements is necessary. We will ensure that regulatory requirements are proportionate and do not place excessive burdens on manufacturers, and that they are aligned with international standards as far as possible. MIR

Class B compliance will not be mandated ahead of a decision by DBT on the external display requirement.

First phase regulations: smart mandate

Within this chapter of the consultation, Government set out the proposed approach to mandating ESA functionality, or smart functionality, and related requirements for certain electric heating appliances, and Battery Energy Storage Systems (BESS). It detailed the context of the proposed approach and sought stakeholder views on the appliances anticipated to be in scope, potential additional smart functionality requirements, and options for regulating the provision of ESA functionality for smart heating appliances. There was also consideration of how to build upon and be consistent with the requirements for electric vehicle smart charge points (EVSCPs) and a future approach to long-term alignment across all ESAs.

Appliances in scope of the smart mandate

The consultation proposed to expand the scope of the smart mandate to cover additional electric heating appliances beyond hydronic heat pumps, storage heaters and heat batteries, up to a thermal capacity of 45kW. It identified hot water storage and generation appliances (specifically, indirect electric hot water storage cylinders, standalone direct electric hot water cylinders, and hot water heat pumps) and hybrid heat pump systems that use optimised common controls. The consultation recognised these appliances as having the highest potential to be used flexibly and to provide consumer-led flexibility (CLF), essentially being those with the greatest ability to shift demand for electricity.

Question 6 - Do you agree that the scope of the smart mandate should be extended to include hot water storage and generation (indirect electric hot water storage cylinders, standalone direct electric hot water cylinders, and hot water heat pumps)? If not, please provide supporting evidence.

Summary of responses

There were 73 responses to this question; 58 respondents agreed that hot water storage and generation (indirect electric hot water storage cylinders, standalone direct electric hot water cylinders, and hot water heat pumps) should be mandated to be smart. 7 were neutral in their responses whilst 8 disagreed with extending the scope citing additional costs to consumers, complexity for consumers and installers, and low uptake of low carbon heating systems.

The main point of agreement was that hot water storage and generation appliances use significant energy and offer large flexibility potential which can allow consumers to take advantage of tariffs (17). However, there were mixed views on applying the smart mandate to indirect hot water cylinders, raised by 15 respondents that either agreed or were neutral in their responses. These respondents suggested that indirect hot water cylinders should be considered separately to standalone hot water cylinders. Indirect cylinders are typically installed alongside a primary heating device (such as a heat pump) which will be required to be

smart. Mandating both the primary heating appliance and the indirect cylinder to be smart could lead to unnecessary duplication of smart functionality and increased costs for consumers. However, other respondents (3) suggested including indirect cylinders heated by gas boilers as tariffs are emerging where cost of electricity drops below gas. They also emphasised consideration of retrofit options and the potential for a replacement cylinder market for gas boilers where backup electric heating elements can be deployed for 'turn up' events.

Several respondents called for clarity on how each product or combination of products should be covered. A minority proposed an optional 'smart cylinder standard' to ensure the correct cylinder is installed in the appropriate setting and to offer consumer choice. This would make ESA cylinders identifiable and ensure they meet minimum smart standards. One respondent suggested 'HP ready cylinders' which could be self-declared as smart ready by manufacturers.

Out of those that agreed, 6 respondents also argued that ESA functionality should be mandated at a system level rather than on a per-appliance basis, whilst 8 respondents proposed that the scope of the mandate should be technology agnostic and apply to any appliance capable of demand side response.

Question 7 - Do you agree that the scope of the smart mandate should be extended to include the whole hybrid heat pump system (rather than just the heat pump within a hybrid), with requirements placed on the common controller? If not, please provide supporting evidence.

Summary of responses

There were 69 responses to this question; 50 agreed that the scope of the smart mandate should effectively include the whole hybrid heat pump system, with requirements placed on the common controller. 12 were neutral and 7 disagreed with the proposal.

Amongst supporters, 12 highlighted the potential system-level benefits of fuel source switching, including to support grid stability during times of peak demand. 10 highlighted benefits to consumers such as more effective system operation and cost optimisation. 3 stakeholders who were supportive of the proposal noted that it could increase capital costs if the common controller requires additional data or functionality from the boiler.

8 respondents recommended applying the smart mandate to the whole property's energy use, or across all energy-using products, to maximise consumer-led flexibility.

Further, respondents sought clarity on how the requirements would apply to and impact different types of hybrid heat pumps, whether bought and installed as a package or created at the point of installation.

Government response – questions 6 & 7

Government has decided to mandate that all hydronic heat pumps, storage heaters, and heat batteries, in each case with up to 45kWh rated thermal capacity, must have smart functionality.

Government has also decided to expand the mandate to cover hot water generation and storage, specifically standalone direct electric hot water cylinders and hot water only heat pumps, each up to 45kW rated thermal capacity. We note the growing electric heating market beyond heat pumps and the transition to Net Zero will require several options for consumers. Therefore, we are expanding the scope to include these additional technologies which have clear flexibility benefits and storage capabilities that can be shifted and utilised with flexibility services, including time of use tariffs (TOUTs).

We recognise the points made by industry with regard to applying the mandate to indirect hot water cylinders, including the key concerns regarding duplication of smart functionality and the associated costs. Based on concerns raised, government will exclude indirect electric hot water cylinders from the scope of the mandate. This will minimise costs for both manufacturers and consumers and prevent any unnecessary duplication of smart functionality where such products are used alongside a heat pump.

Further, we will also exclude indirect heat batteries from the scope of the proposed regulations. This means batteries able to be charged by a centralised heating device, such as a heat pump, where in a system the main heat source has system control. These can include a standby internal electric heating element to provide a backup. Indirect heat batteries are likely to be used in a similar way to indirect electric hot water cylinders therefore we want to remain consistent in our approach. Government recognises that this is still an emerging technology and does not want to impede growth of this nascent market by introducing additional requirements and costs.

For hybrid heat pumps, government will apply the smart mandate requirements to the common controller, or ‘master controller’, which optimises operation of the component heat sources within the hybrid system. For clarity, the controller will be subject to the requirements, with the effect that it will control the flow of electricity into the heat pump, irrespective of whether it also controls the fossil fuel appliance. We emphasise that the gas boiler component of the hybrid heat pump system will not be in scope and therefore not mandated to have ESA functionality.

Government notes the argument for potentially requiring ESA functionality at a system level rather than at the level of specific devices. However, different types of ESAs present different risks and opportunities to consumers and the energy system. As such, requirements may not apply uniformly to all ESAs. At this stage, we are primarily focused on mandating smart functionality for specific appliances with the highest potential for flexible use to provide CLF. As outlined in the consultation (see Q26), we intend to allow the smart functionality to be provided by an ‘add-on’ module which could be a third-party smart control. We will keep this position under review as consumer uptake of ESAs grows and markets mature.

We also acknowledge feedback suggesting that the mandate should be technology agnostic across all energy-using products. We intend to progress with the scope of technologies set out above, focusing on the identified technologies with the highest potential for flexible use to provide CLF and the greatest anticipated deployed volumes that, without the ability to shift their demand, would require additional reinforcement of the grid. For technologies not included, we recognise that the costs associated with these smart mandate proposals may not be

proportionate for ESAs with expected lower uptake or lower CLF potential such as air-to-air heat pumps, electric panel heaters, or infrared heaters. A voluntary approach to adoption of minimum smart requirements is a proportionate approach for such ESAs initially. Nonetheless, we will keep the scope of the mandate and the range of technologies it covers, including indirect electric hot water cylinders and indirect heat batteries, under review.

Question 8 - Do you have a view on whether standalone domestic battery energy storage systems (BESS) should be included in future legislation in order to be subject to the smart mandate requirements associated with the first phase regulations? Please provide evidence to support your answer.

Question 9 - Do you have any data on what proportion of installed domestic battery energy storage systems (BESS) have smart functionality? Smart functionality is defined as being communications-enabled and able to respond to price and/or other signals by shifting and/or modulating their electricity consumption.

Question 10 - Do you have evidence on the extent to which domestic battery energy storage systems (BESS) with smart functionality already meet the minimum requirements set out in Table 1? Please provide evidence to support your answer.

Summary of responses

Out of 60 respondents to question 8, 38 were in favour of standalone domestic battery energy storage systems being subjected to the smart mandate in future legislation. Respondents thought that most BESS already incorporate smart functionality (Q9). However, the level of communication ability and responsiveness varies between products. There was a call for clear government guidelines on cybersecurity and grid stability, with some stakeholders arguing for market-driven solutions over legislative intervention. Some manufacturers thought that grid stability requirements are not suitable for BESS as they already have to demonstrate compliance with G98 and G99, and the trade association supported this view.

In general, manufacturers and energy suppliers believe that BESS with smart functionality already meet, or can meet with little additional refitting, the minimum smart functionality requirements in Table 2 of the consultation[7], though there are variations in compliance levels (Q10). As above, some manufacturers argued that grid stability requirements are not suitable for BESS as they already have to demonstrate compliance with G98 and G99.

Government response

We welcome stakeholder views on these questions. Based on evidence on the state of the market gathered from consultation responses, we are reassured that uptake of smart battery electric storage systems is increasing and that more general uptake of smart BESS has

[7] The consultation document incorrectly referred to Table 1 in question 10, instead of to Table 2 which set out an overview of proposed requirements for the Smart Mandate. Responses to question 10 identified this error and responded by making appropriate reference to Table 2.

significant potential both to deliver bill savings for consumers and in driving carbon reductions more broadly.

When Parliamentary time allows we will pursue a primary legislative power to establish a smart mandate in relation to BESS, in the event that the market does not evolve towards smart capability with sufficient pace. We will continue to monitor the development of the BESS market over the next several years and will consider further evidence before legislating a smart mandate for BESS.

Finally, as a result of the evidence gathered during this consultation, the government will apply requirements on functionality, grid stability and cyber security to BESS sold with smart capability (regardless of whether a smart mandate, requiring BESS to have smart functionality, is ultimately put in place). These requirements are expected to be the same as those that will apply to smart electric heating appliances, except where the nature of BESS or heating appliances means that some specific provision for either is appropriate. Application of these requirements to smart BESS will safeguard consumer interests, for example by ensuring that BESS with smart functionality will have protection against safety risks, building consumer trust in the sector.

The drafting of these requirements, and a definition of the domestic smart BESS to which they will be applied, will be included in our forthcoming consultation on 1st phase ESA regulations.

Additional functionality for smart heating appliances

This section sets out the policy proposals for additional functionality requirements for smart heating appliances. These functions will enable participation in consumer-led flexibility services and aim to balance the benefits to consumers and networks while avoiding limiting innovation and ensuring compliance is not too onerous for manufacturers. The proposed minimum requirements for electric heating appliances were informed by the existing Electric Vehicles (Smart Charge Points) (EVSCP) Regulations 2021, including their development and implementation, taking into account feedback and experiences of industry, consumers and the enforcer, in respect of the Regulations.

Government wants to avoid the risk of sub-optimal products being sold into the market whilst also avoiding creating barriers to ESA deployment that could impede heat decarbonisation.

Question 11 - Do you agree with government’s proposal that electric heating appliances must be able to modulate output and/or change the time at which electricity is consumed in response to signals, including price and other signals that facilitate DSR?

Summary of responses

There were 76 responses to this question; 57 broadly agreed with the proposal that devices must be able to modulate output or change the time at which electricity is consumed in response to signals. 10 were neutral, whilst 9 disagreed with the proposed requirement.

It was noted by a majority that the regulation should place consumer preference at its core, providing consumers with the ability to override this functionality, both permanently and momentarily, as well as the option to opt out of using any smart functions and always remain in control. Some concerns were raised that any proposal must align with existing energy efficiency schemes and should not disproportionately affect low-income and vulnerable consumers whilst ensuring appropriate levels of consumer protection. For example, there is a risk that consumers might be incentivised to participate in flexibility services not suitable to their needs, for example if they are unable or don't know how to change their time of electricity use, resulting in higher costs or unsuitable temperature levels. Where consumers in vulnerable circumstances are negatively affected, for example the elderly or medically vulnerable, the effects may be more severe.

Whilst the majority agreed, there were some areas for clarification including the price signals that devices will respond to, noting that there may be contradictory price signals, such as carbon versus the wholesale market. Five respondents suggested that the government needs to be clear on what 'other signals' are and provide sufficient clarity on what the minimum period of modulation is, whilst a minority questioned whether government would define the kW for limiting power consumption. Some respondents also highlighted that regulatory requirements should only cover energy consumption and not output as different technologies modulate heat output and electrical input differently.

Government response

Government confirms that electric heating appliances in scope of the smart mandate (see response to Q6 and Q7) must be capable of increasing or decreasing the rate of electricity flow and/or altering the timing of electrical consumption in response to signals, including price signals. Devices must be capable of providing CLF services, including response DSR services. We note stakeholder requests for clarity around what constitutes 'other control signals'. We intend this to cover signals relevant to both response DSR (explicit DSR, in which energy use is modulated in response to a request, made in real time, from a system or network operator) and routine DSR (implicit DSR, in which energy use is managed according to consumer preferences, including price, and based on incentives set in advance, which are often multi-party market signals).

For contradictory signals, we anticipate that, subject to safe operation of the device and to consumer preferences, appliances will prioritise operation modes to aid grid stability but will not specify this within the first phase regulations, other than stating that heating appliances must prioritise safe mode above all other operation modes (see Q15). This will be explored in more detail as we develop the technical specification for phase two regulations.

Government acknowledges the importance of consumer choice, as highlighted by respondents. Consumers will always have the option to decide whether and to what extent they will utilise the smart functionality present in these devices. Q24 sets out the necessary ability for users to override device behaviour. In addition to the manufacturer requirements set out later in this document, government intends to include a requirement for a manufacturer guidance pack to be provided with each appliance when placed on the market. This should

include high quality and appropriate information and instruction on how the system operates, including how to override device behaviour, in addition to signposts to relevant information on CLF and tariff options. This should be easy to understand, specific to the appliance, and in an accessible format to suit all end users, including vulnerable, digitally illiterate, and fuel poor consumers.

Government notes stakeholder requests for clarity on the minimum period of modulation. The modulation period is the time that will expire before the temperature of the building goes outside the temperature set by the consumer. We do not intend to set a minimum period in the first phase regulations as this will vary depending on the building that the appliance serves. Turning an appliance on or off is acceptable, and users can set a temperature range where they would be comfortable and within which the appliance can perform CLF. Users will be prompted to set preferences during setup or on first use, as required by the proposed requirement set out in Q24 but will be able to utilise the required function for consumers to be able to change those preferences at any time.

In response to the comments that regulatory requirements should relate to energy consumption and not heat output – or should be worded to avoid being understood to cover heat output – the "energy smart function" which can be mandated for heating appliances is defined in the Energy Act 2023 in terms of an appliance's capability to adjust *"the immediate or future flow of electricity into or out of itself or another appliance…"*. The legislation under which the Regulations will be made therefore already avoids confusion with heat output and demonstrates that electrical consumption is the relevant metric.

Government will not define the kW for limiting power consumption. We note that a heat pump can operate within an 80 Amps cut-out rating provided to consumers by the Distribution Network Operators (DNOs). DNOs may need to upgrade the property's network connection before an installation can take place. DNOs will upgrade fuse sizes, cut-outs and service cables (provided they remain single-phase) for free to a certain limit if needed, either 80A or 100A depending on the DNO. The DNO then recovers these costs from electricity bills in its area. Analysis carried out by the Department for Energy Security and Net Zero found that the vast majority of homes should be able to accommodate a heat pump with no more work to their connection than free fuse upgrades from DNOs to their existing single-phase connection.[8]

Question 12 - Do you agree with the proposal that electric heating appliances within the scope of the mandate must provide two-way communication in order to receive and act upon direct control signals, and to send signals on the device status?

Summary of responses

There were 72 responses to this question; 58 agreed with the proposal that devices must provide two-way communication. 8 were neutral, whilst 6 disagreed. Most respondents viewed this as a fundamental requirement for participation in electricity markets. It is necessary to

[8] https://www.gov.uk/government/publications/energy-security-bill-factsheets/energy-security-bill-factsheet-low-carbon-heat-scheme

deliver both routine and response DSR, to provide a suitable infrastructure to be able to build on for future use cases, and to ensure a level of control for the end user.

Several respondents sought clarity on definitions, including what constitutes 'other direct control signals', and suggested specifying standards to ensure common and interoperable communication. A number of respondents also requested details on how this proposal would be delivered and enforced and highlighted the need to consider the implications of this proposal on established or developing government policy and programmes.

The minority that disagreed with the proposal mainly cited privacy and security concerns when selecting relevant signals and protocols but were not specific in what these could be.

Government response

Government agrees with industry that this is a crucial requirement and confirms that smart electric heating appliances must provide two-way communication in order to receive and act upon price and other direct signals. Devices must be capable of communicating back to the load controller, providing signals on the status of the device, at a minimum, whether responding to a signal or indicating when the device has ceased to do so. Adhering to GDPR principles of data privacy and minimisation, only the essential data needs to be shared with the load controller to enable consumer participation in CLF. All appliances within scope of the regulations will need to adhere to cyber security requirements as set out in the 'First phase regulations: cyber security and grid stability' chapter below.

Government notes that respondents sought clarity on what was meant by the reference in the consultation to receiving and acting on 'price and other direct control signals'. We clarify that we intend smart heating devices to respond to signals relevant to both explicit DSR (in which energy use is modulated in response to a request, made in real time, from a system or network operator) and implicit DSR (in which energy use is managed according to consumer preferences, including price, and based on incentives set in advance, which are often multi-party market signals).

At this stage, government does not propose to mandate standards and minimum data requirements in the short term. However, as set out below, government is working with industry to develop agreed interoperability standards that we intend to introduce in the future under subsequent regulation.

Question 13 - Do you agree with the proposal that electric heating appliances within the scope of the mandate must be designed to be interoperable so that devices do not cease to have smart functionality if the owner changes electricity supplier?

Summary of responses

There were 76 responses to this question; 67 agreed with the proposal for electricity supplier interoperability. 3 were neutral, whilst 6 disagreed with the proposal. Of those in favour, 26 did not provide detailed comments however it was agreed by most that this requirement is vital for a fair transition, ensuring uninterrupted smart functionality when owners switch electricity

supplier. Interoperability will prevent consumer lock-in, incentivise service providers to maximise performance to maintain customers, and promote market competitiveness and consumer choice. Several respondents noted that it also safeguards smart functionality and purchase expectation in cases of supplier bankruptcy or wide-scale technical failure.

A minority (6) emphasised the need to support owners, suppliers, and aggregators with legacy devices, suggesting that regulations should encourage innovation while ensuring backward compatibility to prevent stranded assets among early adopters and optimise long-term flexibility. Several stakeholders further highlighted the importance of learning from the rollout of smart electricity meters (SMETS1) which tainted perceptions of smart products due to negative consumer impacts. Concerns were also raised about competition in retail markets, with some arguing that not mandating interoperability will hinder increased competition.

Government response

Based on strong industry agreement, government confirms its intention to proceed with the requirement for energy supplier interoperability, which is consistent with the approach taken in the EVSCP Regulations. This requirement will mandate that an appliance should not lose its smart functionality in the event the owner changes energy supplier (i.e., a manufacturer cannot place on the market a heating appliance that can only be used with a certain tariff). This aims to increase competition and innovation in the electricity supplier market and help prevent consumer lock-in. It is a step towards ensuring that consumers have the ability to choose and switch suppliers according to their preferences and needs regardless of the device they purchase. Further detail on the plan to take forward technical standards to enable full interoperability is set out below.

Question 14 - Do you agree with the proposal that, as part of the first phase ESA regulations, electric heating appliances within the scope of the mandate must be designed to utilise open standard communication protocols for the application interface to remove a barrier to interoperability with DRSRPs?

Summary of responses

There were 71 responses to this question; 54 agreed with the proposal for open standard communication protocols in the first phase of ESA regulations. 6 were neutral, whilst 11 disagreed with the proposal. Those that agreed had a strong consensus that government needs to provide a clear definition of an open communication protocol to provide more regulatory guidance for industry. A minority also questioned whether this specifically refers to OpenADR as referenced in PAS 1878 or if use of other open standards are acceptable. Whilst agreeing in principle, several respondents noted that a single mandated standard could stifle innovation at a nascent stage of the market, whilst concerns were raised by some (4) that if OpenADR is specified there would be delays due to limited test house certification capacity in UK (there is one OpenADR certified testing lab in the UK (Resillion)). Additionally, it was stressed by some (7) that any open standards must align with European and international protocols as imposing additional or substantially different functionality requirements to those in European markets may create barriers to investment in the UK.

Those that disagreed (11) with the proposal provided varied views. A minority suggested that the same result could be achieved with an outcome-based solution rather than using open protocols, whilst others suggested that a specific standard shouldn't be mandatory as third-party control devices can act as an adaptor. Concerns were also raised about cyber security risks, stating that any design must not compromise the critical function of appliances or customer data privacy. Some stakeholders highlighted the risk of an additional investment burden on manufacturers if they design according to one protocol that is not eventually designated. They also noted the potential for higher costs for consumers who may opt out of participating in CLF, as well as the possibility that incompatible or stringent regulations could discourage investment in the UK energy sector and hinder cross-market sales and trade. A few also disagreed with the proposed two-phase implementation approach which could require additional product development, preferring a single requirement in the second phase of regulations.

Government response

Based on stakeholder responses to the consultation, and subsequent engagement with electric heating appliance manufacturers and trade associations, government has decided that electric heating appliances will not be required to use open standard communication protocols for the application interface in the first phase of ESA regulations.

Since the publication of the April 2024 ESA consultation, the SSES programme has been exploring alternative approaches to interoperability based on detailed technical analysis and through working with industry via the ESA Technical Working Group. The lead alternative approach is based on using existing standards, accompanied by a 'Companion Specification' that will specify which parts of these existing standards ESAs need to comply with, and clearly setting out the requirements where there are no suitable existing standards. The content of the Companion Specification will be driven by a plain language schema (commands and data items needed for interoperable CLF) and simple device functional requirements (e.g., randomisation) that will be agreed with industry.

To take into account the additional work on interoperability, we conducted follow-up engagement with electric heating appliance manufacturers, including heat pump manufacturers, and trade associations that previously responded to the consultation to seek their views on the original proposal. There were 12 responses to our survey; when presented with the new information, 10 out 12 were in support of delaying an open communication protocol requirement until phase 2 device regulations. Of these, 4 had originally advocated for the delay in the initial consultation, whilst 6 changed their position from phase 1 to phase 2.

Reasons cited included the length of the phase 1 regulatory timeline and the need for clear, stable requirements before commencing product development. Many respondents preferred delaying the requirement until phase 2 (2028 or later) to allow sufficient time for R&D, product development, and approvals. Concerns about resource allocation and the inefficiencies of a two-phase approach were also common.

Government still expects the future regulatory framework for interoperable CLF to be based on open standards. However, we are not yet in a position to decide which protocol will form the basis for that, and do not expect to establish government's minded-to position on this until the end of 2025, following detailed design work and engagement with industry as detailed above. We expect to be able to specify how to communicate in a standardised way in phase 2 device regulations, via an agreed open standard that we expect to identify through working with industry stakeholders in the ESA Technical Working Group. We welcome any interested parties that would like to be part of the Working Group and encourage proactive engagement from industry with this work throughout 2025.

We are mindful of Clean Power 2030 targets and the anticipated increase in the adoption of low carbon heating. Therefore, we will keep the timeline for introducing a requirement to enable DSRSP interoperability under review as the work develops and will accelerate the introduction of earlier requirements if possible.

Question 15 - Do you agree with the proposal that the mandate should require electric heating appliances to prioritise safe operation over responding to information or user input?

Summary of responses

There were 72 responses to this question; 67 agreed with the proposals for safe operation. 4 responses were neutral, whilst 1 disagreed. Key points of agreement emphasised that safety of consumers is inherently important and should always be the priority. In addition, including this requirement will build trust and consumer confidence while maintaining a positive reputation and ensure societal buy-in of clean heat. A few stakeholders noted that most heating assets already have inbuilt backline safety features to override requests, and these features should be maintained despite CLF requirements. Many respondents suggested that requirements on manufacturers should be high-level and allow use of safety features such as monitoring and alerts, whereas others advocated for more prescriptive and defined regulations, for example a formal hierarchy of behaviours, similar to that set out in PAS 1878.

Several respondents recommended aligning safe operation regulations with European and international markets, applying them to all ESAs, including BESS and EVSCPs. It was also suggested that responsibility for safety should lie with the original equipment manufacturer (OEM) rather than the user or DSRSP.

Government response

Government will mandate that smart electric heating appliances must prioritise safe operation over responding to information or user input to ensure the safety of the device and the health or safety of the end user and household. This requirement intends to ensure consumer expectations are met and to maintain electricity grid stability alongside safe operation.

This requirement is high-level to allow use of various safety features, such as alerts, and existing in-built safety mechanisms specific to manufacturers products. Government aims to align with current EVSCP requirements relating to safety.

Question 16 - Do you agree that the mandate should require electric heating appliances to be able to continue to function to provide heating and/or hot water services when network connection is lost?

Summary of responses

There were 75 responses to this question; 71 agreed with the proposal to ensure appliances maintain basic functionality when network connection and/or smart functionality is lost. 3 provided neutral responses, whilst 1 disagreed.

A strong majority of those in favour emphasised the need to guarantee minimum comfort for end users, for example if technical issues arise during winter, as heating and hot water are essential services that are vital for ensuring quality of life and the wider safety of consumers. This is particularly relevant for vulnerable consumers, and there should be measures in place to protect them in various scenarios. For example, protections are needed for those medically dependent on heat or those who might face higher bills if broadband is cut off due to lower income threshold. Consideration of digitally naïve consumers was also noted.

Several respondents suggested that all equipment should be able to operate independent of a network for a period of time or permanently, and connectivity should not be required for core functions, including installation. Some recommended that government be more prescriptive around what happens when devices lose connectivity – consumers should be able to specify offline default behaviour (i.e., stop operation, use last known schedule, or enter safe mode) and it should be clearly communicated to users when connectivity is lost.

A few concerns were raised including about software update methods as the updating of common platforms can be a point of failure if a mass update of a platform renders dependent apps unresponsive. A few argued that consideration of the impact of co-ordinated actions when communications are restored is also necessary so that major step changes in demand are avoided. A minority also suggested that devices should measure low voltage and frequency so that critical grid services can continue during network outages.

Government response

Government will require smart electric heating appliances to continue to provide heating and/or hot water services when network connection and/or smart functionality is lost. Appliances should be able to operate independently of a network for a certain period, even if an app interface is used to control the device. We agree with strong industry feedback that connectivity should not be a requirement for basic functions, ensuring thermal comfort needs of end users can be met with or without connectivity. We are mindful of the needs of the disparate consumer base, including vulnerable and low-income consumers, as heating and hot water are critical services for maintaining quality of life.

At this stage, government does not expect to regulate specific device offline behaviour beyond ensuring they continue to provide core services as appropriate for their primary function. Consumers may prefer to operate their devices differently depending on their property type and needs, meaning an approach that is too prescriptive may offer limited benefits and affect

consumer experience. However, we do intend to require that smart heating appliances notify users if they cannot receive tariff information due to lack of communication in order to keep them informed of the operation of the device.

We acknowledge industry suggestions to include a requirement for low voltage and frequency measurement, for use to maintain critical grid services during network outages. However, noting that some appliances, particularly heat pumps, can respond to low frequency events (as they can turn off) but only for a short time to prevent the building becoming too cold. Therefore, specifying this may offer limited benefits as some appliances can only be turned off for a limited time if consumer experience is not to be prejudiced, offering minimal support to grid stability. Monitoring low voltage could also cause the appliance to simply turn off and may negatively affect consumer experience.

Question 17 - Do you agree with government's proposal that the mandate should not require a maximum turn/shut down time or minimum speed of response?

Summary of responses

There were 72 responses to this question; 57 agreed with the proposal to not require a maximum turn/shut down time or minimum speed of response. 9 were neutral whilst 6 disagreed with the proposal. A strong majority of those in favour argued that such a requirement would limit potential technology choices and preclude future use cases. Some argued that it would be dangerous and exclusionary of some flexible assets to introduce this as devices should respond according to their different capabilities, customer preference, and the unique characteristics of properties. Some respondents did suggest keeping the requirement under review as the CLF market develops.

Several of those in favour (9) recommended introducing guidance on maximum reaction times to prevent infinitely slow responses from ESAs, noting the need to balance being too prescriptive with ensuring quick and effective responses to signals or commands, especially for grid stability. A minority suggested managing this in collaboration with asset manufacturers, control providers, and DSRSPs, emphasising the need for clear communication of specifications and limits to DSRSPs to enable selection of the best suited flexibility markets for an ESA to participate in.

Those that disagreed argued that a shutdown timeframe for heat pumps is essential and noted the necessity of immediate and proportionate response times for a system to function smartly, particularly during unexpected power surges.

Government response

Based on industry feedback, government maintains its view that regulating a maximum turn/shut down time or minimum speed of response for electric heating appliances is unnecessary. We emphasise that these appliances have different levels of storage and pre-heating capabilities, alongside properties being highly variable on how thermally efficient they are, thus setting maximum turn/shut down times would offer limited benefits to consumers.

We acknowledge the recommendation of some stakeholders to specify or provide guidance on maximum reaction time. We do not intend to introduce a requirement around this but will keep it under review and will consider what if any requirements need to be introduced in subsequent standards and technical specifications.

Question 18 - Do you agree with government's proposal that the mandate should not require specific control strategies to be installed with electric heating appliances?

Summary of responses

There were 71 responses to this question; 55 respondents agreed with the proposal to not specify control strategies such as weather or load compensation to be installed with electric heating appliances. 12 were neutral whilst 4 disagreed. Of those in favour, the majority felt existing regulations including Approved Document L supporting the Building Regulations 2010, the Future Homes Standard (FHS), and Microgeneration Certification Scheme (MCS) requirements[9] set out requirements in relation to control strategies. 8 respondents emphasised the need for alignment rather than additional regulations.

Specifying control strategies was seen as a restraint on market development, innovation, market competition, and consumer choice. There was consensus that this proposal allows for differentiation and flexibility for software solutions and optimisation against consumer and market priorities. There was broad agreement that not all controls suit all ESAs and scenarios and that manufacturers are best placed to design strategies. It was also highlighted that specifying control strategies will increase prohibitive costs, including costs of implementation, equipment, and operation.

A minority of respondents suggested there is value in frequency load shedding, suggesting a standard for devices that have the ability to adapt the droop curve (i.e., the rate of change of frequency versus the rate of change of load) or disable frequency response remotely in defined areas to meet local requirements.

Government response

Government will not require that specific control strategies be installed with electric heating appliances. It aims to avoid imposing unnecessary costs on manufacturers and consumers by mandating strategies that are not suitable for all ESAs, scenarios, or consumer needs.

We acknowledge the recommendation by stakeholders to align with existing regulations, notably Building Regulations and the FHS, and emphasise that not imposing the potential requirement is consistent with the EVSCP Regulations which do not reference control strategies.

We acknowledge the points raised by stakeholders regarding frequency load shedding as using only a linear response to frequency deviation can lead to instability issues. We do not

[9] MCS, MIS 3005-D 2.0
https://mcscertified.com/wp-content/uploads/2024/12/MIS-3005-D-Issue-2.0-Final-.pdf

intend to include specific requirements on this in the regulations and note that there are existing technical solutions to this issue outlined in current standards[10].

Question 19 - Do you agree with government's proposal that hybrid heat pumps operated by a common controller must be able to receive and act upon fuel tariff data and be able to utilise the alternative heat source to meet heat demand during a DSR instruction?

Summary of responses

There were 62 responses to this question; 44 agreed with the proposal that hybrid heat pumps operated by a common controller must have the ability to receive and act upon fuel tariff data and to utilise the alternative heat source during a CLF instruction. 12 respondents were neutral, whilst 6 disagreed.

There was broad agreement that hybrids should be able to optimise their performance and be able to flexibly switch between fuel sources, and 6 respondents suggested that optimisation could be in the form of metrics such as carbon emissions or user costs. 3 respondents also commented that hybrid users should be able to maintain a comfortable warmth level during a CLF instruction.

Concerns raised by small numbers of both supporters and opponents of this proposal included potential issues arising from users having different electricity and gas suppliers (2), and a preference that hybrids should not be supported or standalone heat pumps should be prioritised (2). 2 respondents recommended that government should work to rebalance energy prices to ensure that electricity is cheaper than gas, making the cost of running a heat pump more attractive to users. One respondent noted that off-gas-grid homes using oil and liquified petroleum gas (LPG) appliances will be subject to more localised pricing and may require the user to set a price point to determine which appliance operates within the system.

A minority of respondents (6) opposed the proposal, with little consensus on reasoning. 2 respondents disagreed with the first part of the question (that hybrid heat pumps operated by a common controller must be able to receive and act upon fuel tariff data), advising that the gas boiler component of the hybrid should not have ESA functionality itself or that the controls should not need to react to gas tariff changes. 3 stakeholders commented that the prevalence of hybrids generally were not consistent with Net Zero targets.

Government response

Based on stakeholder feedback, government will require that a hybrid heat pump (as a whole heating system that is operated by common controls) must be capable of receiving and acting upon signals, such as electricity tariff data, to optimise operation. This requirement is essential to enabling hybrid heat pumps to meet all additional smart functionality requirements set out in this government response.

[10] PAS 1878:2021

We emphasise that the gas boiler component of the hybrid heat pump system will not be required to have ESA functionality. Instead, the requirements will be placed on the common controller of the hybrid heat pump system, as detailed in the government response to Q7 above. Requiring this smart functionality will mean that hybrid heat pump master controllers are able to receive and act upon price signals which will allow them to optimise the use of the component appliances, potentially leading to bill savings for the user and making greater use of the heat pump if the price difference between electricity and gas decreases.

Government acknowledges concerns around issues arising from users having different electricity and gas suppliers, and how the tariff data is communicated. Currently, there is one standardised way to send electricity and gas tariffs to the appliance through the smart metering network, as set out in smart metering technical documentation[11]. However, as set out in the 'Tariff data interoperability' section below, government also intends to introduce new requirements on energy suppliers to make tariff information relevant to flexibility use cases available in a consistent format via energy supplier APIs[12].

Hybrids have the potential to play an important role in heat decarbonisation over the coming years. Government will continue to consider their long-term role.

Question 20 - Do you agree with government's proposal that all electric heating appliances within scope must provide a user interface?

Summary of responses

Out of 72 responses to this question, 54 agreed with the proposal that heating appliances must provide a user interface, while 9 were neutral and 9 disagreed. Most respondents supported mandating a user interface as it allows for and encourages participation in CLF (5), consumer control and self-service options (9), and transparency (2).

Flexibility in approach and definition of a user interface was a key theme amongst those that agreed, disagreed, and were neutral to the proposal. Many suggested that the interface should not be required to be a physical component on the device itself. 18 respondents preferred the option of providing an interface through an app, either alongside or as an alternative to a physical user interface. A smaller number specified that the user interface should not be in the form of an in-built display or onboard control. Consistency with other ESAs was also raised including reference to the EVSCP Regulations 2021, which allow user interfaces to be purely digital. It was noted an onboard user interface could limit participation in CLF in certain multi-room use cases, such as hotels.

Concerns were raised around a more prescriptive approach including the risk of increased cost (9), stifling innovation (5), the need for consumer choice and varied consumer needs (2). On which heating devices should be covered by the proposal, it was noted that needs and characteristics may vary for different types of ESAs and controllers requiring different solutions.

[11] https://smartenergycodecompany.co.uk/the-smart-energy-code
[12] https://assets.publishing.service.gov.uk/media/6659f05e7b792ffff71a8604/smart-secure-electricity-systems-2024-time-of-use-tariff-consultation.pdf

It was suggested that in some cases where there is an ‘add-on’ flexibility controller, the ‘add-on’ could provide the user interface rather than the heating device. A minority raised specific concerns about the requirement for an interface covering hot water cylinders, particularly indirect cylinders, suggesting they be made exempt or optional unless the user interface is app-based – cylinders don’t usually have an interface, and this would add cost unless delivered by an app. The cost of meeting the user interface requirements should be proportional to the type of ESA (for example a physical interface on a heat pump or other high value product) whilst balancing risks of stifling innovation or limiting the drive for lowest cost solutions. Accessibility needs were also highlighted as an important consideration, including the needs of the elderly and access to internet among certain demographics. It was suggested by some that a user interface should be simple, intuitive and graphic.

Government response

Based on stakeholder feedback, government will mandate that smart electric heating appliances must provide a user interface through an app, web portal, or other digital means, at a minimum. This does not prevent provision of a physical interface also. The digital interface must be able to be easily accessed by the end user, for example through mobile device, touchpad, or screen, and the manufacturer will be expected to take into account the accessibility needs and digital literacy level of various user demographics when determining the methods of access. This feature will allow users to set their preferences, ensure they are always able to choose whether to participate in CLF, and maintain control over their devices.

Government acknowledges the concerns around the initial proposal allowing for a physical (local or built-in) interface only and stakeholders’ request that all appliances are equipped with a digital interface as standard. We agree that flexibility in approach is important to provide options for consumers, and to ensure specific use-cases are not excluded. Therefore, this requirement will allow for purely digital or remote interface options. Note that this requirement will not prevent inclusion of a physical interface also, depending on manufacturer preference. For scenarios where a physical interface is provided, the device must also include a digital component through an app, portal or other digital means.

Question 23 - Do you agree with government’s proposal that electric heating appliances will not be required to collect data on their thermal output?

Summary of responses

There were 69 responses to this question; 43 agreed with the proposal to not require appliances to measure thermal output, however 25 did not provide substantive comments. 13 were neutral in their response whilst 13 respondents disagreed with the proposal, suggesting that measuring thermal output is an essential requirement for heating appliances.

Those that disagreed argued that measuring both electrical input and thermal output helps consumers better determine system efficiency and flexibility, identify issues, and to make data enabled decisions to reduce energy use and bills. They also noted it would be a useful additional metric to aid DSRSPs in ensuring home temperatures meet consumer comfort parameters.

Of those in favour, the main areas of agreement were increased installation costs without benefits (9), making heat pumps less attractive to consumers, and potential deterrence to heat pump adoption (5). Some stakeholders acknowledged that measuring thermal output can allow for better optimisation of devices but felt this should be a voluntary option open to market conditions. A minority noted that while some aggregators request this data, it shouldn't be mandatory, not least because there is no benefit for grid balancing or security and is unnecessary for CLF (3). Some stakeholders suggested reviewing this requirement as heat flexibility grows in the future.

Government response

Government does not intend to place requirements in the first phase regulations that electric heating appliances must measure thermal output. Requiring appliances to monitor and collect additional data such as thermal output could add costs to devices, particularly heat pumps that would require a heat meter to enable monitoring and may increase installation time and cost. Given thermal output data is not necessary for appliances to participate in CLF and the individual financial benefits for taking part in CLF are already low, these additional costs could remove any benefits for consumers.

Government acknowledges the arguments from stakeholders regarding the potential benefits to measuring thermal output, including helping consumers understand their system's efficiency, encouraging manufacturers and installers to promote efficiency tracking, and aiding in the collection of data on heating appliance performance. However, government maintains that this should remain a voluntary feature, included at the discretion of the appliance manufacturer. Government intends to keep this position under review as the CLF market evolves.

Question 24 - Do you agree with government's proposal that all electric heating appliances, on set up, should require users to set their heating preferences, that DSR and TOUT operations to be enabled by default, and for functions that can be undertaken outside of peak hours to be pre-set to do so?

Summary of responses

There were 71 responses to this question; 43 agreed with the proposal to require that appliances, on set up, must have users set their heating and hot water preferences, with CLF and TOUT operations enabled by default and schedules pre-set to operate outside of peak hours, giving the user the opportunity to accept, remove, or change those defaults. 8 responses were neutral whilst 20 respondents disagreed with the proposal.

The majority of those that disagreed stated that it should be an opt-in rather than opt-out process as the consumer needs to be able to provide informed consent (15). Concerns raised included added complexity to the handover which is incumbent on the installer (9) and the additional cost of implementing the requirement. Some respondents raised that there is also a risk that it could set back the rollout of CLF by provoking customer backlash if perceived to raise bills, causing issues for manufacturers and increasing complaints to installers/manufacturers (10).

While there was broad agreement with the proposal, supporters emphasised the need for full consumer understanding of CLF so that they can correctly engage. These respondents advocated for increased consumer engagement, including the need for high-quality, appropriate information and instruction on how the system operates to ensure consumers are actively informed during the setup process. Most stakeholders that argued that an opt-out method would reduce hassle and likely raise awareness about CLF among those with little interest or knowledge. A minority suggested that this requirement might duplicate existing regulation as the Building Regulations already set out commissioning requirements for installations of heating systems. It was also noted that setting smart as default would facilitate smart performance assumptions within the Home Energy Model, enabling the model to reward installation of smart appliances via Energy Performance Certificates.

Some respondents (6) highlighted accessibility as crucial, with a need for suitable advice for vulnerable and fuel poor consumers as CLF and TOUTs concepts can be confusing and potentially lead to higher bills. They said that there should be adaptability for various scenarios and certain users as it cannot be assumed that defaults will fit every individual's use case. Concerns were also raised about appliances being commissioned or installed without the homeowner present, such as in new builds or social housing properties with prepayment meters.

Government response

Government has decided to require that smart heating appliances have consumer-led flexibility and TOUT operations enabled by default and that functions that can be performed outside of peak hours should be pre-set accordingly. Manufacturers must ensure that appliances incorporate pre-set default usage hours that are outside of peak hours, defined as 8am to 11am and 4pm to 10pm on weekdays. Additionally, when the appliance is first used by the end user, it must be designed to offer the owner the option to accept, change, or remove these default usage hours. Consumers must be able to remove or change the default usage hours at anytime and to override the provision of demand side response services.

Smart heating appliances must also prompt users to set their heating or hot water preferences on set-up (i.e., upon first use of the appliance by the end user, after initial installation). This requirement is for manufacturers to ensure that devices prompt consumers to set their preferences and allow them to modify default settings, rather than a direct requirement for consumers.

Government recognises the concerns raised by stakeholders regarding 'informed consent' and is taking measures to ensure that consumers receive adequate guidance, including from manufacturers and installers in the handover process. As set out in Building Regulations, there are specific installation and commissioning requirements for fixed building services[13] (that provide heating and hot water in dwellings) that must be met. Of particular relevance,

[13] A fixed building service is defined in the Building Regulations as: "any part of, or any controls associated with: fixed internal or external lighting systems (but not including emergency escape lighting or specialist process lighting); fixed systems for heating, hot water, air conditioning or mechanical ventilation; or any combination of systems of the kinds referred to in paragraph (a) or (b)."

Regulation 40, Regulation 40A, Regulation 44 and Regulation 44ZA, where applicable, must be met[14]. In particular Regulation 40(2) states that: "*The person carrying out the work shall not later than five days after the work has been completed provide to the owner sufficient information about the building, the fixed building services and their maintenance requirements so that the building can be operated in such a manner as to use no more fuel and power than is reasonable in the circumstances."* This should be non-technical, easy to understand and in an accessible format, suitable for a variety of end users, including those that are vulnerable. The statutory guidance on demonstrating compliance with relevant regulations regarding commissioning and providing information to the owner, including the provision of operating and maintenance instruction, is set out in Sections 8 and 9 of Approved Document L, Volume 1 – Dwellings.

Government believes that an 'opt-out' approach is the most suitable. This approach will simplify the setup process, increase awareness about CLF among those with limited interest or knowledge, and encourage more consumers to participate in CLF if smart settings are enabled by default.

In cases where an appliance is commissioned or installed without the homeowner present, it is crucial that the end user receives all necessary information to configure the appliance according to their preferences and needs. To support this, government plans to mandate that manufacturers provide a guidance pack and manual, in addition to provisions within Building Regulations. The guidance pack will need to include essential details such as operation and maintenance instructions, an installation manual, and signposts to relevant information on CLF and TOUT. This should be easy to understand, specific to the appliance, and in an accessible format. This links to the requirement for the provision of information to building owners when work is carried out on a new or existing dwelling, as set out in regulation 40 of the Building Regulations 2010 and section 9 of Approved Document L, the statutory guidance supporting Part L of Schedule 1 to those Regulations.

As set out in the Clean Power 2030 Action Plan, DESNZ will publish a consultation in Summer 2025 on consumer engagement, including on the potential to better coordinate and amplify accurate messaging on consumer-led flexibility.

Question 25 - Are there any other requirements that you believe should be included in the minimum requirements for the smart mandate?

Summary of responses

There were 40 responses to this question. 5 respondents suggested a requirement linked to consumer awareness and handover, emphasising the increased need for, and knowledge of, greater energy efficiency to allow heating appliances to meet flexibility requirements and perform optimally. Other respondents highlighted the necessity of energy advice from qualified individuals, particularly for any government funded work or installation and in situations where a householder has a vulnerability. There were also references to introducing a consumer

[14] https://www.gov.uk/government/publications/conservation-of-fuel-and-power-approved-document-l

experience standard (such as HOMEflex) and aligning with elements from the Future Homes Standard (FHS) such as providing handover packs to guide homeowners through transition.

Several respondents recommended including voltage and frequency measurement within appliances, with 3 respondents suggesting appliances should have the ability to ride through frequency events and voltage fluctuations beyond the statutory range (i.e., the capability to withstand frequency and voltage disturbances and continue operating).

Communication requirements were also mentioned including specifying one common data exchange methodology for all ESA types and clarifying the definition of the complete communication path including DSRSP, Interface A, and Customer Energy Manager (CEM). A minority of respondents referred to connected device data and suggested that CEMs or Home Energy Managers (HEMs) should report on numbers of connected devices each month.

Other suggestions included local control APIs to maintain functionality during internet outages, local or nodal pricing, requirements to test/roll out software updates in small batches to avoid large scale global “Type” failures, and random time delay to ramp-up and ramp-down responses to half hourly price changes/NESO requests or to limit flicker in domestic/communal wiring and network systems. A clear compliance regime was also noted as necessary, alongside alignment with EU initiatives.

8 respondents reiterated the need for an appropriate metering standard to measure the power consumptions of an appliance, in line with MIR or COP11, to benefit both consumers and the energy system.

Government response

The points raised in this section often duplicated concerns previously raised by stakeholders and have therefore been addressed in more detail earlier on in this document.

Government acknowledges industry recommendations for a voltage and frequency measurement requirement however, as set out in response to Q16, we do not plan to include such a requirement for first phase regulations. Specifying this may offer limited benefits, particularly for heat pumps that can respond to low frequency events (as they can turn off) but only for a short time to prevent the building becoming too cold. Monitoring low voltage could also cause the appliance to simply turn off and may negatively affect consumer experience. We will keep this position under review.

Government acknowledges stakeholder comments reiterating the importance of an appropriate metering standard and refers to the above response to Q21 and Q22. Government now intends to mandate that relevant heating appliances must include a device meter, and this meter must comply with MIR class B requirements for active electrical meters.

Government recognises the importance of consumer awareness and agrees with stakeholders that increasing consumer knowledge of low carbon technologies, energy efficiency, and CLF is crucial for the transition to a smart and flexible energy system. Government provides advice tools on gov.uk, supplemented by a phoneline service, covering low carbon heating and

energy efficiency measures and has existing and planned campaign activity to promote heat pumps and energy efficiency. This activity is kept under review and the department is considering how to implement a long-term approach to addressing consumer awareness of low carbon technologies on a mass scale. DESNZ will also, in Summer 2025, publish a consultation on consumer engagement, including on the potential to better coordinate and amplify accurate messaging on consumer-led flexibility.

Additional stakeholder suggestions, including requirements for local control APIs, local pricing, and software update/testing specifications, are not within the scope of the first phase of ESA regulations. However, we will keep these additional suggestions under review as we continue to develop the smart mandate and the technical specification for phase two.

For comments regarding communication protocols, please see the government response to Q14 above.

We also recognise the importance of alignment with EU initiatives and the need for a suitable compliance regime, details of which are set out later in this document.

Regulating the provision of ESA functionality for smart heating appliances

This section outlined government's proposed regulatory approach to ensure that the ESA functionality of a smart electric heating appliance is delivered, in line with the aims of the smart mandate. Our primary powers allow us to place requirements on any economic actors (including manufacturers, importers, and distributors of ESAs). The key issue is how that ESA functionality is going to be delivered and how we regulate this effectively.

The proposed regulatory framework will require appliance manufacturers to either embed ESA functionality within the device boundary or provide connectivity to an 'add-on' module to give the appliance ESA functionality (i.e., smart controls produced by the appliance manufacturer or a third-party in partnership with them). The communication protocols used for communication with the device can be closed proprietary systems, based on agreements between the third-party and ESA manufacturer, or open protocols when available.

Question 26 - Do you agree with government's proposal to require the appliance manufacturer to provide appliances with integrated or 'add-on' ESA functionality?

Summary of responses

There were 72 responses to this question; 52 agreed with the proposal to require the appliance manufacturer to provide appliances with integrated or 'add-on' ESA functionality. 9 disagreed with the proposal whilst 11 responses were neutral.

There was significant agreement that government should specify the required functionality but not prescribe how this is delivered, allowing manufacturers flexibility to innovate and deliver solutions that suit their business models and products. These respondents noted that closed standards for communication between a device and third-party are appropriate as an initial requirement, however developing an open standard for appliances and controls would increase

consumer choice in the long term. There was concern that this requirement would add costs for consumers, but this was seen to be outweighed by the long-term benefits.

Several respondents highlighted that devices should be able to accommodate firmware updates, and 'over the air' updates should be a required capability which could enhance retrofit applicability. One respondent also welcomed clarity on whether manufacturers must sell every heat pump with integrated or 'add-on' functionality, or whether a heat pump could be sold with the guarantee that an 'add-on' could be retro-actively fitted at a later stage.

11 responses were neutral; however, these respondents did note that government needs to ensure it does not advantage one ESA type over another as some ESAs have far more regulation than others and there needs to be an even-handed approach.

Those who disagreed felt the proposal risks significantly narrowing the competitive market by forcing manufacturers to develop UK-compliant[15] ESA solutions which will differ from those supplied to other markets, or to pre-select a third-party solution in the development phase. This will stifle innovation and consumer choice. Further points of disagreement were that choice should come from the market rather than regulation, and that the proposal could raise the cost of low carbon technology and disrupt UK manufacturing and imports. One respondent suggested that manufacturers should either integrate the functionality or provide and document a suitable local device interface to allowing a range of third-party providers to connect, advocating for a more open solution.

Government response

Government will make appliance manufacturers responsible for providing ESA functionality for electric heating appliances. This functionality can be delivered through a separate piece of hardware and/or software, and/or in the Cloud, and can either be embedded within the device or provided via an 'add-on' module (such a smart thermostat connected to an appliance via a communication method, or a smart controls 'box' physically attached to the appliance). Manufacturers can partner with third parties to provide this functionality however the manufacturer will remain responsible for ensuring compliance with the regulations.

Stakeholders sought clarity on whether manufacturers must sell appliances with integrated or 'add-on' functionality, or if they can be sold with the assurance that an 'add-on' could be retrofitted later. Government intends that appliances should not be placed on the market in Great Britain (i.e., made available on the market for the first time) unless they comply with the substantive requirements set out in the regulations. Therefore, appliances must be sold with smart functionality as standard meaning they cannot be sold without embedded or 'add-on' functionality. Consumers could choose to purchase and install another third-party smart control system if they prefer, using it in place of the ESA functionality provided with the appliance if there is a guarantee it would be compatible.

Government notes the agreement from stakeholders on initially using closed proprietary protocols for the interface between appliances and the potential 'add-on' given there is not

[15] Note that the territorial extent of the ESA regulations will be GB-wide.

currently an established open protocol for controlling electric heating appliances. Government will continue to explore the option of developing an open standard for appliances and controls as this could ensure compatibility between all controls and heating appliances thereby increasing consumer choice.

Government acknowledges the view that market forces should drive choice rather than regulation and emphasises the aim to create space for industry innovation and the development of solutions best suited to them alongside appropriate regulation. Government recognises that there may be different approaches to implementing smart functionality, and beyond requiring that ESA functionality be provided through embedded connectivity and/or an 'add-on' module, it does not intend to dictate the specific method of delivery provided the required outcomes are met.

Government will proceed with a requirement for those placing appliances on the market, i.e., manufacturers or importers, to ensure that an appliance (or system of appliances, where appropriate) is sold with either integrated or 'add-on' ESA functionality. As part of this regulatory framework, and to allow certification of compliance throughout the supply chain, government will require a statement of compliance prepared by the manufacturer, to be provided with an appliance. Failure to provide a statement of compliance would mean that the device is not complaint with regulations and as such, should not be placed on the GB market.

In addition, and as set out in response to Q11, the regulations will include a requirement for a manufacturer guidance pack to be provided with each appliance when placed on the market. This should include high quality and appropriate information and instruction on how the system operates, including how to override device behaviour, in addition to signposts to relevant information on CLF and tariff options.

Sellers

Question 27 - Do you agree with government's proposal to require sellers to ensure that an electric heating appliance (or system of appliances) is sold with either integrated or 'add-on' ESA functionality?

Summary of responses

There were 69 responses to this question; 41 agreed with the proposal that sellers must ensure electric heating appliances are sold with ESA functionality, though 24 did not provide substantive comments. 16 respondents disagreed, and 12 were neutral but sought clarity on how enforcement would take place.

The main areas of agreement amongst supporters were that this requirement was necessary as sellers should not sell 'non-smart' devices. There was consensus that this would not be a significant burden on sellers and is consistent with the EVSCP regulations and other product regulations. Some respondents noted the need for clarity on what constitutes a 'seller' and consideration of the time different products spend in the supply chain from the point of manufacture to sale to the consumer.

Of those that disagreed, the primary concern was that placing this burden on the seller does not guarantee that the functionality is installed or used. They argued it would not guarantee that a product is smart at the point of installation and would add extra administration for sellers with limited benefit. Several respondents highlighted that it would be inconsistent to place obligations on manufacturers and sellers but not on installers. Other concerns included the potential for this requirement to increase the difficulty and time of sale, negatively impacting heat pump adoption. The added complexity could disrupt market dynamics, leading to inefficiencies and increased costs passed on to consumers. These stakeholders suggested that the requirement should instead be on the installer, with government using existing mechanisms such as Building Regulations and sign-off by a competent person.

Government response

Government has decided to require those placing appliances in scope on the GB market (that is, first making them available), i.e., manufacturer or importers, to ensure those appliances comply with the Phase 1 ESA Regulations. This means the devices must have the required smart functionality and meet the other requirements set by the Regulations, and the applicable assurance requirements must be complied with. The requirements are intended to cover those offering and advertising smart heating appliances, for example advertising on an online marketplace, and placing on the market includes doing so for payment or for free. This means it will cover offering an appliance for ‘free’ as part of a package deal, as with the existing EVSCP Regulations. Whilst the responsibility for compliance with the substantive requirements of the Regulations will rest with the manufacturer, who must prepare a statement of compliance and technical file, anyone placing or making an appliance available on the market will need to ensure it has the statement of compliance. That is, any relevant appliance that is sold within the supply chain up to the end user (placed on the market or made available on the GB market again, after its initial placing) must be accompanied by a statement of compliance.

Government intends to require anyone who places or makes available a relevant heating appliance on the GB market must keep a ‘register of sale’ for 10 years. The register will be required to include, at a minimum, details which will enable the enforcement agency to better trace devices.

Installers

Government proposed to place no legal requirements through ESA regulations on installers but is exploring use of existing mechanisms and clean heat interventions to ensure installers are aware, and capable, of installing smart electric heating appliances and handing over to consumers.

Question 28 - Do you agree with government’s proposal not to place any legal obligations on installers of smart heating appliances?

Summary of responses

There were 70 responses to this question; 32 agreed with the proposal to not place any legal obligations on installers of smart heating appliances. 12 were neutral, whilst 26 disagreed.

Of those that agreed with the proposal, the majority highlighted the risk of introducing additional installer requirements which could deter new installers, discourage upskilling/reskilling, and slow down heat pump installs, taking into account existing demands from training, certification, and market volume. Overly burdensome requirements risk pushing installers towards the path of least resistance, potentially resulting in suboptimal setups, undermining the intended benefits of smart heating appliances and hindering consumer engagement with these technologies. This was also noted by several providing neutral responses.

A majority of respondents agreed that a lighter touch approach focusing on installer training in smart heating installations could be a viable alternative, utilising existing pathways to train and audit installers. Some respondents suggested that avoiding an installer requirement keeps the focus on manufacturers to ensure appliances meet standards at point of sale and would require manufacturers to provide detailed documentation to support installers in understanding the full capabilities of their products. More proactive engagement with local authorities, housing associations, and consumers was also highlighted as important.

Of the respondents that disagreed with the proposal, the main concern raised was the risk of poor outcomes to consumers if appliances are installed incorrectly, including the risk of devices being installed in ‘dumb’ mode or not achieving full functionality resulting in inefficiency, poor heating outcomes, and bill impacts. A strong majority of those that disagreed suggested that the point of installation should be the focus for regulation given installers’ crucial role to set up and verify systems, and to understand the needs of and educate consumers. Several respondents suggested that a requirement could be included in Competent Person Schemes which are referred to in the statutory guidance supporting Part L of Schedule 1 to the Building Regulations 2010. This would require that installers sign off that the installed ESA is capable of operating in a ‘smart’ way, is commissioned, and importantly has been handed over to the user.

However, some respondents noted that it would be difficult and complex to enforce an installer obligation, especially where it may rely on self-certification, and suggested an alternative would be to ensure creation of a market where the only appliances available to be purchased for install are fully compliant and ‘smart’ as default.

Question 29 - Do you have a view, and supporting evidence, on how government ensures that installers have the awareness and ability to successfully install smart heating appliances?

Summary of responses

There were 68 responses to this question of which 50 included substantive comments.

Key suggestions included introducing training schemes, accreditations, or industry standards (19), such as a specific smart home installation partner certification or industry standard. Within this, respondents also noted the role of MCS and the need to update MCS installation, commissioning and design guidance to include smart heating appliances. An increased role for manufacturers and the supply chain was highlighted (13), including manufacturer training

centres or manufacturers ‘approve certified’ training to upskill and inform the installer base. A common suggestion was provision of clear manufacturer instructions on system design, install, and troubleshooting. DSRSPs, CEM providers, The Institution of Engineering and Technology (IET), and accredited training organisations could also play a role.

The main area of consensus was to add requirements to the Building Regulations regime, specifically the statutory guidance in Approved Document L (11), and including smart competence requirements within Competent Person Schemes (11). It was noted that there is a need to introduce a competence scheme for ESAs or CLF including a requirement for regular training (such as The National Inspection Council for Electrical Installation Contracting (NICEIC) or Gas Safe).

Respondents raised the need for financial incentives or government funding to encourage installers to upskill (10). Suggestions included enhancing measures, such as the existing heat training grant, to provide support for manufacturers to put resources into the installer market and continuing professional development (CPD) funding. It was noted that grant funding should be contingent on end-user awareness of smart system operation.

Lack of consumer awareness was a common concern, with several respondents (10) highlighting the need for a communication campaign led by an unambiguous third-party, alongside more leadership from government on how to disseminate information. Increased proactive engagement with installers, Local Authorities, and housing associations was also suggested.

Some respondents felt that focusing regulation on the device rather than the installer was more appropriate, drawing parallels with EVSCP Regulations that make it illegal to purchase or install non-compliant ESAs and specify smart mode as the default.

Other suggestions included a requirement to notify the DNO if a smart appliance is to be used in non-smart mode, use of an automatic asset register, and utilising Benchmark to register installs.

Government response – questions 28 and 29

Government does not expect at this point that it will place additional requirements on installers in first phase ESA regulations. We are mindful of the risk that legal requirements may deter potential installers and create additional burdens for the heat pump installer workforce, which might have a wider impact on our ability to deploy heat pumps at scale and exacerbate shortages creating additional barriers to reaching heat pump installation targets. That said, we want to ensure that consumers are able to realise the benefits that smart appliances offer and acknowledge the concerns of stakeholders around the risk of poor consumer outcomes. We are therefore exploring alternative mechanisms to increase installer awareness and ability to successfully install smart appliances**.**

DESNZ are working with the Ministry of Housing, Communities and Local Government to explore including a smart-related requirement through the Mandatory Technical Competencies that apply to the installation of electric heating appliances. The Health and Safety Executive

(HSE), as Building Safety Regulator, is reviewing and updating the competence requirements for competent person schemes.[16] This includes developing Mandatory Technical Competencies to support the installation of relevant energy smart heating appliances. This approach minimises the burden on the supply chain whilst taking steps to increase the ability of installers to support policy aims.

Government funded the Automatic Asset Registration (AAR) programme to develop and demonstrate a potential technical solution to simplify registration. GreenSync and Energy Systems Catapult delivered the LCT Connect project through the programme, which concluded in March 2025. In the Clean Power 2030 Action Plan, DESNZ, NESO and Ofgem committed to setting out measures to enable greater visibility of distributed energy assets in the Low Carbon Flexibility Roadmap in 2025.

There are existing requirements within the Building Regulations that installers must comply with. When installing a new heating and hot water system, then the relevant technical requirements (e.g., Part G3, Part P, Part L1(b) and Part L2 where applicable) and the information and commissioning requirements (e.g., Regulation 40, Regulation 40A, Regulation 44 and Regulation 44ZA, where applicable) must be met. Compliance with these provisions will aid in the correct installation and commissioning of these fixed building services (that provide heating and hot water in dwellings), give information to users and prevent poor consumer outcomes.

Stakeholders emphasised customer handover and poor awareness of smart heating appliances as a potential significant point of failure however government emphasises that this should not solely be the responsibility of the installer. We encourage an increased role for manufacturers, energy suppliers, and DSRSPs in consumer engagement and device guidance. We will also look to strengthen and simplify the consumer protection landscape through the Warm Homes Plan, so that households can have confidence when making the transition to heat pumps.

Question 30 - Do you agree that open data standards are required to enable EV charge point interoperability with energy suppliers and DSRSPs?

Question 31 - What are the barriers to implementing such open data standards?

Summary of responses

There was broad support for open data standards, with recognition that they are key to enabling EV charge point interoperability.

Of the 34 respondents, 31 agreed, 2 disagreed and 1 indicated a neutral view on the matter. Of those who agreed, there was some divergence as to whether open data standards should be

[16] The purpose of competent person schemes is to allow approved persons to self-certify the compliance of controlled work in buildings that are subject to the Building Regulations. It avoids the need for work to be checked by Local Authority Building Controls. This includes heating and hot water installations as defined in the regulations. One of the requirements for an installer to be a member of a CPS is that they must be able to demonstrate appropriate competence to undertake the work. These requirements are set out as Mandatory Technical Competencies (MTCs).

mandated or market-led. 17 positive respondents (55%) did not state a direct view. The remainder of positive responses were split with 8 (26%) indicating a view that they should be market-led with 6 (19%) indicating a view that these standards should be mandated by Government.

Respondents indicated two main barriers to implementing open data standards. Firstly, the increased cost such standards could place on manufacturers and the subsequent cost that may be passed on to consumers. The second barrier was a concern that any requirements could be overly prescriptive, if mandated by Government, restricting future innovation as the market develops.

Government response (Q30 & 31)

Government is supportive of open data standards and welcomes the broad consensus from stakeholders that such standards are key to unlocking EV driver access to smart tariffs and services. Government also notes stakeholder concerns regarding the mandating of such standards on costs and on restricting future innovation.

The EVSCP Regulations 2021 do not specify an open data standard for charge point to charge point operator communication. However, in the absence of such a requirement the industry has to the most part coalesced around the OCPP open data standard. In light of this, our position is not to mandate such a standard at this time but instead consider doing so as part of future enduring SSES regulations. As outlined above (in Q14), extensive work is being undertaken with industry to develop an approach to interoperability underpinned by open standards.

Government will continue to monitor the evolution of the market to inform the best approach to delivering open data sharing between electric vehicles, charge points, energy suppliers and DSRSPs.

Question 32 - From your experience does EV-EVSCP interface communication regarding battery state of charge pose a barrier to access to the full range of EV tariffs and DSR services?

Summary of responses

A majority of respondents viewed limitations on access to EV battery state of charge as posing a potential barrier to consumers being able to access the full range of EV tariffs and DSR services

Of the 28 respondents (excluding no comment), 19 agreed (68%), 2 disagreed, 7 were neutral. Responses overwhelmingly stressed the importance of state of charge data to optimising charging cycles and enabling EV drivers to be able to access current and future dynamic tariffs.

Standardisation of data standards for openly sharing data between electric vehicles and charge points and DSRSPs was recognised as being key to enabling EV driver access to

these tariffs. There was a broad view that agreement and finalisation of these international standards remains an ongoing barrier.

Government response

Government is supportive of open data standards for charging cable communication between EVs and charge points and additionally for telematic remote communication between EVs and energy suppliers/DSRSPs. Government recognises that the development and implementation of such standards is essential to enabling consumers to access the full range of dynamic charging tariffs in the future.

Government will continue to actively monitor the development and implementation of such standards including ISO15118-20 across EV smart charge points and EVs and will consider the potential need to mandate such standards in both charge points and electric vehicles. Government notes that mandating such a standard would also support the deployment of V2X bidirectional technology

Question 33 - What other technical and commercial barriers have you experienced to EV drivers accessing a full range of available tariffs and DSR services?

Summary of responses

Respondents identified a number of additional barriers in the 35 responses. The strongest theme was the lack of open data standards (10 responses) and open data access (5 responses) for communications between EVs, charge points, home energy management systems and DSRSPs. Regulatory and code changes were identified as a barrier to participation in flexibility markets, this included delays to the Market Wide Half Hourly (MWHH) settlement (3 responses) and varying metering requirements for different DSR markets (2 responses).

Some respondents noted a need for an increase in the provision of tariffs (public smart and dynamic) (2 responses), and need for a comparison tool for the varying tariff offers to make it easier for consumers to pick the right tariff for them (3 responses). On this consumer theme, some respondents focused specifically on consumer concerns, such as cyber security or providing third party control of their charging (4 responses).

Lastly, respondents pointed to concerns about consumer lock-in to particular charge points, EVs, and energy supplier ecosystems with recognition that this could be for a mix of technical and commercial reasons (5 responses).

Government response

Government is committed to increasing EV drivers' access to EV tariffs and flexibility. We are reviewing the barriers identified by respondents and are committed to removing both commercial and technical barriers to interoperability, where possible. We will be conducting further work in this area and will continue to work across government and with Ofgem to tackle them.

Specifically regarding open data standards, consumer lock-in and metering requirements, government is responding to these concerns as described elsewhere in this consultation response. Regarding wider barriers to EV flexibility participation, initial government action is described within the recently published Clean Power Action Plan and will be considered in more detail in the upcoming Low Carbon Flexibility Roadmap due to be published in Summer '25.

First phase regulations: cyber security and grid stability

In the consultation, we shared our vision on using ETSI EN 303 645 for phase 1 requirements for all ESAs and ongoing work on ESA testing and assurance, seeking industry to provide their views on potential issues and mitigations. In addition, we provided industry with our perspective on maintaining grid stability and using the randomised offset function to mitigate key risks as the number of smart appliances connected to the grid increases.

Question 34 - Do you foresee any issues with adoption of ETSI EN 303 645 for Phase 1 requirements for all ESAs? If so, how could these issues be mitigated?

Summary of responses

There were 55 responses to this question in total, with 22 respondents not foreseeing any issues, 13 neither agreed nor disagreed and 20 had concerns with using ETSI EN 303 645 for the phase 1 ESA Regulations.

19 respondents expressed concerns about the additional cost involved to meet all 13 principles of ETSI EN 303 645.

14 respondents were concerned about the implementation timeframes, requesting a grace period of up to three years, particularly for heat pumps. There were also concerns raised around testing capacity creating bottlenecks, causing delays to devices going to market.

14 respondents suggested additional requirements would be needed alongside ETSI 303 645 to mitigate key risks, however fell short of specifying what exactly was required and suggested engagement with industry to discuss this. Some advised that government need to review the lessons learned from smart metering and outputs from the SSES programme's Security Architecture Design workstream to inform what additional device requirements may be needed.

6 respondents suggested government should seek to align ESA Regulations with existing legislation, such as the Product Security and Telecommunications Infrastructure Act 2022 and relevant EU legislation.

Question 35 - To what extent would requiring cyber security testing of ESAs prior to them being sold or distributed in GB impact ESA supply chains? What other approaches could be used to provide sufficient assurance that cyber security requirements were being met?

Summary of responses

There were 62 responses to this question in total, 28 respondents expressed concerns, 18 were unsure, 14 suggested there would be minimal impact and two provided no comment.

Over half of respondents advised government to engage with industry to provide more information on device requirements and testing proposals overall, as well as advising government to align with existing regulations on cyber security testing for IoT devices. Six of

these respondents requested further detail from government on how firmware and hardware updates will be tested in practice.

19 respondents expressed concerns on the additional costing that will be involved if devices require testing pre-market, whilst 16 organisations expressed concerns around the potential delays that will occur if additional assurance measures are introduced.

Nine respondents encouraged government to consider self-assessment as an alternative to third-party testing to align with existing UK and international legislation such as the Product Security and Telecommunications Infrastructure Act 2022 and the (EU) Radio Equipment Directive, in order to reduce bottleneck testing and offer a flexible approach that aligns with industry capabilities.

Government response to questions 34 and 35

Government notes that whilst there is a significant number of supportive respondents for using ETSI EN 303 645 for requirements for phase 1, a similar number raised concerns around testing and implementation timeframes and costs, the need for additional requirements beyond ETSI EN 303 645 and alignment with other domestic and EU legislation.

Since the publication of the consultation, we have worked closely with National Cyber Security Centre (NCSC) and Ofgem, as well as with industry stakeholders via our Security Working Group (SWG) and beyond, to determine what minimum security requirements are proportionate and appropriate for the first phase of ESA regulations. This includes undertaking a Security Architecture Design (SAD) exercise, which has been reviewed by the SWG, NCSC and Ofgem, to determine where security controls need to apply to mitigate key risks to devices, as well as organisations and systems in scope of the SSES programme.

ETSI EN 303 645 is a widely recognised good practice European standard which will raise basic levels of cyber hygiene and which we understand many manufacturers are already partially or fully using for devices, including some heat pump and battery manufacturers. Additionally, the standard is being used via existing regulations. As noted by respondents, we recognise that there are additional cyber security requirements that may be desirable for ESAs to be manufactured to. However, for phase 1, government's view is that manufacturers must follow the most current version of ETSI EN 303 645. For any subsequent version of ETSI EN 303 645, manufacturers will have a period of 20 months before they have to comply with updates to the standard ETSI EN 303 645. This aligns with the direction of travel in EU regulations, however, as the risk of cyber threats evolves, government will keep under review the need to implement additional requirements for phase 2 of the ESA Regulations.

We expect organisations that have the ability to remotely (i.e., from outside the home) control or configure an in-scope ESA within a domestic or small non-domestic setting to require a licence as a Load Controller. Please see our response to the Licensing regime Qs 1, 2, 3, 5, 7, and 8 for further details on our approach to activities that we expect to be in scope of the licence.

To alleviate concerns around test lab bottlenecks and immediate costs for independent 3rd party testing, we will allow for manufacturers to demonstrate compliance via self-testing for phase 1 of the ESA Regulations. We anticipate that the regulator will audit a sample of products to ensure compliance with the regulations. This aligns with assurance arrangements under the Electric Vehicle (Smart Charge Points) Regulations 2021 and Product Security and Telecommunication Infrastructure Act 2022 and the regulations made under it.[17] We will continue to explore whether independent 3rd party testing should be introduced at a later point and will work with NCSC and industry to assess ongoing capacity of test labs to meet the demand of any potential future 3rd party testing requirements.

Government will consult on the detail of the phase 1 - and subsequently phase 2 - ESA Regulations before they are laid in Parliament.

Question 36 - Do you have any suggested alternative solutions to the random offset function which would mitigate the risk of large-scale synchronised changes in load?

Summary of responses

There were 66 responses received to this question - 45 respondents offered no alternative solution to the randomised offset function. However, 11 of those respondents suggested government needs to provide more detail on the intricacies of randomisation. The remaining 21 respondents provided alternative solutions to randomisation. The most common alternatives to the randomised offset function suggested by industry were flexibility arrangements to tariffs, frequency response, geographical measures and ramping.

Government response

We welcome respondents' feedback and the level of support for the use of the random offset function (also known as randomisation) where there is a risk of herding.

In October 2023, government established the Grid Stability Working Group, consisting of representatives from government, NESO and DNOs, to explore in further detail how randomisation could be implemented in practice, alongside the consultation. Over several sessions, the working group discussed the suitability of the randomised offset function as well as alternative solutions, included ramping and frequency response. The Group agreed that a randomised offset function of up to 10 minutes on specific use cases would be the most appropriate approach currently available to support grid stability and minimise the risks of herding. As such, government intends the phase 1 ESA regulations to require ESAs in scope to support a configurable random offset function for a period up to 10 minutes but configurable up to 30 minutes, where there is a risk of herding as a minimum (for example, in response to a Time of Use Tariff). Based on this, we intend to require randomised delay to be applied as a minimum to events when there is a risk of herding, with the regulations setting out a non-

[17] Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023/1007.

exhaustive list of scenarios in which randomised delay must be applied, as well as specifying cases in which randomised delay must not be applied.

Government intends specific grid stability license conditions to apply to Demand Side Response Service Providers and load controllers via the SSES licensing scheme, and to consult on the detail of this as part of the consultation on licence conditions.

Having established approved use cases and a defined outcome for randomised delay (as per above), we will provide industry with the flexibility to choose how they meet the overarching requirement across their organisation and devices. This approach also aligns with grid stability requirements in the EV Smart Charge Points Regulations, whilst also accounting for lessons learned.

Question 37 - Please comment on the assumptions and methodology used in the cost appraisal of the analytical annex. Can you provide estimates of the costs of providing consumer interfaces and monitoring?

Summary of responses

There were 49 responses to this question, with limited positivity. Only 11 of the respondents expressed the opinion that the assumptions and methodology were acceptable, and 6 of those highlighted areas where it could be improved. 15 of the respondents outright rejected the assumptions and methodology provided, with the remaining 22 not having a strong view either way, or not enough knowledge to judge.

The overriding theme in the responses was that the estimates were thought to be too low, and that ongoing maintenance costs have not been accounted for. In general, there was low confidence in the rollout rates of technologies/devices.

Some respondents shared their own estimates for elements of the assumptions alongside suggestions for improved methodology.

Government response

We welcome the engagement from stakeholders on this question, and the views and information shared in the responses. We will endeavour to update our assumptions and methodology to incorporate this new information when producing the final impact assessment.

Second phase regulation: technical frameworks

In this Chapter of the consultation, we set out how we envisage standards to be used in future regulation.

Regulatory Approach: Approved Standards

In the consultation, we presented two models for using standards in regulations: an approved approach and a mandated approach.

Under the approved standards approach, ESAs must meet outcomes set in regulation and could use designated standards to show compliance.[18]

Under a mandated standards approach, ESAs demonstrate compliance by using a standard or specification specifically mandated in legislation or other documentation, such as guidance or an industry code.

There are other models of using standards in regulation. For example, some regulations mandate the use of standards designated by the Secretary of State, rather than mandating the use of a standard specified in the legislation itself. In this scenario, the designated standard must be followed and there is no optionality to demonstrate compliance through alternative routes.

Question 38 - Do you agree with using the Designated Standards approach as the basis for government to design the Approved Standards framework for the SSES programme?

We received 44 responses to this question: 20 were neutral, 19 were in agreement, and 5 were in disagreement.

Stakeholders felt that an approved standards approach was appropriate because of the nascent nature of the DSR market and the immaturity of a technical solution that could encompass the diverse technologies and services that may emerge in this sector. Using regulation to clarify expected outcomes whilst allowing space for different routes to compliance would allow greater flexibility than a mandated approach: to adapt to societal and technical changes and to align with solutions that may be adopted internationally and in European markets. However, there were concerns that an approved standards approach would create multiple routes for demonstrating compliance which could lead to interoperability issues, with similar appliances functioning differently. There was also a concern that more than one standard could gain approved status, and this would lead to increased costs for parties to interact with all approved standards.

Question 39 - Do you have any comments, suggestions or changes to the initial view described above [in chapter 6 of the consultation] for how Approved Standards could

[18] Designation of a standard is the process by which government gives recognition to the whole or part of an established standard.

work; especially for the proposed manner of assessing potential new approved standards?

We received 35 responses to this question, expressing a broad range of views on how the approved standards process could work.

The main points made by stakeholders included the need to: align with EU and international standards to ensure interoperability and global competitiveness, balance additional costs for manufacturers with potential adverse impacts on interoperability objectives, have an industry panel decide on approved standards, have a detailed and transparent approval process involving controls, reviews, and independent testing, and establish and maintain a central register of approved standards in a common format.

Question 42 - How should an approved standards approach be designed to ensure that DSRSP interoperability is maintained?

We received 46 responses to this question. The main suggestions for how to design an approved standards approach can be summarised as follows:

• Keeping standards simple yet robust to ensure interoperability and foster innovation, while allowing flexibility to accommodate new technologies. There should be a high bar for including new standards to avoid raising consumer costs.

• Ensuring consistency of interpretation of standards and regulatory clarity on who must be able to operate ESAs, through what interfaces, and what minimum functionality they must be able to access.

• Establishing technical committees and industry panels to review standards, implement rigorous governance processes and independent testing for new standards, and ensure stakeholder involvement and visibility in the development and review process.

• Ensuring robust compliance of ESAs with the approved standards through certification and third-party assessments, regular compliance checks, consistent stakeholder engagement, and continuous review of specifications.

Question 44 - What criteria should be applied to ensure that any proposed standard is fit for purpose, and to avoid an excess of standards adding undesirable complexity?

We received 41 responses to this question. The main criteria suggested for inclusion by respondents was:

• Apply overarching principles that ensure standards deliver a positive impact on: innovation, competition, carbon reductions, cost to all consumers, cost to specific customers, cost to supply chain companies.

• Any new standard that is part of the regulatory framework should demonstrate why existing standards are insufficient and that the new standard creates material benefits to consumers.

The application of any new standards being considered must be subject to robust independent testing as part of the approval process.

• New standards should use similar architecture and data structures for common features.

Government response to questions 38, 39, 42 and 44

We welcome the engagement of respondents with these questions.

Considering, amongst other factors, the feedback from Q38, we have decided not to use an approach of approved standards giving a presumption of conformity in future regulation because the option to use an alternative way to meet requirements does not provide the necessary level of confidence in interoperability.

Based on the consultation feedback and parallel engagement with industry and consumer representatives in the ESA Technical Working Group, Government has decided that second phase device regulations should mandate ESAs to demonstrate compliance with interoperability objectives through a designated standard or standards, i.e., full or parts of standards that government has formally recognised as part of the regulatory framework. The regulations will set a minimum requirement, which ensures a base level of interoperability, whilst allowing ESAs to implement additional standards and functionality as they see fit (so long as this does not affect the mandated functionality). This balances flexibility and innovation with greater certainty for the consumer, industry and government that interoperability outcomes will be met.

Government recognises the benefits (including lower costs) of alignment with international and European standards and is committed to using international and European standards as a basis for requirements where available and appropriate. Government also recognises the challenges (including additional complexity and higher cost) that having multiple standards may cause. The aspiration is for there to be one standard that covers communication and messaging for DSR. However, we recognise that there may be a good rationale for additional standards to be part of the regulatory framework. For example, it may be appropriate to recognise one standard per ESA type, including: EV smart chargepoint, smart heating and smart BESS. It may also be necessary to mandate parts of several standards to achieve our outcomes. Government will consider the opportunities and challenges of different approaches, in consultation with stakeholders, with the overall aim of delivering interoperability at a proportionate cost for consumers.

Through consultation with industry and consumer groups, we are developing a plain language schema which details the minimum data items and commands necessary to enable interoperable DSR. In collaboration with working groups, the plain language schema will be used to assess the suitability of a standard as part of any process to require compliance with the standard.

In addition, following feedback from industry including from the Interoperable Demand Side Response innovation programme and other sources, government is sponsoring the revision of PAS 1878 through the British Standards Institution. However, we are also sponsoring work to

develop alternatives to PAS 1878 (as outlined above in Q14 and below) and are working to ensure these parallel developments provide us with a full range of options to select designated standards from and could functionally work alongside each other. We are also aware of industry initiatives to develop interoperable standards too. Government will continue to work with industry and consumer representatives to determine which standards should form part of our future policy framework. At this stage there is no 'lead' standard or specification for implementation.

We note that PAS 1878 is based upon use of the OpenADR communications protocol and that the Energy Networks Association, Elexon, and the National Energy System Operator (NESO) have recently signed a letter of intent with OpenADR to collaborate on using that protocol for flexible dispatch systems in the GB energy market.[19] While this work focusses on communications between grid-side actors and flexibility service providers, we are also considering suitability of OpenADR for communications between ESAs and service providers, noting that additional specification would be necessary in order to implement this approach.

With regards to assurance, further work is being undertaken to establish what an appropriate approach to assessing compliance looks like, including whether any further regulation is required. This is dependent on the technical standards that form part of the second phase regulations. Government is committed to making sure that the approach to assurance is robust and does not create unnecessary barriers to competition and is proportionate to the potential level of risk and harm that noncompliance could cause.

We will continue to engage with industry through our existing technical working groups as our proposals develop. As set out in our response to Q54, in the longer term, we will be setting up a technical governance group as part of enduring governance, which will ensure continued stakeholder engagement and have a role in advising government and regulators on the mandated standards. Although details will need to be worked through, we recognise that existing technical working group members may have a strong interest in contributing to the longer-term governance once established.

Question 40 - Are there any areas where you foresee the need for additional standardisation beyond PAS 1878? If so, in what areas and over what timeframes would you expect new standards to develop?

We received 37 responses to this question. 31 did foresee areas for additional standardisation beyond PAS 1878, and 6 did not. Those who did foresee a need for additional standardisation had a broad range of views on what this might include, for example: whole home optimisation, consumer switching, accessible design of smart products and services, electric vehicles and bidirectionality, clarity over the end-to-end interoperability processes (aggregation, retail and manufacturing), consumer protection, and alignment with amended Measuring Instruments Regulations 2016 (MIR).

[19] https://www.energynetworks.org/newsroom/ena-elexon-and-openadr-alliance-sign-letter-of-intent-to-pave-the-way-for-international-flexibility-standard [accessed 3 April 2025]

Those who did not foresee the need for additional standardisation beyond PAS 1878 suggested that it was premature to impose additional requirements on the industry, and that this should be kept under review as the ESA market continues to develop. Some felt that PAS 1878 was a useful starting point and that until the revision process was concluded they could not comment on whether additional standardisation was required.

Question 50 - Are there any documents (such as specific standards, protocols, guidance, code, specifications) that should be explored for inclusion into the SSES technical framework? Please can you provide within your answer why their inclusion would help meet the SSES policy objectives and why the SSES technical framework is the best delivery mechanism.

We received 41 responses to this question. There were numerous suggestions for documents that SSES should consider for inclusion in the technical framework in addition to or instead of PAS 1878.

Examples of suggestions include: G99 and G100 specifically related to Import Limitation schemes, ENA ER G0 Issue 1 2012, IEEE 2030.5, OpenADR3.0, Energy Management Specification under development from Home Connectivity Alliance, Elexon's Code of Practice 11, MIR, MATTER, IEC 62325, IEC 62746, EEBus, SG Ready, ACER/ ENTSO E 15118, and OCPI.

Government response to questions 40 and 50

Government recognises the high level of support for alternative or additional standardisation in addition to or instead of PAS 1878. As recognised by some respondents, PAS 1878 is undergoing revision in response to industry feedback. We note that concerns have been raised by parts of industry with the design of PAS 1878 and it is not yet clear to what extent the revised edition of PAS 1878 will address these or enable standardisation of the predominant business models used in GB at this time. We also recognise that there are other initiatives being led by industry at present, for instance the use of OpenADR for grid to flexibility service provider communications being explored by the Energy Networks Association (see above government response to questions 38, 39, 42 and 44 for further details), and work being undertaken by the recently formed Project Mercury consortium. Therefore, in parallel to the revision of PAS 1878, government is working with industry to explore alternative ways to achieve interoperable DSR, so we can choose the most appropriate interoperability standard approach for consumers and industry from a range of options. Our intention is to identify an approach that meets our regulatory objectives and works with the grain of industry by ensuring the interoperability of the prevalent business models and services on the market today.

Since the publication of the April 2024 ESA consultation, the SSES programme has been exploring an alternative approach to interoperability than PAS 1878 based on detailed technical analysis and through working with industry via the ESA Technical Working Group (ESA TWG). This alternative approach is based on using existing standards, a "Companion Specification" that will specify which parts of these existing standards ESAs need to comply with, and where there are no suitable existing standards to clearly set out the requirements.

The content of the Companion Specification will be driven by a plain language schema (commands and data items needed for interoperable DSR) and simple device functional requirements (e.g., randomisation) that will be developed with industry input.

This plain language schema will support power profile generation by a DSRSP and an ESA and will be used to assess candidate standards that could be designated as a mandated standard: whether that be the revised PAS 1878, OpenADR 3.x series, or any other relevant standards that are suggested by industry as part of on-going ESA TWG engagement. We are designing the plain language schema to be business model agnostic, and so the interoperability standard or standards that are designated will be as consistent as possible with the prevailing business architectures.

We recognise the appetite for standardising other functions such as HEMS and V2X. Please see the government response to Q51 and 52 for further details around our approach to HEMS. With regards to V2X, while these technologies continue to develop, the UK government has not chosen to mandate V2X in either electric vehicles or charging infrastructure at this time, though we are continuing to support commercialisation of V2X through a range of innovation projects.

We are committed to building a technical framework that is based around a minimum viable product for interoperability of DSR services that maximises space for industry to innovate and is flexible enough to incorporate required changes as appropriate to do so.

Question 41 - Do you believe that there is a need for standardisation of Implicit (also called Routine) DSR in order to meet the government's interoperability objective? If so, what aspects do you consider would need to be standardised, and are there any existing technical standards that you believe could be used?

There are two forms of DSR:

1. Explicit (also known as response) DSR, in which energy consumption or production is shifted in time or modulated in magnitude in response to a request, made in real time, from a system or network operator. Note that consumer preferences form part of inputs that determine whether a device can respond, and in addition, a consumer can always override a response.

2. Implicit (also known as routine) DSR, in which energy consumption or production is managed according to consumer preferences and based on incentives set in advance, which are often multi-party market signals.

The practical difference between these forms lies in where the benefits are directly realised: Explicit DSR provides direct benefits to grid stability, whereas Implicit DSR allows energy suppliers to optimise their positions on the wholesale energy market. The prevalent DSR services being offered to consumers today involve Implicit DSR and these can be based on: simple peak/ off peak tariffs that require no active management of an ESA by a DSRSP (eg consumer "programs", usually via the ESA app, the start and end time of off peak period as well as the two corresponding peak and off peak prices into the ESA); or where a DSRSP

(usually an energy supplier) generates profiles and actively manages an energy appliance's energy consumption (or production) against wholesale energy prices.

The standardisation within PAS 1878 focuses only on the minimum requirements for where an ESA is generating profiles (some types of Explicit DSR) and how Implicit incentives are optimised against is left to innovation, including where a DSRP generates profiles and actively manages ESAs. As such, PAS 1878 does not standardise models or services where the DSRP generates profiles and actively manages ESAs, such as those prevalent and increasingly often offered to consumers today, particularly in relation to EV charging.

Summary of responses

Of the 36 respondents to the question, 24 agreed, 9 were neutral, and 3 disagreed. Those in agreement thought Implicit DSR also needed to be standardised to meet the government's interoperability objective. The reason for supporting standardisation was that Implicit flexibility makes up a large proportion of domestic DSR and provides benefits to consumers (through lower energy bills) or to a third party (such as being a tool in managing an energy supplier's imbalance position).

Those in disagreement did not think that Implicit DSR should be standardised, because it is unnecessary, will stifle innovation and result in worse outcomes.

Those who were neutral thought standardisation of Implicit DSR was a good idea in principle but that it was too early to implement standardisation because it may limit innovation, would impose compliance costs and complicate the transition from existing systems.

Government response

Government recognises that the large majority of stakeholders agree that both Implicit and Explicit DSR need standardising to achieve interoperability outcomes. As mentioned in response to Q40, government is working with industry to explore alternative ways to deliver interoperable DSR: this includes looking at how we can standardise Implicit DSR. We will continue to work with industry to develop a technical framework that enables interoperability for both Implicit and Explicit DSR.

Interoperability

Question 43 - How complex would it be for DSRSPs to update their system to have the functionality to interact with an ESA that uses a new approved standard? What would the likely timeframes be and how could the technical challenges be managed?

Summary of responses

We received 36 responses to this question.

Respondents highlighted that the complexity of integrating with new standards varies significantly. Simpler standards that specify system abilities are easier to comply with compared to those that detail Application Programming Interface (API) schemas. Integration

timeframes were expected to range from 18 to 24 months, depending on the complexity of the standard. Costs can be substantial, with estimates reaching up to £1.9 million per DSRSP for each implementation, and annual costs per supported standard around 10% of the implementation cost.

Many respondents raised that open engagement with industry stakeholders and providing advanced guidance and notice years ahead of implementation are crucial to ensure a smooth transition. Utilising well-tested solutions can simplify implementation and open up international opportunities. There were concerns about the additional work and costs if all providers are required to meet all standards.

To mitigate complexity and costs, respondents suggested using a base level mandated standard with optional approved standards add-ons. This approach would allow for evolution, innovation, and flexibility without forcing all products to comply with the new standard.

Government response

As set out in response to question 38, we do not envisage that an approach of approved standards giving a presumption of conformity will be used in future regulation: we expect to mandate compliance with designated standards. The responses provided are useful in helping us understand the challenges of using multiple standards for interoperability. We acknowledge the comments that complexity of integration can vary significantly, with simpler standards being easier to comply with than more detailed ones. We recognise the importance of providing sufficient time to allow for integration with new standards, and the preference for a single standard. We will continue to work closely with stakeholders through industry working groups to develop an effective standards approach.

Question 45 - Should DSRSPs be required to ensure that services they offer are interoperable with all ESA types that they offer that service to? (for example, a service for EV drivers should be compatible with any approved standards for EV charge points).

Summary of responses

Of the 38 respondents to this question, 16 agreed, 13 were neutral, and 9 disagreed.

Stakeholders generally recognised and supported the need for DSRSPs to be able to integrate with all models of a particular product type provided that there was an obligation on manufacturers to build ESAs per standard regulations with easy API access. Some stakeholders argued that to ensure interoperability, ESAs and DSRSPs need to be bound by the same level of interoperability requirements. Respondents also expressed concerns that costs would be too prohibitive for DSRSPs if too many standards were required to be supported.

Government response

Government’s aspiration is that where a DSRSP is providing a service for a type of ESA, that service should be accessible to any consumer that has that ESA product type. For example, if

a consumer has an EV smart chargepoint, they should be able to access any EV smart charging tariff or DSR service. When making requirements, government will consider impacts on stakeholders including consumers and industry. In the longer term, we will establish a technical governance group to provide advice to government on standards to include in the technical framework. This technical governance group will, in time, replace the ESA Technical Working Group and the expectation is that, as a minimum, both ESA manufacturers and DSRSPs will be represented in this group. The technical governance group would be part of the enduring governance arrangements and will help to minimise consumer detriment and strike the correct balance of costs. Industry involvement in the technical advisory group will mitigate disproportionate impacts on industry stakeholders, especially within a given ESA product type. If multiple standards are deemed necessary to achieve interoperability, then we expect that DSRSPs would want to integrate with these standards to maximise their market opportunities. If necessary, government will require DSRSPs to integrate with standards within the ESA product type they are providing DSR services for.

Question 46 - How should an approved standards approach be designed to ensure that the SSES cyber security, grid stability and data privacy objectives for devices can be met?

Summary of responses

There were 49 responses to this question, with 41 respondents providing their view on what should be included in the design of cyber security, grid stability and data privacy standards in scope of the SSES programme. 8 respondents provided no view, answering with no comment to this question.

A strong majority of respondents were supportive of creating and adhering to industry standards to ensure a common approach to interoperability, cybersecurity and data privacy. This included aligning with existing industry standards, such as ETSI EN 303 645 and ISO 270001, as well as existing regulations, including the Electric Vehicles (Smart Charge Points) Regulations 2021.

Many respondents also stressed the importance of creating a clear consistent framework for data privacy that includes General Data Protection Regulation (GDPR) compliance.

Regarding grid stability, there were no common themes across responses. A strong minority of respondents suggested: implementing dynamic response capabilities to voltage and frequency variations, incorporating protocols such as IEC 61850, enabling load shedding, and maintaining grid stability by back-up storage capability.

Question 47 - What information on the cyber security, data protection and grid stability criteria would industry need to be able to design a new approved standard?

Summary of responses

There were 29 responses to this question. In general, respondents stressed that more information was required to be able to answer the question as intended.

On cyber security, the majority of respondents suggested more information was required from government to design a new approved standard, including use-cases for different risk and threat scenarios. A minority of respondents also highlighted the need for NCSC input on any cyber security standard design.

On data protection, the majority of respondents reported that they have a common understanding of impact measures within current regulations, including GDPR and Distribution Connection and Use of System Agreement (DCUSA).

On grid stability, the majority of respondents said they have a common understanding of how the grid operates but require clearer definitions of the grid stability criteria and guidelines on device performance to provide specific feedback. There was acknowledgement that more information would likely be required from DSRSPs and ESA manufacturers on the exact reactive and cross-asset coordination capabilities they possess to mitigate grid stability issues.

Government response for questions 46 and 47

Government acknowledges the importance of industry involvement in creating and maintaining standards and ensuring any new standards fit appropriately with existing standards and regulations. Government also recognises the benefits of alignment with international and European standards and has a legal obligation to use international standards as a basis for SSES requirements where available and appropriate to do so. As set out in response to Q38, we do not envisage that an approved standards approach will be used for second phase regulations: we expect to mandate compliance with designated standards.

For phase 1 requirements, we intend to set Regulations in place that require all ESAs in scope to follow the most up to date version of ETSI EN 303 645 as a basis for cyber requirements. For further information on this, please refer to Q34 and 35. For detail on organisational cyber security standards, please refer to government's response to questions 10 and 11 in the section on 'Assuring the Cyber Security of Load Controllers' under the Licensing consultation.

There are already strict regulations governing the control, handling and protection of personal data under the UK GDPR. As such, government is not looking to incorporate additional data protection requirements.

For our position relating to grid stability, please refer to government's response to question 36.

Intellectual Property

This section of the consultation was part of the update on the PAS 1878 revision process and the potential need for additional technical specifications to increase the functionality or interoperability of the ESA. This may include using intellectual property developed by third parties: where access to this intellectual property is needed to meet the required technical standard.

Question 48 - What template of "open" or "fair and equitable" licence should government require before allowing technical specifications that require this intellectual property into the standard?

Summary of responses

There were 29 responses to this question. 23 respondents were in favour of a no-cost open option. These stakeholders felt that it was necessary to have a free open licence on intellectual property included in technical requirements to make sure there are low barriers for market entry and innovation which would lead to the lowest costs for consumers.

6 respondents did not have a preference for whether an open or fair and equitable template was used.

Government response

Government notes the benefits raised of a free and open licence expressed by respondents to this question. We will take this into consideration as to which standards form part of our future technical framework as part of on-going work and collaboration with industry.

Further development of the technical framework

Question 51 - Do you believe that in the future, homes with multiple devices will have problems (such as sub-optimal energy management, grid stability concerns, etc) if there is not an active management of the devices at a premises level?

50 stakeholders responded to Q51. 41 respondents believed that in the future, homes with multiple devices will have problems if there is not an active management of the devices at a premises level, 3 do not have an opinion one way or the other and 6 did not believe this would pose a problem. Those who thought that active management of devices at premises level was necessary, believed that this would: ensure grid stability, optimise energy use, and maximise consumer benefits. Those who were neutral or did not believe this would cause future problems thought that active management of devices at premises level would add complexity, raise costs and stifle innovation.

Question 52 - What is your definition of a Home Energy Management System (HEMS) and what, if any, role do you see HEMS having within the SSES technical framework?

61 stakeholders responded to Q52 and suggested what the definition of a HEMS could be and the role HEMS might play within the SSES technical framework.

Government response

Government maintains its position that we will not prioritise standardisation of HEMS as part of second phase device regulations due to the nascent nature of the market and relatively low levels of take-up compared to consumers with only one ESA, such as an EV smart charge point. We will continue to consider how device regulations could impact existing and emerging HEMS models and whether HEMS should be accommodated in future device regulation, noting that in the future more and more homes are likely to have multiple ESAs that will need managing collectively. We welcome the suggestions from respondents on how they define HEMS and will give them consideration as we continue the work of developing the technical framework.

Whilst we are not planning to include HEMS in second phase device regulations, controlling an ESA through a HEMS will be a licensable activity as we believe organisations offering these services pose similar risks to consumer protection and the electricity system as those controlling ESAs directly. Please see our government response to Q1, 2, and 3 in the licensing regime response for further details of how HEMS will be affected by the load control licence.

Second phase regulation: governance and delivery frameworks

In the consultation, we reiterated that governance for the SSES Programme is to be managed in three phases: development phase, transition phase and delivery phase. As we move towards the transition phase of the programme, we will be progressing with identifying a suitable mechanism for formalising governance arrangements with industry. The consultation set out that we would revisit whether delivering the governance through a new or existing body would provide better outcomes. Since the consultation, consideration has been given regarding the landscape of existing governance bodies in light of the live code reform project being undertaken by Ofgem. Therefore, it is felt that adding a new body and code to the sector is not appropriate at this time as it would not be consistent with the overall approach of streamlining the landscape.

We have been engaging with NESO, Elexon, RECCo and SECCo regarding their ability to deliver SSES governance functions through their existing codes or licence due to synergies with their current roles within the energy sector and as not for profit entities. We have assessed these bodies against the following criteria:

- *Freedom from any unmanageable conflicts of interest*
- *Stakeholder management*
- *Relevant expertise and synergies*
- *Ability to efficiently and fairly recover costs*
- *Feasibility*

We have also been engaging with stakeholders through our existing ESA Technical Working Group and ESA Security Working Group as well as our SSES Industry Advisory Group to gather feedback on our approach to implementing enduring governance. Following this engagement and assessment of NESO, Elexon, RECCo and SECCo our minded-to position is for Elexon to deliver SSES enduring governance through the Balancing and Settlement Code.

Elexon has wide subject matter expertise based on current work in the flexibility market meaning they would have oversight of the wider provision of demand flexibility to complement the flexibility provided by ESAs. Elexon also has operational expertise including as a central system delivery body, overseeing technical codes of practice (for metering) and compliance testing of meters against those codes of practices (including asset meters). Elexon engages widely with stakeholders in its code administration and other roles, including EV charge point manufacturers, OPSS, standards institutes and consumer representatives which are all key stakeholders for the SSES programme.

We will consult in 2025 on Elexon delivering SSES governance through the Balancing and Settlement Code and on further detail regarding the technical and security governance functions. We will also consult on changes to the Balancing and Settlement Code prior to implementation.

We welcomed views on the technical and security models and governance functions in the consultation. The sections below set out the government response on these elements of the consultation.

Question 53 - Does this list of technical governance functions (on p60/61 of the consultation) capture all the required functions to maintain the technical frameworks necessary to facilitate load control? Are other functions needed?

Summary of responses

We received 41 responses to this question, a majority (26) thought that the list of technical key functions the governance body may need to deliver captured the functions required to maintain the technical frameworks necessary to facilitate load control. A plurality (18) of respondents thought that no additional functions were required, a minority (12) felt they did not have enough knowledge to comment and 2 respondents recommended considering additional functions or an extension of the suggested functions.

A few respondents (3) were concerned that the governance functions set out were too prescriptive and cautioned against the impacts on growth and innovation of the market.

Government response

Government expects that a Technical Governance Group delivering the functions consulted on will be necessary to ensure the technical framework continues to meet the evolving needs of industry and government's policy objectives. This will ensure that the technical framework is maintained as the sector evolves and that interoperability outcomes continue to be met. We believe the functions consulted on provide a good basis for the technical governance group to meet interoperability requirements and recognise the need for further detail on what the technical framework will include: we will consult on more detailed technical governance functions before implementation.

We note that a minority of respondents were concerned that the governance functions were too prescriptive and may impact market growth and innovation. The exact functions of the Technical Governance Group are dependent on the approach to regulating technical interoperability. The functions consulted on represent the best assumptions on what may be needed and the parties likely to be involved. We are engaging with industry working groups to test thinking around how to regulate technical interoperability, which will include sharing models for how the technical framework should be maintained and what an appropriate governance approach would be. We will use the feedback from these working groups to inform our proposals for the Technical Governance Group and will consult on a more detailed technical governance functions list in the enduring governance consultation later this year.

Question 54 - Do you agree with the overall model of technical governance? Can you suggest any existing governance that would be well suited to take on this function?

Summary of responses

We received 50 responses to this question, a majority (31) were in favour of the overall mode of technical governance proposed. A minority (13) were neutral, and a small minority (6) were opposed.

Those who were opposed to the model felt the membership of the Technical Governance Group was not appropriate. The use of trade bodies to represent industry interest was seen as suboptimal because they generally lack the detailed expertise and experience required to assess the impact of proposals. The use of regulators to represent consumer interests was also seen as needing further consideration, with a respondent suggesting engagement with Community Energy organisations. The involvement of companies such as Sustainable Energy Association[20] and Innovate UK[21] were suggested because of their awareness of current activities, requirements and innovations taking place in the industry and market.

Those in favour thought the model looked reasonable and the detail would need to be worked out including: clear terms of reference, term limits, audit processes, budget, membership, voting structure, external review. Respondents suggested other governance arrangements that should be explored as good models such as the technical governance in Smart Metering and the governance of the Capacity Market Advisory Group.

Government response

As set out above, government is of the position that having a Technical Governance Group is necessary to maintain technical standards and interoperability. We are committed to making sure the consumer and industry voice is appropriately represented as part of this group. We will ensure the group is comprised of the right expertise and experience to enable appropriate decisions and recommendations to be taken as part of this governance forum.

We recognise that further detail regarding the technical governance model is required and will be consulting further on the proposed model in the enduring governance consultation later this year.

Question 55 - Does this list of security governance functions on p62 of the consultation capture all the necessary functions to deliver security governance? Are other functions needed?

Summary of responses

Of 40 respondents to this question, a strong majority (33) supported the proposed list of necessary functions to deliver security governance, 4 were neutral and 3 disagreed.

Of the 33 in support, 24 provided additional feedback and felt that the consultation paper's indicative list of functions to deliver security governance was a good starting point, and either

[20] Sustainable Energy Association - Member-based industry body
[21] Innovate UK – Part of UK Research and Innovation which is a non-departmental public body of Department for Science Innovation and Technology

reflected or mostly reflected what will be required to manage security needs on an enduring basis.

4 respondents cited smart metering as a good example of a security governance group and asked the government to seek to align the functions already in place for smart metering with security functions intended for CLF.

Some respondents asked for further detail on anomaly detection proposals. Many respondents noted they already deploy local logging and alerting within their organisation and that there was a general expectation that further requirements relating to anomaly detection will be required in future to mitigate the risk of a CNI-level impact on the grid. Introducing a Public Key Infrastructure (PKI) was supported by 3 respondents, with the caveat that any PKI would need to balance security interests with innovation and business needs.

Other themes raised include future-proofing functions to tackle new security risks, such as AI and quantum, following NCSC's Principles Based Assurance approach to governance, and introducing an Energy Smart Appliances register that logs the compliance assessments and certificates of ESAs.

Government response

We welcome the widespread support from respondents for the key security functions set out. We will endeavour to adopt good practice principles in the delivery of the Security Governance Group and take on board lessons learned from existing bodies where security governance works well, such as the Security Sub Committee for Smart Metering.

Since the publication of the consultation, we have worked closely with NCSC and Ofgem, as well as with industry stakeholders via our Security Working Group and beyond to determine what minimum security requirements for devices, organisations and systems in scope of the SSES programme are proportionate and appropriate for the first phase of regulations, and how these should be managed on an enduring basis.

Through this engagement and consultation feedback, we understood that a number of stakeholders are already deploying solutions at a local level to monitor, log and remain alert for risks in their own organisations, as well as encrypting internal messages and messages leaving the organisation. Stakeholders also advised that transitioning to more advanced monitoring systems would be too complex and expensive for many organisations at this time, with internal estimated costs of upwards of £250,000 to an individual business. In light of these considered operational and business impacts, as well as our understanding of current and projected CNI risks, we are not seeking to introduce common systems or mandate requirements pertaining to common systems as part of the first phase of the SSES programme. We recommend that organisations deploying or seeking to deploy local cryptographic solutions follow publicly available NCSC good practice guidance, for example on designing a Public Key Infrastructure[22] and using Transport Layer Security[23]. Similarly, for

[22] Public Key Infrastructure (PKI) design principles - NCSC.GOV.UK
[23] Using Transport Layer Security to protect data - NCSC.GOV.UK

those using hyperscaler platforms such as AWS or Azure, organisations should follow the best practices as detailed in the associated platform's guides.

Respondents noted they expected further requirements relating to anomaly detection to be required. We are not seeking to introduce a central anomaly detection function at this time. We will keep under review the need for a central anomaly detection function, as well as any other common systems requirements in future.

We recognise that further detail is required on the key security governance functions, including our approach to assurance and any potential common systems requirements introduced at a later date, and we will be consulting further on our minded-to proposals in the enduring governance consultation later this year.

Question 56 - Do you agree with the overall model of security governance? Can you suggest any existing governance that would be well suited to take on this function?

Summary of responses

Of the 48 respondents to this question, a majority (29) support the overall model of security governance proposed, 16 were neutral and 3 disagreed.

A key theme across respondents was the need for broad representation across industry and government, with specific suggestions to include Ofgem, NCSC, NESO, DNOs, industry experts, and relevant trade bodies.

Some respondents recommended integrating the Security Governance Group with existing governance frameworks for Smart Metering under the Smart Energy Code. Others did not suggest linking the two schemes together, but adopting lessons learned from the Smart Energy Code for the overall security governance of SSES cyber security requirements. Additionally, some respondents proposed that an independent body, such as Ofgem or NESO, should take on the role of chair of the Group on an enduring basis, rather than government.

Concerns raised with the overall approach centred around a need for greater clarity and detail around proposals.

Government response

We will ensure broad representation in the Security Governance Group across industry and government as set out in responses and will reflect on views regarding a suitable chair.

We do not intend to integrate the Security Governance Group functions into the existing Smart Meter Security Subcommittee however, as pointed out by respondents, we recognise there are a number of areas where the governance and functions of the Smart Metering Security Sub-Committee works well and we will take on lessons learned.

Further clarity on the proposed objectives, responsibilities and structure of the security governance group will be set out in our next consultation on enduring governance later this year.

Question 57 - Do you agree that electricity network licence holders are best placed to meet certain costs of setting up and maintaining technical and security frameworks during the Transition Phase? Please explain your answer.

Summary of responses

We received 52 responses to this question. A majority of respondents (34) offered broad support for the proposal for costs in the transition phase to be recovered via electricity network licence holders meeting governance costs in the transition phase with cost recovery. However, 10 respondents were unsure, and 8 opposed the proposal.

Among the respondents who agreed, 12 indicated that electricity network licence holders would be the primary beneficiaries of flexibility CLF, as it reduces the need for reinforcing infrastructure, therefore, it would be appropriate for them to bear the associated costs. There was also recognition from those in agreement that electricity network licence holders would directly benefit from the governance body maintaining security frameworks.

Others who agreed wanted government to avoid charges to manufacturers. They stated it may act as a barrier to entry for new organisations into the market and if these costs were to be passed onto consumers then it may reduce uptake of CLF decreasing the impacts which it will provide.

A small number of respondents stated consideration was needed on the potential of cost recovery mechanisms to increase costs for consumers, especially regarding lower income or vulnerable consumers.

Government response

The government's position on cost recovery continues to be that the costs of activities required to deliver SSES policy objectives should be recovered from those benefiting from these arrangements.

We are exploring how SSES governance functions could be delivered through existing industry structures such as the Balancing and Settlement Code. As such, alongside the option of recovering costs from electricity network licence holders, we also intend to work with Elexon to explore incorporating SSES costs into their existing cost recovery mechanisms.

This approach could reduce the administrative burden of a governance body having to manage a different cost recovery mechanism for SSES. We would also aim to ensure that the costs of activities required to deliver SSES policy objectives are recovered from those benefiting from the arrangements, depending on the details of the relevant existing mechanism. As raised in consultation responses, we recognise the importance of reducing costs to an emerging sector, as well as on lower income or vulnerable consumers, who may be less able to afford ESAs and therefore to benefit directly from the flexibility they provide and will take these points into account before taking any final decisions.

Question 58 - Do you agree with the proposed approach for recovering the costs of administering a licensing regime? Please explain your answer.

Summary of responses

We received 45 responses to this question. Of those 45, 19 respondents agreed with the proposed approach, 19 remained neutral and 7 disagreed.

Of those who agreed, some stated that licence holders should recover the costs of regulating the load control licence as this is in line with cost recovery for other competitive licences in the energy sector. 2 respondents agreed that electricity network licence holders should bear the costs of the wider governance structure (as set out in Q57) with licence holders assuming the cost of Ofgem regulating the load control licence. There was a sense that this provided a fair split of cost recovery across the sector.

A number of respondents asked to see more information about Ofgem's costs, with some stating they were unable to provide a full response until the costs were known.

Among those opposed to the suggested approach, many respondents strongly believed the costs should be charged to the Distribution Network Operators (DNOs). They argued that DNOs were the primary beneficiaries of the flexibility provided by DSR and these organisations could more easily absorb the costs compared to load control licensees.1 respondent suggested costs could be apportioned based on the size of the business. There was concern from some respondents that the cost recovery mechanism proposed could impose costs on an emerging market, acting as a barrier to innovation/market entry.

Government response

Government intends to align recovery of costs associated with Ofgem's resource for regulating the load control licence with cost recovery mechanisms used on certain other licences in the energy sector (for example, for supply and generation). This means we intend for load control licensees to pay an application fee directly to Ofgem and for all other costs to be recovered through Ofgem's existing cost recovery mechanism which covers gas transportation, certain electricity transmission, and electricity distribution licences[24].

We recognise the mixed views, with some respondents in support of load control licensees bearing more of the costs while others in favour of network operators and owners bearing more. To ensure simplicity, particularly for the launch of the licence, we believe it's important to align with existing Ofgem cost recovery mechanisms. We remain open to more costs being recovered through the load control licence as the market grows.

Ofgem have oversight of their cost recovery mechanisms including the general "annual licence fee" and provide guidance on the cost recovery principles which underpin it[25]. Adding additional costs to this levy will be subject to further Ofgem consultation.

[24] https://www.ofgem.gov.uk/publications/licence-fee-cost-recovery-principles-may-2024
[25] https://www.ofgem.gov.uk/publications/licence-fee-cost-recovery-principles-may-2024

Licensing regime

In the 2024 consultation, government put forward for consideration proposals for new legal requirements on organisations providing load control services to domestic and small non-domestic consumers. This included proposals on what type of organisations will require a load control licence and the licence requirements associated with consumer protections, consumer switching, cyber security and technical requirements, data privacy, and management and financial controls.

The aim of introducing new legal requirements on organisations providing certain DSR services and undertaking load control activity to domestic and small non-domestic consumers is to protect consumers and the electricity system, while supporting the growth of a competitive load control market.

Activities requiring a load control licence

In this section of the 2024 consultation, we declared our intention to require a load control licence for a subset of activities related to the definition of load control in the Energy Act 2023. We proposed that a licence would only be required for load control that is both 'remote' and 'direct', where 'remote' was defined as the sending of load control signals over relevant communications networks outside the premises at which an ESA is situated and 'direct' as load control that affects the load of an ESA without additional factors. We proposed that the following activities would require a load control licence:

- *Contracting with domestic or small non-domestic consumers for services including load control of certain ESAs for the purposes of DSR - organisations undertaking this activity are called 'DSR Service Providers' (DSRSPs).*
- *Load control of certain ESAs in domestic or small non-domestic settings for the purposes of DSR - organisations undertaking this activity are called 'DSR Load Controllers'.*
- *Load control of certain ESAs with aggregated maximum potential load of equal to 300MW or above - organisations undertaking this activity are called 'Large Load Controllers'.*

We also outlined our intention to use the licence as an intermediary route to regulate cyber security requirements for Large Load Controllers before parliamentary time allowed for updating the Network and Information Systems (NIS) Regulations 2018 to include Large Load Controllers as Operators of Essential Services (OES).

We further explained our intention to limit the scope of the licensable activity in three ways, proposing that the licensable activity would only apply:

- *To certain ESAs, such that those undertaking DSRSP and DSR Load Controller related activities would only require a licence if those activities were in relation to EVs, EV*

charge points (in domestic and small non-domestic settings), heating technologies that fall within scope of the smart mandate, and battery energy storage systems (BESS); and those undertaking Large Load Controller activities would require a licence if those activities were in relation to EVs, EV charge points in all domestic and non-domestic settings as well as public settings, heating technologies that fall within scope of the smart mandate, BESS, and ESAs that control wider loads in non-domestic settings.

- *For the purposes of DSR, such that those undertaking DSRSP and DSR Load Controller related activities would only require a licence if it was for the purposes of DSR. We defined DSR as changing, or the request to change, electricity consumption in response to price signals or instructions communicated to benefit any electricity market participant (e.g., changing load of a consumer's ESA in response to requests from DNOs to support grid or network operations).*
- *To domestic and small non-domestic consumers, such that that those undertaking DSRSP and DSR Load Controller related activities would only require a licence if those activities were in relation to domestic and small non-domestic consumers. We further proposed that consumer protections would extend to domestic and small non-domestic consumers, except protections related to consumers in vulnerable situations (these would apply to domestic consumers only. We proposed no protections would be extended to large non-domestic consumers.*

We proposed using a definition of small non-domestic consumers consistent with the definition for 'small businesses' in government's recent consultation on expanding availability of redress services to small businesses and the related Ofgem consultations[26]

- *employ fewer than 50 employees (or their full time equivalent) AND*
- *have an annual turnover of at most £6.5 million or balance sheet total of £5.0 million OR*
- *have an annual consumption of electricity of not more than 200,000 kWh OR*
- *have an annual consumption of gas of not more than 500,000 kWh.*

Finally, in this section of the consultation, we proposed that licensees would only need to comply with licence requirements which are relevant to the activities they undertake. This meant that we were proposing:

- *DSRSPs would need to comply with consumer protection, consumer switching, data privacy, and management and financial requirements.*
- *DSR Load Controllers would need to comply with cyber security, data privacy and management and financial requirements.*
- *Large Load Controllers would need to comply with a cyber security requirement which will direct them to the NIS regulations, and data privacy and management and financial requirements.*

[26]Consultation outcome: New threshold for businesses accessing the Energy Ombudsman' (2024), https://www.gov.uk/government/consultations/new-threshold-for-businesses-accessing-the-energy-ombudsman

Question 1 - Do you agree that activities of DSRSPs should require a load control licence? Please explain your answer.

Question 2 - Do you agree that activities of DSR Load Controllers should require a load control licence? Please explain your answer.

Question 3 - Do you agree that activities of Large Load Controllers should require a load control licence? Please explain your answer.

Summary of responses

In relation to question1, there were 39 respondents to the question. 31 agreed with the proposal, 4 were neutral, and 4 disagreed. Overall, responses indicated strong agreement with the proposal.

Of those in favour, several specifically highlighted the benefits that a DSRSP licence would bring to protect consumers and maintain consumer confidence in the market. Several also commented on the overall benefits licensing this activity would have in supporting energy networks and systems.

A number of responses also asked for government to provide more information on the scope of the licence, including use cases about which types of organisations will be in scope of the licence, such as third-party intermediaries and Virtual Lead Parties (VLP), and further clarity on the interaction with the supply licence.

Some respondents suggested that alignment with existing regulation would be important, particularly alignment with the supply licence which already includes a robust consumer protection regime. However, some respondents commented that the licence should be light touch to ensure innovation and growth is not stifled. 3 disagreed with the proposal altogether, citing the nascency of the market and that regulatory intervention could harm competition and growth of the market.

In relation to question 2, there were 39 respondents to the question. 32 agreed with the proposal, 2 remained neutral, and 5 disagreed. Overall, responses indicated strong agreement with the proposal.

Of those in favour, several respondents agreed that the proposal was proportionate to the risks to the grid and/or provided the necessary assurance to mitigate these risks. Some of these respondents commented that licensing DSR load controllers would support grid stability in local clusters where a single point of failure in an ESA could result in local loss of supply. Some respondents commented that the proposal would support a level playing field for load control activities and 1 mentioned that licensing both DSR and Large Load Controllers would support smaller load controllers transition to the regulatory requirements associated with Large Load Controller activity.

Several respondents raised questions and concerns related to the need for government to provide more information. A number of respondents commented that more information was

needed about organisations in scope, including third party intermediaries and device manufacturers and a few on how the licence framework would interact with electricity supply licences and/or existing industry codes. 2 respondents suggested that including all organisations involved in facilitating load control in scope would be needed to ensure a weak link did not pose a threat to grid stability. 1 respondent commented on the role DSRSPs play in sending potential peak load and/or annualised consumption units to load controllers. A small number of respondents asked for more clarity on whether remote and/or direct load control would be in scope, whether load control activity would be determined by aggregated or maximum potential load control, including how this would apply to tiering, and whether sending tariff and demand profiles would be in scope of the load control licence.

Some respondents that disagreed with the proposal commented on their preference for only licensing DSRSPs, where DSRSPs would be responsible for compliance with licence requirements related to the Load Controller licensable activity (as opposed to separately licensing Load Controllers). 2 of these respondents also commented on existing device cyber security standards, suggesting that they were sufficient to provide assurances against security threats. 2 respondents commented on the possible need to consider consumer protection obligations for Load Controllers and/or an approach which ensured DSRSPs could effectively refer consumer issues to Load Controllers and those Load Controllers be held to account.

In relation to question 3, there were 40 respondents to the question. 34 agreed with the proposal, 2 remained neutral and 4 disagreed. Overall, responses indicated strong agreement with the proposal.

Of those in favour, many specified that introducing a load control licence for the activities of Large Load Controllers was proportionate to the risks these activities pose to the grid and/or to Critical National Infrastructure.

However, many respondents also raised concerns and/or questions about how the tiering approach to cyber requirements for load controllers moving between under and over 300MW load control will work in practice. Some respondents commented on the need for a nuanced approach to DSO networks, suggesting that under 300MW load controllers with a high demand density in a local area could pose a similar threat to grid stability as Large Load Controllers. 2 respondents asked for more clarity on whether load control activity would be determined by aggregated or maximum potential load control, with 1 suggesting a nuanced approach may be needed for specific ESAs, such as EVs, which typically charge for lower amounts of time than other ESAs. 1 respondent commented on their preference for tiering to be based on maximum potential load capacity over the maximum potential capacity of a site. Of those that disagreed, 2 respondents re-iterated their preference for only licensing DSRSPs. 2 respondents re-iterated the possible need to consider consumer protection obligations for Load Controllers.

Government response

Government will license DSRSPs and Load Controllers providing domestic-scale DSR services (both Load Controllers controlling loads under 300MW and 300MW and above). This means there will be two types of licensable activity, and a load control licence will be required if an

organisation undertakes one or more of these activities. One licensable activity will be focused on controlling load on ESAs, making any organisation undertaking this activity a Load Controller, and the other on entering into arrangements with consumers related to this load control, making any organisation undertaking this activity a DSRSP (see sections below for further details of these licensable activities). Please see our response to Q5, 7, and 8 for further details on why there will now only be a single “Load Controller” licensable activity and why we no longer intend to use DSR Load Controller and Large Load Controller terminology to differentiate between Load Controller licence holders.

We acknowledge some limited concerns about the effect a licence could have on a nascent market. However, we remain committed to the view that the load control licence will protect consumers adopting consumer-led flexibility services which involve load control and support government’s ambition for consumer-led flexibility to play an integral role in modernising our energy system as we move towards Clean Power 2030 and Net Zero. Given the risk that controlling load on ESAs poses to grid stability and the maintenance of electricity networks, particularly due to the threat that malicious cyber-attacks pose, we believe it is proportionate to license Load Controllers as well as DSRSPs. Giving Ofgem regulatory oversight of Load Controllers’ obligations will ensure that Ofgem have powers to take enforcement action directly against Load Controllers that fail to comply with the obligations set out by the licence. We note the strong support for this proposal.

We welcome the asks in consultation responses for more information on the types of organisations that will be subject to the load control licence. The intent of the licence is not to regulate specific types of organisations. We believe requiring a licence in relation to certain load control activities rather than organisation types will support the variety of business models found in these markets, leading to better growth and innovation. Any organisation undertaking one or more of the licensable activities will require a load control licence. Please see our response to Q9 for further detail on how licence requirements will differ depending on the licensable activities) undertaken.

Nevertheless, some examples of organisations we do not expect to require a licence are:

- ESA manufacturers that have the ability to remotely control load on an ESA but do not use this ability for the purposes of load control i.e., they only send firmware updates to an ESA
- Manufacturers/app providers/web interface providers/software providers that enable consumers to control load (e.g., setting charging schedules) on their ESA without any organisation controlling load on the ESA themselves through load control signals.
- Platforms producing data that may be used to inform load control decisions, such as weather, carbon intensity, demand or tariff data, unless these platforms are also controlling load on ESAs.
- Grid system operators/network operators
- Retail energy suppliers who are neither undertaking load control nor offering load control services.

Please also see our response to Q55 for further details on our approach to licensing energy suppliers also undertaking load control activities.

Load controllers

We expect organisations that have the ability to control or configure an in-scope ESA within a domestic or small non-domestic setting to require a licence as a Load Controller, unless related to certain out of scope activity. The table below represents our current view as to what these out-of-scope activities are likely to be. These activities have been excluded from requiring a licence on the basis that, while they support the provision of load control services, they do not pertain to load control itself.

The wording in the table below does not represent legal drafting and the list of examples of out-of-scope services may not be exhaustive. The wording used is intended to bring further clarity to what we mean by "remote" load control. While we had proposed in the 2024 consultation that only undertaking "direct" remote load control would require a licence, we have decided that configuring the load control of ESAs in response to certain data, such as tariff, weather or grid carbon intensity data will also require a licence. For clarity, the activity of sending data to an ESA in isolation will not. We will not licence organisations that provide APIs which would allow consumers to link their ESA to certain data, such as a TOUT, unless the organisation takes an active role, through sending load control signals, to control or configure the load control response of the ESA in response to this data.

We will be working with industry during our development of draft regulations, including testing approaches to ensure we don't disproportionately bring into scope load control activity which is not linked to supporting increased flexibility of electricity system. We will consult on these draft regulations in our next licensing consultation.

Table 1 – Load controller activity in scope of a licence

Licensable Load Controller activity	Out of scope activity
• The ability to remotely control or configure an ESA for the purpose of adjusting the immediate or future flow of electricity into or out of the ESA or another relevant appliance controlled by an ESA (unless, in any case this activity is related to one of the out of scope activities); this may be via any software or other systems, including HEMS, which enables the load controller to facilitate the adjustment to be made. By "control", we intend for this to capture load controllers that have the effect of	• Manufacturers that have the ability, through a load control signal, to remotely adjust the immediate or future flow of electricity into or out of an ESA but do not use this ability for the purposes of load control i.e., they only send firmware updates to an ESA • Sending tariff (or other) data to an ESA, where the load-control response of the ESA to that data is not controlled by the organisation sending the data e.g., a manufacturer enabling configuration of an ESA through an

adjusting the immediate or future flow of electricity into or out of an ESA through a load control signal. By "configure", we intend for this to capture load controllers who have the ability to change the parameters or functions of an ESA, through a load control signal, that has the effect of adjusting the immediate or future flow of electricity into or out of an ESA. This would include configuring the load control response of an ESA to certain data, such as tariff, weather or grid carbon intensity data, but not the activity of sending data to an ESA in isolation (see right for out-of-scope activities).	API (without actively configuring the device through load control signals themselves) • The configuration of an ESA prior to installation in a consumer premises. • Consumers controlling or configuring load on their own ESA, either through local and/or remote control e.g., via a home assistant

DSRSPs

All organisations entering into arrangements with a domestic or small non-domestic consumer for the purposes of providing a service which involves load control in scope of the licence framework will require a licence as a DSRSP. This means that, where an organisation enters into arrangements with a domestic or small non-domestic consumer to provide a service that pertains to load control they will be required to hold a licence, whether or not the load control activity is also being undertaken by themselves. The table below includes examples of flexibility services which would not require a licence because they would not include activity pertaining to load control. The wording in the table below does not represent legal drafting and the list of examples of out-of-scope services is illustrative rather than exhaustive. We will be working with industry during our development of draft regulations, and we will consult on these draft regulations in our next licensing consultation.

Table 2 – DSRSP activity in scope of a licence

Licensable DSRSP activity	Out of scope services
• Entering into arrangements with a consumer that pertains to load control (see above table for what pertains to load control)	Examples of services which would not require a licence would be: • An app/web interface service which enables a consumer to control load (e.g., setting charging schedules) on their ESA without any organisation undertaking activity

	pertaining to load control in relation to that ESA. • A TOUT service which involves tariff data being sent to an ESA without any organisation configuring the load control response of the ESA to that data.

Licensees working with other organisations

We are aware of various business models in the market. As per the 2024 consultation, there will only be one load control licence (rather than a separate DSRSP and Load Controller licence) but certain requirements within the licence will only apply to a DSRSP. In contrast to the 2024 consultation proposals, we have now decided that all licence requirements except consumer protections will apply to both DSRSPs and Load Controllers. Consumer protections will only apply to DSRSPs. Please see our response to Q9 for further detail on how licence requirements will differ depending on the type of licensee.

A licence holder will be wholly responsible for ensuring the licence obligations are met in relation to the licensable activity. This means that where third parties undertake activities on behalf of a licensee, the licensee will remain the responsible party for the relevant licence requirements. We believe this is essential for maintaining clarity to consumers and to Ofgem on whom the responsible party is for complying with licence requirements.

Question 4 - Do you think there should be any further activities that should require a load control licence? Please explain your answer, and expand on any further activities where relevant.

Summary of responses

There were 36 respondents to the question. In general, there was a running theme of respondents wanting the licensing framework to be as adaptable as possible to ensure it can react to an evolving market.

A few respondents asked for more clarity about which types of entities fall within scope of the licence or specifically mentioned other organisations involved in the provision of load control services, such as software providers, HEMS and intermediaries like community energy groups, suggesting that these could be considered within scope of a licensing regime either now or in the future.

A few respondents mentioned other smart appliances that were out of scope of the licensable activity such as electric radiators and non-storage batteries, suggesting that government may want to re-consider this to futureproof the development of these markets and protect against loopholes in consumer protection. 2 respondents commented on consumers manually controlling load, suggesting the possibility of bringing these within scope of the licence and the

need to ensure these consumers are adequately protected. 2 respondents mentioned the possibility of needing more network-wide collaborative reporting requirements, such as reporting on generation profiles in local areas, to ensure that load control events do not interfere with one another and facilitate response to variations across shared assets.

Government Response

At this stage, we do not think there is sufficient evidence to include other activities within the scope of the load control licence. As set out in the 2024 consultation, the load control licence is intended to be a regulatory vehicle to support government's ambition for the growth of demand flexibility through specific ESAs within domestic and small non-domestic settings. The powers under the Energy Act 2023, and the amendments it makes to the Electricity Act 1989, enable government to require licences for activities around the sending of load control signals over a relevant electronic communications network to ESAs, rather than wider flexibility activity such as consumers manually switching appliances on and off in response to price signals.

Whether certain types of organisations will require a licence will depend on the activity that they undertake. Our response to Q1-3 provides detail of what we expect to be in scope of the licensable activities.

For the launch of the licence, including other activities, ESAs and/or consumer types may be disproportionate and put undue regulatory pressure on organisations, with minimal benefit to the consumer and the grid. Please see our response to Q5, 7, and 8 for further detail on our approach to ESAs and consumer types in scope of the licence framework. Government will continue to monitor the development of various aspects of the consumer-led flexibility market to ensure that the licence framework adapts at the appropriate time. We will work with Ofgem to ensure reporting requirements on the sector are sufficient to achieve government ambitions for the services in scope of the licence.

Question 5 - Do you agree with government's proposal to limit the scope of the licence to certain ESAs for each activity proposed in this chapter? Please explain your answer.

Question 7 - Do you agree with Government's proposal for protections around DSR in this licence to cover small non-domestic consumers? Please explain your answer.

Question 8 - Do you think the scope of DSR protections in the load control licence should extend to larger non-domestic consumers too? Please explain your answer.

Summary of responses

In relation to question 5, there were 37 respondents to the question. 20 agreed with the proposal, 9 remained neutral, and 8 disagreed. Overall, there was broad agreement with the proposal.

Of those in favour, a number commented that government had picked the most mature ESA markets and this would provide clarity to industry, with some mentioning that including small load devices within scope of the licensing framework could slow down innovation. However,

some respondents suggested that the licensing regime should future proof DSR markets evolving in white goods and PV solar panels, including highlighting that in volume these would pose risks to the grid.

A few respondents questioned whether leaving some ESAs out of scope provided less certainty for industry. For example, innovators may be less confident about developing smart white goods due to uncertainty about regulations being introduced in the future.

In relation to question 7, there were 36 respondents to the question. 28 agreed with the proposal, 6 remained neutral, and 2 disagreed. Overall, there was strong agreement for the proposal.

Several respondents in favour commented that small non-domestic consumers have similar energy consumption to domestic consumers and equally little capacity to negotiate fair energy contracts.

Many respondents commented on the definition of small non-domestic consumers, declaring their preference for it to be aligned with the definition proposed in the consultation. Although, one stakeholder mentioned that the £6.5mn turnover threshold is not aligned with the turnover element of the definition of a small business given by Companies House (£10.2mn), which risks leaving many small businesses who meet the other eligibility thresholds without sufficient protections.

One respondent questioned whether a load controller (working distinctly from a DSRSP) could know whether they would be handling different types of consumers.

In relation to question 8, there were 36 respondents to the question. 10 were in favour, 11 remained neutral, and 15 disagreed. Overall, there were mixed views about the proposal.

Those that were in favour, highlighted the maturity of the large non-domestic market, the existence of bespoke arrangements between consumers, and the established voluntary standards scheme Flex Assure[27]. However, another respondent commented that Flex Assure was a voluntary scheme and thus did not necessarily offer many large non-domestic consumers protections.

Of those that disagreed, some respondents mentioned changes within the supply market with some consumer protections extended to large non-domestic consumers and the need for consistency with these changes. A few respondents suggested that it was important to be consistent across all non-domestic consumers, with 1 of those suggesting that it could be more difficult for licensees to verify which businesses surpass the threshold of Ofgem's definition.

Some concerns were raised about large non-domestic consumers posing a threat to grid stability, while others acknowledged that these risks would be mitigated by licensing Large Load Controllers.

[27] https://www.flexassure.org/about

Government response

Government has decided that a load control licence will only be required by an organisation if it is capable of controlling the load of 1) EVs, EV charge points, heat technologies that fall within the smart heat mandate, or domestic-scale BESS; or where it is capable of controlling such technologies via another ancillary device and 2) where those ESA(s) are within domestic and small non-domestic settings. This means the following ESA and consumer type criteria will determine whether a licence is required:

Table 3 – ESAs and consumer types in scope: Effect on requirement for a licence

		Is the organisation a Load Controller of, and/or has it entered into arrangements for Load Control of domestic and/or small non-domestic consumers?	
		Yes	**No**
Is the organisation a Load Controller of, and/or has it entered into arrangements for Load Control with, a consumer in relation to the following: EVs, EVSCP, heat tech within smart mandate, BESS?	**Yes**	Requires a licence	No licence
	No	No licence	No licence

We also expect the consumer protection requirements within the licence to only apply in relation to domestic and small non-domestic consumers, except protections related to consumers in vulnerable situations (these would apply to domestic consumers only). This is because, to ensure that all large non-domestic consumers were protected equally, we would need to require DSRSPs and Load Controllers that have only large non-domestic customers to be within scope of requiring a licence. At this stage, we believe this could introduce a disproportionate level of complexity, where large non-domestic consumers have more complex energy needs and bespoke contract arrangements with their flexibility providers. We do not think this is proportionate at this stage of licence development. We remain open to extending the scope of the licence to introduce minimum standards of consumer protections at a future stage of the licence.

Licensing approach to load controllers and impact on scope

Since consulting, we are now minded to use a legislative route to bring Load Controllers controlling loads of 300MW or above into scope of Schedule 2 of the NIS Regulations 2018, as deemed designated OES. As per the 2024 consultation, this is our preferred route due to the

significant role Load Controllers controlling loads of 300MW and above will play in a highly connected electricity system and the risk of unacceptable impacts on the electricity system and on Critical National Infrastructure (CNI), should these organisations be compromised.

As our proposal is now that 300MW and above Load Controllers are subject to cyber requirements to be set out in NIS, we no longer believe there is a need for the scope of the licence to differ in respect of ESAs and consumer types depending on which type of licensable activity is being undertaken, as we had proposed in the 2024 consultation. This means only licensable activities undertaken in relation to EVs, EV charge points, heat technologies that fall within the smart heat mandate, BESS (or control of these technologies via an ancillary device), where this activity is undertaken within domestic and small non-domestic settings, will be in scope of the licence framework. No aspect of the licence will now apply to a wider set of ESAs and/or large non-domestic consumers.

As a result of these changes, in contrast to the 2024 consultation proposals, there will now only be a single “Load Controller” licensable activity (consistent with our response to Q1 – 3) and we no longer intend to use DSR Load Controller and Large Load Controller terminology to differentiate between Load Controller licence holders. Load Controllers undertaking load control in relation to the ESAs set out above within domestic and/or small non-domestic settings will require a licence regardless of the capacity of load they control and the threshold of load control with aggregated maximum potential load of 300MW or above will apply in respect of cyber security requirements under the NIS Regulations.

Further detail is provided in the ‘Government Response’ sections to Q9, 10 and 11 on the cyber security approach within the licence.

Scope of NIS

We continue to believe there are cyber security risks associated with Load Controllers that manage loads of 300MW and above and a wider set of ESAs in large non-domestic settings. Large non-domestic consumers and the wider scope of ESAs proposed for Large Load Controllers in the 2024 consultation will continue to be used for designating OES in scope of NIS regulations. This means, for the purpose of NIS Regulations, we propose that organisations who manage domestic and small non-domestic loads of 300MW or above, as well as industrial and commercial loads of 300MW or above, will be deemed designated as OES, and this will apply to the following ESAs: EV charge points in all domestic and non-domestic settings, EVs, Heating technologies that fall within scope of the smart mandate, BESS, and ESAs that control wider loads in non-domestic settings.

For the purpose of NIS, we also recognise the key role of aggregators that would neither be a DSRSP nor a Load Controller but engage in flexibility services or support load control activity. As such, we intend to bring aggregators controlling 300MW load and above into scope of NIS requirements given the key role they will play in flexibility services and the wider risk they pose to the grid.

While we do recognise that a licence also covering a larger set of ESAs and consumer types, as is being proposed for NIS, could provide protections to a larger number of consumers, we believe due to added complexity, at this stage, that this would be a disproportionate intervention. We remain open to extending the scope of the licence as evidence of further risks associated with a larger set of ESAs and large non-domestic consumers emerge.

Defining small non-domestic

We will continue to consider the best way to define small non-domestic settings to provide clarity to non-domestic service providers about whether they will require a licence, and for DSRSPs that are licensed which non-domestic consumers will be in scope of receiving the consumer protections set out in the licence. We continue to see merit in defining small non-domestic consumers in relation to company size, financial position and consumption (as proposed in the consultation), particularly for the purposes of transparency to consumers about whether they would receive certain consumer protections. However, we welcome the feedback that Load Controllers, who are not also DSRSPs, may not readily have access to this data. Given the implementation challenges associated with a scenario where a Load Controller may not easily be able to identify whether or not it requires a licence, we believe we need to consider the definition of small non-domestic further.

We have also considered using a definition of small non-domestic consumers consistent with the designated premises approach that will be used for determining tariff data in scope of tariff data interoperability requirements (see our response to Q2 in the tariff data interoperability section). Under this option, a licence would only be required where the licensable activity is undertaken within a domestic and/or a designated premises:

- A designated premises is a non-domestic premises with a metering point in profile class 1-4 (as defined in the Balancing and Settlement Code on 30 November 2012)[28].

Under this definition of designated premises, DSRSPs and Load Controllers would be able to identify which of their consumers would be classified as “small non-domestic” through identifying a premises’ profile class within the associated MPAN. This would mean that a DSRSP and/or Load Controller providing services to non-domestic premises only would be able to identify whether they fall within scope of requiring a licence by virtue of whether any of their consumers’ MPANs include a profile class 1-4.

However, we are aware that Elexon are replacing meter profile classes as part of Market-wide Half Hourly Settlement (MHHS) reforms. As such, we are uncertain about whether any new way of designating premises will use a classification system which would continue to be identifiable through a consumer’s MPAN. We do not believe this will be an issue for suppliers as any new definition will take into account the needs of suppliers identifying “designated” premises (hence our commitment to use this definition for our tariff data interoperability approach). However, at this stage, we are uncertain about whether the same would apply for all DSRSPs and Load Controllers. If prospective load control licensees were not easily able to

[28] A non-domestic premises is broadly a premises where electricity is not supplied wholly or mainly for a domestic purpose (the full definition, including certain situations where a premises is specified to be non-domestic, is set out in condition 6 of the Electricity Supply Standard Licence Condition).

identify whether they provided services to a designated premises, this could cause complexities for certain DSRSPs and Load Controllers identifying whether they require a licence.

Furthermore, for the purpose of defining which consumers will be in scope of consumer protections, we will need a way of defining “small non-domestic” which will be easy for DSRSPs to identify which of their non-domestic consumers fall within this category. While this definition does not need to be the same as the definition we use for defining the scope of the licence, we want an approach that is consistent and effective, while protecting the necessary consumers. Therefore, while at this stage of licence development, government is committed to licences not being required by organisations providing load control services to large non-domestic consumers only, and for consumer protections not to be extended to large non-domestic consumers, we are still considering the best approach for implementing this.

Question 6 - Do you agree with government’s proposal to limit the scope of some of the activities in the licence (consumer contracting for load control and load control below 300MW) to load control for the purposes of DSR? Please explain your answer.

Summary of responses

There were 34 respondents to the question. 20 agreed with the proposal, 11 remained neutral and 3 disagreed. Overall, there was broad agreement with the proposal.

Of those in favour, the main support related to few use cases for regulating load control activity outside of DSR. 1 respondent also mentioned that it was helpful to clarify to industry and consumers that it is load control activity for the purposes of DSR that is being regulated.

However, there were some comments about the need for an unambiguous definition of DSR and ensuring that the scope can be expanded as the market develops. Some respondents also questioned whether 'for the purposes of DSR' was relevant when mitigating cyber security risks, with 1 respondent mentioning that some remote controls associated with EV vehicles, for example, would not be in relation to DSR e.g., remote charge point control, software/firmware updates. Although, it was noted that these are lower risk.

Government response

At this stage, we are still considering whether defining ‘for the purposes of DSR’ into regulations is the most effective way of achieving our policy intent. Our response to Q1, 2, and 3 covers the load control activity and DSRSP services which we expect to be in scope of the licensable activities. We also welcome and support feedback that an unambiguous definition of DSR would be needed and could need expanding as the market develops. We will be testing draft regulations with industry upon launching our Licensing Working Group before consulting on these draft regulations further.

Question 9 - Do you agree with Government’s proposal for licensees to only be responsible for compliance with particular conditions in the licence related to the activity or activities they carry out? Please explain your answer.

Summary of responses

There were 34 respondents to the question. 26 agreed with the proposal, 4 remained neutral and 4 disagreed. Overall, there was strong agreement for this proposal.

Of those in favour, many respondents commented on the approach being proportionate, streamlined and/or an effective and measured way to ease regulatory burden on market participants, including supporting new entrants to the market. 1 respondent stated that this would provide additional clarity to the market to assist in commercial partnerships between different organisations undertaking different activities.

Some respondents welcomed further clarification on how this would apply in practice, including the request for use cases and/or guidance. 2 respondents commented on the need to ensure robust governance across various different supply chains and the need for licensed parties to be held accountable to Ofgem even where third-parties may be at fault. 1 respondent commented that the compound effect of licences across multiple parties would need to be as rigorous as a single licensable activity framework.

2 respondents took the opportunity to comment on wider regulatory reforms, such as NESO, the review of electricity market arrangements (REMA) and NIS, with 1 suggesting NESO and REMA should be the primary vehicle for ensuring grid stability and the other suggesting NIS should be used as the vehicle to regulate load controllers with a single DSRSP licensable activity.

Respondents against the proposal mainly focused their comments on the overall scope of the licence, with 1 respondent re-iterating their preference for licensing DSRSPs only and another commenting that the focus of the licence should be on interoperability, security and operational standards.

Government response

Government will continue with its intention for licensees to only be responsible for compliance with particular licence conditions related to the licensable activity they undertake. Other regulatory activity such as REMA and NIS, in isolation, will not capture all of the interventions which we intend the licensing framework to introduce. We believe licensing DSRSPs and Load Controllers will be essential for maintaining regulatory oversight, particularly as consumer-led flexibility markets develop further.

As mentioned above, it is proposed that Load Controllers managing loads of 300MW and above will additionally be subject to the NIS Regulations 2018. We expect this to be implemented in a way which would mean that 300MW or above Load Controllers will still be subject to a cyber security condition in their licence (and we will set this out in accompanying guidance to the Load Control Licence so that this transition is clear to load controllers). Further detail is provided in the ‘Government Response’ sections to Q10, 11 and 53 on the cyber security approach within the licence.

We have also decided that DSRSPs should be subject to cyber requirements through the licence. DSRSPs have the potential to indirectly effect load control as they will set the parameters of asset demand/export via partner load controller organisations. If a DSRSP is compromised, this could lead to malicious signals being sent to the load controller and thereby risks to the security of the electricity system. We recognise that connectivity across the domestic-scale flexibility landscape is complex and multifaceted, and we will seek to establish clear demarcations for accountability in the licence and NIS amendments to support enforcement. Please refer to 'Government Response' sections to Q10, 11 and 53 for further detail on the cyber security approach within the licence.

Noting concerns in responses to other questions in the consultation around ensuring the stability of the grid in response to a DSR request, government have decided that specific grid stability requirements will be placed on DSRSPs and Load Controllers through the licence and we intend to consult on the detail of this as part of a future consultation on licence conditions.

This means we are now proposing that licensees will need to comply with the following licence requirements depending on the licensable activity or activities that they undertake:

- Load Controller licensees will need to comply with all licence requirements except consumer protections such that the following will apply: cyber security, grid stability, and management and financial requirements.
- DSRSP licensees will need to comply with all licence requirements: consumer protection, consumer switching, cyber security, grid stability, and management and financial requirements.
- Licensees that are both a DSRSP and a Load Controller will need to comply with all licence requirements: consumer protection, consumer switching, cyber security, grid stability, and management and financial requirements.

Detail of our approach related to the individual aspects of the licence is provided in the rest of the 'Licensing regime' section of this document.

Assuring the cyber security of load controllers

This section of the consultation proposed to use a tailored Cyber Assessment Framework (CAF) profile for DSR Load Controllers controlling loads below 300MW and a separate tailored CAF profile for Large Load Controllers managing equal to or above 300MW. The CAF, developed by NCSC, is an outcome-focused framework designed to assess the cyber resilience of organisations.

This section also set out principles for the security assurance framework to ensure it is fit for purpose. Chapter 8 of this consultation included the government's proposals to tier requirements for Load Controllers based on total potential load, with Q53 addressed here for relevance and completeness.

Question 10 - Do you agree with the four assurance principles? If not, please explain your answer.

Summary of responses

Out of 41 responses to this question, 36 respondents supported the four assurance principles, 3 were neutral, and 2 disagreed.

Six respondents recommended that the CAF should align with existing international cyber security certifications, such as ISO27001 and IE62443, to avoid duplicative requirements on organisations and reduce overall costs. These respondents suggested that organisations should demonstrate compliance from the start of their operations, either before the licence is issued or within a specified short period after the licence is granted. They said this approach aims to ensure that cyber security measures are implemented and adhered to from the beginning, rather than relying on future audits to reveal non-compliance.

Five respondents highlighted the need for a flexible and adaptable assurance approach that is outcomes-based and reflective of the latest market developments. Three respondents commented on the tiered security approach, emphasising that it should be proportionate to the size of the load controlled.

Of the respondents who disagreed, it was remarked that further clarification on tiering and defining load volume was necessary and that the fourth principle on transitioning between tiers could require organisations to undergo significant operational and compliance changes to meet the outcomes required of the Large Load Controller profile.

Question 11 - Do you agree that two tailored CAF profiles, one for DSR Load Controllers and a separate profile for Large Load Controllers, is the right approach to organisational assurance for assessing licensed Load Controllers? Please explain your answer.

Summary of responses

Out of the 39 responses to this question, 27 respondents supported having two tailored CAF profiles, 7 were neutral, and 5 disagreed.

Of the 27 respondents who supported having two tailored CAF profiles, 21 specifically highlighted the importance of creating profiles and assurance frameworks that are realistic and achievable, given the existing technological and resource limitations in this emerging field.

Six respondents emphasised the need for consistency across profiles to ease the transition to Large Load Controllers and align with NIS-regulated sectors, ensuring the CAF is consistently applied. They also expressed the need for additional details on how the transition between tiers would work in practice to ensure it is smooth and minimises any potential disruptions.

Additionally, six respondents requested that the CAF be aligned with ISO27001 and other commonly used frameworks and standards rather than creating bespoke UK arrangements. Five respondents asked that the CAF profiles and assurance regime be developed in recognition of current technological and resource constraints in this nascent sector and sought further details on the assurance regime. Four respondents sought clarity on the transitional approach between tiers to ensure it is smooth and without undue burden.

Of the respondents that disagreed with the creation of dual tailored CAF profiles for load control, three raised concerns about increased risk to system resilience and grid stability from a tiered system. They argued that all load controls should demonstrate compliance with the same CAF profile to avoid the risk of insecure assets and sub-optimal cyber security. One respondent suggested lowering the threshold below 300MW, while another opposed Ofgem being the licensing body. Additionally, there was concern that customers could unknowingly face varying levels of risk depending on whether their ESA is managed by a large or small load controller.

Question 53 - Do you agree with the approach on tiering requirements for Load Controllers based on how much load they have the potential to control? Please explain your answer.

Summary of responses

Out of the 36 responses to this question, 30 respondents agreed with the proposal, 3 remained neutral, and 3 disagreed.

Of those that agreed with the proposal, many cited the logic in the consultation that more load control capacity carries greater risks to the grid and therefore regulatory burden should reflect this. Two respondents highlighted that the approach is consistent with the approach under NIS.

Three respondents suggested that demand density of distribution networks needed to be considered in the approach where significant control of a local network could pose significant grid stability risk e.g., a community retrofit project. One respondent highlighted the risk of tiering leading to company group structure gaming where a parent company might evade higher cyber security requirements by undertaking its activity through a series of smaller companies.

Two respondents took the opportunity to ask government to provide more information on how the process of moving between tiers will work in practice.

Government response for questions 10, 11, and 53:

The government welcomes feedback on the four assurance principles set out and on tiering requirements through the creation of two tailored CAF profiles for load control determined by the managing load of 300MW or above. We note that a strong majority of respondents expressed support for all policy positions set out.

Since the publication of the consultation, we have continued to work closely with NCSC and Ofgem, as well as with industry stakeholders via our Security Working Group, and have decided we will draft two tailored CAF profiles for load control:

- A CAF profile for Load Controllers managing below 300MW of load
- A CAF profile for Load Controllers managing equal to or above 300MW of load

Both profiles will be subject to future consultation later in 2025. We will ensure that the outcomes set out in both CAF profiles are proportionate to the risks posed by each tier of organisation to provide alignment and consistency between tiers, and to not create unnecessary barriers to entry. By its nature, CAF is designed to align well with internationally recognised good practice frameworks such as those highlighted by respondents, and compliance with these frameworks would contribute towards an organisation meeting the CAF.

Both CAF profiles will have accompanying industry guidance to support organisations in their implementation where existing guidance is not sufficient, ensuring that organisations have the necessary support to implement the CAF profiles effectively.

The consultation referenced our intention to assure the cyber security of Load Controllers managing equal to or above 300MW through updates to the NIS Regulations 2018 when Parliamentary time allowed by bringing them into scope of the NIS Regulations so that they are deemed to be designated as Operators of Essential Services (OES). This remains our intention. This will include organisations who manage domestic and small non-domestic loads as well as industrial and commercial loads for the purposes of DSR, as well as aggregators that engage in flexibility services or support load control activity on behalf of other organisations. As OES, they will be required to meet the requirements under the NIS Regulations and will be expected to be assured against the CAF profile for load controllers managing equal to or above 300MW of load.

For the avoidance of doubt, the type of organisations who will fall under scope of NIS is broader than the type of organisations who will require a load control licence. Those that have a licence and manage below the 300MW threshold will be expected to meet the CAF profile for below 300MW, whereas those organisations managing load in industrial and commercial settings will not be expected to do so.

For load controllers managing below 300MW requiring a load control licence, there will be a specific licence condition in the Load Control Licence requiring assurance against the relevant CAF profile. For licensed organisations undertaking load control managing 300MW or above, they will be in scope of both the Load Control Licence and the NIS Regulations, ensuring comprehensive coverage and avoiding any regulatory gaps. The detail of their cyber

requirements will be housed in the NIS Regulations (and we will set this out in accompanying guidance to the load control licence so this transition is clear to licenced organisations). The Competent Authority in Great Britain for these essential services will be DESNZ and Ofgem jointly, as this aligns with existing NIS requirements in the wider electricity sector.

Several industry stakeholders have asked for further clarity on how the 300MW threshold is defined. The proposal is that this threshold should be based on the maximum potential load of all energy smart appliances within a load controller's portfolio, rather than the amount of load they can actively manage at any given time. This includes devices such as electric vehicles, heat pumps, and other energy smart appliances in scope of the SSES programme. This definition ensures that all devices within a portfolio are considered collectively to account for the risk of simultaneous control. For example, if a load controller only manages 200MW of load at any given time but has devices with a combined possible aggregate load of 400MW, they will be considered a load controller managing equal to or above 300MW.

We will consult on both CAF profiles, alongside plans for the accompanying audit and assurance regime later this year. We will also set out clear criteria and guidance for when and how organisations will transition across tiers, including proposals on grace periods to allow organisations to adjust to any new security requirements.

Consumer protection

General consumer protection condition

In this section of the 2024 consultation, government proposed that DSRSPs will be required to meet a general principle of fairness licence condition, akin to condition 0 in the Electricity Supply Licence (SLC0)[29]. We set out that this approach would provide flexibility to DSRSPs as they develop their approaches and deliver fair consumer outcomes, including fair outcomes to those consumers in vulnerable situations, and to give Ofgem the capability to enforce against organisations delivering poor customer service. We further set out our intention to consider which of the more detailed Standards of Conduct should apply.

Question 12 - Do you agree with requiring DSRSPs through the load control licence to meet a general condition to treat consumers fairly? Please give reasons for your answer and, where relevant, include reference to alternative or additional options.

Summary of responses

Out of 35 responses to this question, 28 respondents agreed with the proposal, 4 were neutral, and 3 disagreed. A strong majority agreed that a requirement for DSRSPs to meet a general condition to treat consumers fairly was sensible.

Of those in favour, reasons given included promoting ethical business practices and providing a clear consumer protection framework which supports public trust in the market. Other reasons included aligning with broader regulatory principles, such as the supply licence, and ensuring a level-playing field between suppliers offering flexibility services and other DSRSPs.

2 respondents suggested implementing the Consumer Duty approach adopted by the Financial Conduct Authority (FCA) instead[30]. Several respondents stated that guidance on the concept of “fairness” for prospective licensees would be useful. A few respondents suggested that alignment with the HOMEflex Code of Conduct would be important.1 respondent suggested that the issue of what “fair treatment” and “consumer detriment” looks like to DSRSPs needs further consideration. 1 respondent raised concerns that some DSRSPs lack of familiarity with the 'fairness' principle could lead to suppliers being held to a higher standard of fairness.

Of the respondents who disagreed, 2 referenced the nascency of the sector and 1 stated that the condition would be a burden on SMEs stifling innovation and growth in the market.

Government response

Government has decided to require DSRSPs to meet a general principle of fairness to domestic and small non-domestic consumers, akin to SLC0 in the Electricity Supply Licence. We expect this condition to closely reflect the Electricity Supply Licence conditions, including the same set of Standards of Conduct. This is a tried and tested consumer protection condition

[29] https://www.ofgem.gov.uk/sites/default/files/2023-03/Electricity%20Supply%20Standard%20Consolidated%20Licence%20Conditions%20-%20Current.pdf
[30] https://www.fca.org.uk/publications/policy-statements/ps22-9-new-consumer-duty

and Ofgem has previously taken compliance action against supply licensees where it has determined that suppliers have not met this condition.

We acknowledge the limited concerns about the nascency of the market. We are also aware that consumers have protections under general consumer protection law in relation to buying goods and services, including protections on financing arrangements where consumers may be leasing their ESA. However, we remain committed to the view that, for consumer-led flexibility to play an integral role in modernising our energy system, it will be essential that consumers are given the adequate additional assurances that they can confidently engage in the market. To achieve this, we believe it is important that Ofgem have oversight of consumer protections specific to provision of flexibility services, as well as enforcement powers to sanction licensees who fall short on expected minimum standards. We expect the licence regime to be iterated over time, where there is evidence of additional consumer protection risks emerging.

Government will be working with Ofgem and industry, upon launching the Licensing Working Group, to ensure the licence conditions are proportionate and the appropriate level of guidance is provided for compliance requirements to be clear.

Recommending suitable services

In this section of the 2024 consultation, we considered licence requirements associated with communications about products and services. We proposed to follow the Electricity Supply Licence approach with consumer communication principles included in Standards of Conduct and that these Standards of Conduct would apply across all communications including service recommendations. Government also proposed a further specific licence condition around only recommending services that are appropriate to the individual consumer's characteristics and preferences, similar to SLC25.5.

Question 13 - Do you agree with the proposal to use Standards of Conduct within a general consumer protection principle of fairness to impose requirements for communications about products and services? Please give reasons for your answer and, where relevant, include reference to alternative or additional options.

Summary of responses

Out of 36 responses to this question 28 respondents agreed with the proposal, 5 were neutral, and 3 disagreed. Overall, there was strong agreement to the proposal.

Many respondents who agreed with the proposal felt that Standards of Conduct would give clarity to DSRSPs on the standard of communication expected, leading to informed decision-making and better protections for consumers. Many respondents also welcomed a principles-based approach, stating it would offer organisations scope to determine the most effective way of presenting information on their services. A few respondents who were supportive of the proposal, raised concerns about an uneven playing field if this approach was not adopted, where suppliers who are also DSRSPs would have to comply with a different set of standards under their supply licence. Some stakeholders suggested that any principles-based approach

will need to be underpinned by clear guidance on compliance with the requirement, given the diversity of operators in the market. 1 respondent asked for standardised 'consumer service summary' templates to be developed.

Of the respondents who disagreed, 2 referenced the nascency of the sector. 1 stated that duplicating supply licence conditions for DSRSPs is not the right approach as DSR is not an essential service. 2 respondents commented that existing consumer protection law is sufficient in this area.

Government response

Government has decided to include consumer communication principles in Standards of Conduct in a general consumer protection condition, similar to the Electricity Supply Licence approach[31]. At this stage, we expect to include all of the Standards of Conduct which are set out in SLC 0.3.

We acknowledge the limited concerns about the nascency of the market and the nature of DSR as an optional service. We believe that it is important that consumers have faith in the information they receive from DSRSPs. In line with many respondents, we believe this principles-based approach effectively balances giving DSRSPs the necessary flexibility over how they present information while ensuring consumers are protected and can have confidence in the service they are being given. We will be working with industry and Ofgem to ensure this aspect of the licence is proportionate.

Question 14 - Do you agree with the proposal to include a licence condition that instructs DSRSPs to only recommend services that are appropriate to the individual consumer's characteristics and preferences? Please give reasons for your answer and, where relevant, include reference to alternative or additional options.

Question 15 - Would guidance for DSRSPs regarding appropriate services for different types of consumers be beneficial?

Summary of responses

Out of 37 responses to question 14, 25 respondents agreed with the proposal, 6 respondents were neutral, and 6 disagreed. Overall, a majority agreed with the proposal.

Respondents who agreed with the proposal stated that such a condition would help to embed a 'consumer-centric' approach, reduce the risk of consumers being recommended unsuitable services and help to mitigate against poor outcomes for vulnerable consumers.

Several respondents queried how a consumer's situation would be ascertained, including access to consumption data, and how "characteristics and preferences" would be defined. One respondent noted the risk of low-income or vulnerable consumers being excluded from participating in DSR if DSRSPs deem services are inappropriate to their characteristics and

[31] https://www.ofgem.gov.uk/sites/default/files/2023-03/Electricity%20Supply%20Standard%20Consolidated%20Licence%20Conditions%20-%20Current.pdf

preferences. Two respondents asked that other aspects of SLC 25 should be considered rather than just SLC 25.5 (recommending suitable services).

Of the respondents who disagreed, two respondents suggested that this condition is unnecessary as it is the role of market participants, rather than the regulator, to determine which services are suitable for a consumer's characteristics and preferences. One respondent noted the nascency of the market and another commented that DSR is not an essential service. Another respondent suggested there could be challenges associated with drafting this condition given the diversity of the markets that DSR operates within, creating potential conflict with the way services are recommended in the market. Two respondents declared their preference for this requirement to be covered by alternatives to a licence condition. One suggested a code of conduct and one suggested overarching outcomes set out by Ofgem.

Out of the 37 responses to question 15, 25 respondents agreed with the proposal, 5 were neutral, and 7 disagreed. Overall, a majority agreed with the proposal.

Respondents who agreed with the proposal stated that guidance would help organisations who are unfamiliar with the condition. Other respondents highlighted that guidance would help organisations tailor their offerings to the specific needs and preferences of diverse consumer segments.

One respondent asked for guidance to be issued as early as possible as it would provide an opportunity to clearly define terms. Given the diversity of consumer needs and preferences, another respondent noted the challenge of establishing appropriate "types" of consumers as a basis for providing worthwhile guidance to DSRSPs. One respondent noted the importance of engaging with charities, consumer groups and other organisations when developing guidance. Two respondents agreed in principle, but due to the complex nature of ESAs and flexibility markets noted possible practical challenges associated with developing clear guidance which also wasn't stringent in a way that could hinder innovation in the market. A few respondents commented on the line between guidance and 'formal regulation' and asked for clarity on whether guidance would be enforceable.

One respondent commented that certain consumer groups could be excluded from participating in DSR from ESAs if conditions and guidance make it more onerous to offer services to certain consumer types. One respondent suggested guidance for consumers could also be useful.

Of the respondents who disagreed, two suggested guidance is not yet needed given the nascency of the market. Of these, one suggested that best practice descriptors could be less prescriptive than guidance and might better support product innovation. Another respondent raised concerns that guidance could be used as an alternative to formal regulation and could be changed without proper consultation or impact assessment.

Government response

Government has decided to include a licence condition to the effect that DSRSPs will be required to communicate their products and services fairly to consumers and may only

recommend services that are suitable to the individual consumer's characteristics and preferences. We believe that it will be essential for maintaining consumer confidence in the market, and preventing consumer harm, that DSRSPs understand consumer needs, do not recommend services that are unsuitable to these needs, and do not employ inappropriate tactics associated with mis-selling. We believe that Ofgem having regulatory oversight of this will benefit consumers and the market.

This means we now expect this licence condition to not only reflect SLC25.5, including a similar definition of "Recommend", but also SLCs 25.1 and 25.4. SLCs 25.1 and 25.4 are:

> *25.1 The licensee must ensure that the structure, terms and conditions of its Tariffs are clear and easily comprehensible.*
>
> *25.4 The licensee must not, and must ensure that its Representatives do not mislead or otherwise use inappropriate tactics, including high pressure sales techniques, when selling or marketing to Domestic Customers.*

We will be drafting load control licence conditions such that they are relevant to the products and services within the market we are licensing. As per previous responses, we expect all consumer protections, except those relating to vulnerable consumers, to extend to small non-domestic consumers as well as domestic consumers.

Our expectation is that this condition, as a whole, will not require DSRSPs to collect excessive information about consumer preferences which is overly burdensome or disproportionate, such as exact consumption data. Some examples of activity associated with meeting this licence requirement could be understanding whether consumers will want to maintain an influence over load control activity, such as by choosing particular variables (e.g., time, temperature, tariff) which determine the configuration of their ESA, understanding consumer preferences around general energy consumption patterns where they want to hand over control to their DSRSP, and/or giving clear reference to possible changes to a consumer's consumption pattern when recommending a service.

We note the appetite for further clarity on how to identify a consumer's characteristics and/or preferences. We will consider how best to provide the necessary clarity. We would want to ensure that any approach taken supports licensees without being overly prescriptive and so we intend to test approaches with industry further upon launching our Licensing Working Group.

We received some requests for clarity on whether guidance is an enforceable part of the licence. We will seek to ensure the status of any guidance is made clear. Guidance should serve to provide information to assist licensees in complying with relevant licence conditions and can detail how the licence condition will be interpreted and enforced.

Complaints procedures for consumer-facing demand flexibility services

In this section of the 2024 consultation, we proposed to use the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008 as a basis for requirements for complaints

processes for DSRSPs32. The consultation explained that setting minimum consumer complaints standards for flexibility services will help to maintain consumer confidence in the market. However, it also acknowledged that, to be appropriate to the circumstances of DSRSPs, licence conditions may need to differ from the provisions of the 2008 Regulations.

Question 16 - Do you agree with the proposal to use the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008 as a basis for requirements for complaints processes for DSRSPs? Please explain your answer.

Question 17 - Are there any requirements within the 2008 Regulations that you consider to be inappropriate to apply to DSRSPs?

Summary of responses

In relation to question 16, out of 37 responses to this question, 24 agreed with the proposal, 9 were neutral, and 4 disagreed. A majority agreed with the proposal to use the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008 as a basis for requirements for complaints processes for DSRSPs.

Many respondents commented that the 2008 Regulations offer a well-established framework and diverging requirements would add unnecessary complexity to consumer complaints processes across the energy sector and would not align with other experience of energy-related complaints consumers may have had in the sector. This point was expanded on by one respondent who noted the possibility that consumers might not know which activity their complaint relates to, supply or DSR, and multiple complaints processes would add avoidable confusion to the sector.

Two respondents, one in support and one neutral, raised questions around the effectiveness of the 2008 Regulations. One of these respondents asked for greater clarity on some terms within the regulations and one recommended a review and enhancement of these regulations to ensure they address the specific challenges and complexities of DSR services. One respondent asked for clear guidelines for DSRSPs to follow on how to work effectively with third party organisations where vulnerable consumers require additional support to raise and resolve complaints. One respondent asked that government provide clarity on how the licensing regime will interact with external compliance schemes such as the HOMEflex Code of Conduct.

Of the respondents who disagreed, it was remarked that the proposal would be a barrier to smaller businesses entering the market due to the onerous process it would entail. Another respondent who disagreed said that DSRSPs should not be treated the same way as energy suppliers because DSR is an optional service and not an essential service.

In relation to question 17, out of 32 responses to this question, 7 agreed, 12 were neutral, and 12 disagreed. However, only 3 respondents identified specific requirements they believed

[32] https://www.legislation.gov.uk/uksi/2008/1898/contents

would be inappropriate. Most respondents either disagreed or were unsure whether the 2008 Regulations contained inappropriate requirements.

Of the respondents who agreed and identified inappropriate requirements within the 2008 Regulations, 3 respondents named specific regulations they believed were inappropriate. All 3 respondents saw Regulation 11, an annual complaints handling report, as a disproportionate requirement for small DSRSPs. Regulation 6 was also seen as disproportionate by 2 respondents. Regulations 3, 5 and 8 were flagged once each. 2 respondents who agreed did not identify any specific inappropriate requirements and focused on a general point that the proposed complaints handling approach was excessive for the market.

Of the respondents who were not sure, it was remarked that Regulations 8 and 9 might not be appropriate. Another respondent noted challenges with timelines of resolution as well as remarking that some requirements may be challenging to apply to DSRSPs due to regulatory overheads.

Common points made in disagreement to the question were similar to the reasons given in support of Q16. These respondents suggested that the requirements within the 2008 Regulations are appropriate and should be applied to DSRSPs to ensure an equal level of protection for customers.

Government response

Government has decided to use the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008[33] as a basis for requirements on complaints processes for DSRSPs.

While we acknowledge some limited concerns about the overall approach, setting minimum standards for consumer complaints will ensure there is a clear process for complaints resolution, which will be essential for maintaining consumer confidence in the market. We believe a clear and robust complaints procedure, which aligns with existing complaints handling in the retail energy sector, is essential to maintaining consumer confidence and supporting government's ambition for DSR to become an integral part of the energy system.

We welcome the limited feedback on requirements that could be inappropriate. We will continue to consider whether there are any requirements which are inappropriate to DSRSPs. At this stage, we believe only regulation 8 (arrangements to address certain consumer complaints) may require admissions and/or be disproportionate. While the most respondents (3) commented on regulation 11 (annual complaints handling report) as being inappropriate, we believe transparency about complaints will be important to support consumers in choosing the service which is the most suitable to their needs and in Ofgem's oversight of the market. We are also aware that any drafting of related load control licence conditions will need to consider the implementation of our approaches on consumer advocacy and dispute resolution, given the role that these functions play in the Gas and Electricity (Consumer Complaints

[33] https://www.legislation.gov.uk/uksi/2008/1898/contents

Handling Standards) Regulations 2008. We expect to test draft licence conditions further with industry, upon launching our Licencing Industry Working Group.

Dispute resolution

In the 2024 consultation, we proposed that the licence should require DSR Service Providers to participate in an Alternative Dispute Resolution (ADR) service to provide dispute resolution to their consumers. We set out that the requirement would help to avoid direct consumer detriment associated with issues that might have otherwise been unresolved and will grow and maintain consumer confidence in the demand flexibility sector. While we stated our belief that having a single common ADR provider across all DSRSPs could be simpler and lead to a consistency of outcomes for consumers across the sector we sought views on whether a similar consistency of outcomes could be achieved through allowing multiple providers.

Question 18 - Do you agree with the proposal that the licence should require DSRSPs to participate in an ADR scheme? Please explain your answer.

Question 19 - Do you think there should be a single common ADR scheme across DSRSPs? Please explain your answer.

Summary of responses

In relation to question 18, out of 37 responses to this question, 27 respondents agreed with the proposal, 6 were neutral, and 4 disagreed. A strong majority agreed with the proposal to require DSRSPs to participate in an ADR scheme.

Of those in favour of the proposal, 1 respondent expressed the view that the requirement would incentivise DSRSPs to proactively address issues and 1 respondent that a clear mechanism for resolving disputes was especially important under a principles-based regulatory regime. Some respondents also remarked that this approach would align the consumer protection requirements with those already imposed on gas and electricity suppliers and without this alignment there is a risk of consumer confusion and harm. 1 respondent noted the possibility of additional rules for energy suppliers who are also DSRSPs, where clarity could be needed on whether a complaint relates to energy supply or DSR. 3 respondents stated that the dispute resolution process for DSR should be delivered by the Energy Ombudsman. This approach would synchronise ADR provision with the energy supply sector.

2 respondents that disagreed with the proposal felt that requiring all DSRSPs to participate in an ADR scheme could create unnecessary barriers to entry for smaller players due to costs and it may be a better solution to only require DSRSPs of a certain size to participate in an ADR scheme.

In relation to question 19, out of 36 responses to this question, 22 respondents answered “yes”, 10 were neutral, and 4 answered “no”.

Of the 22 that answered “yes”, most respondents supported a single common ADR scheme across DSRSPs. There were 3 responses to the invitation to offer a view on whether multiple

ADR providers could offer a similar consistency of consumer outcomes to those of a single provider. Of these 3 respondents, none believed that multiple providers could offer a similar consistency of consumer outcomes to those of a single provider. 2 noted that multiple providers could lead to inconsistent consumer outcomes and 1 noted that multiple providers would likely lead to consumer confusion.

Many respondents who supported the approach of a single provider commented on the need for consistency and the complexity for consumers to navigate if there were multiple schemes. A number of respondents stated that dispute resolution for ADR should be delivered by the Energy Ombudsman. 1 respondent suggested that competition among ADR providers would unlikely benefit consumers as ADR providers may compete to provide the best outcomes for DSRSPs rather than consumers. 2 respondents noted that lessons should be learnt from the Third-Party Intermediary sector where multiple ADR schemes have led to inconsistencies.

A few respondents asked for clarity on whether the Digital Markets, Competition and Consumers Act 2024 made the previous voluntary regime for approval of ADR providers across the economy into a mandatory accreditation requirement.

Of the respondents who disagreed, a common theme was that DSRSPs should be given freedom to choose the accredited ADR provider of their choice. 1 respondent who disagreed also commented that a requirement to participate in a single common ADR scheme would not be proportionate at this stage of the market's development. None of the respondents who disagreed offered a view on whether multiple ADR providers could offer a similar consistency of consumer outcomes to those of a single provider.

Government response

Government has decided to require DSRSPs to participate in an Alternative Dispute Resolution (ADR) scheme. We believe this approach will help avoid direct consumer detriment associated with issues that might have otherwise been unresolved and will grow and maintain consumer confidence in the demand flexibility sector.

In line with consultation support, government has a preference for a single common ADR scheme across DSRSPs. While the Digital Markets, Competition and Consumers Act 2024 will be seeking to make approval of ADR providers into a mandatory accreditation requirement, we believe, in line with much consultation feedback, ADR provided by a single ADR provider would be the clearest and simplest for DSRSPs' consumers[34]. We further believe that consumers seeking ADR associated with their DSRSP service should not be required to pay a fee when taking a dispute to an ADR provider and should be guaranteed a legally binding outcome.

We note that the Energy Ombudsman has a wealth of experience supporting energy consumers seeking redress and supporting the energy sector in improving standards and that DSRSPs' consumers would likely be familiar with this ADR process through their electricity

[34] https://www.gov.uk/government/publications/digital-markets-competition-and-consumers-bill-supporting-documentation/strengthening-consumer-enforcement-and-dispute-resolution-policy-summary-briefing

supply service. We will be engaging with the relevant stakeholders to ensure that the implementation of our expressed preference for a single ADR scheme achieves the needed outcomes to maintain consumer confidence in the market.

Independent consumer advocacy and guidance

In this section of the 2024 consultation, we sought views on independent advocacy and guidance for consumers who have signed up for DSR load control services. We set out our belief that there are clear benefits for consumers to a general advocacy and guidance service and that they could be invaluable in avoiding detriment for vulnerable consumers. Although, we acknowledged that any new involvement of consumer advice organisations would likely come with associated costs.

Question 20 - Do you think government should extend consumer advocacy and advice services to cover issues related to DSR load control? If so, what particular services do you think would be useful for DSR consumers? Please give reasons for your answer.

Summary of responses

Out of 38 responses to this question, 26 respondents agreed with the proposal, 9 were neutral, and 3 disagreed. Overall, a strong majority agreed with the proposal.

Several respondents who agreed with the proposal remarked on the importance of consumer advocacy as the DSR market grows and the key role impartial advice could play in improving consumer awareness of flexibility and supporting them in choosing a service. One respondent added that funded advice would be crucial to support vulnerable and fuel poor users. Many respondents advocated for Citizens Advice to take on this role, while one respondent noted the importance of national and regional energy advice organisations beyond Citizens Advice. One respondent remarked that a consumer advocacy and advice service should complement a national independent Net Zero advice service.

Some respondents noted the financial cost and technical expertise required to cover DSR related advocacy issues and questioned whether Citizens Advice would have the capacity to act as the statutory consumer advocacy body. The issue of price comparison websites (PCWs) was noted by several respondents, where the common view was that government could further consider the potential of PCWs to play an advisory role for consumers looking to participate in DSR.

Respondents who disagreed with the proposal noted that the costs associated with expanding advocacy and advice services could harm the market and/or would likely be borne by the consumer.

Government response

We welcome feedback about the importance of consumer advocacy supporting the growth of the flexibility market and in line with this we will be looking to extend consumer advocacy and advice services. There is wider work ongoing within the department on government’s approach

to supporting consumer engagement in CLF, which will lead to a consultation this Summer, as set out in the Clean Power 2030 Action Plan[35]. While wider policy on the optimal approach to CLF consumer engagement is being scoped, we do not think it is appropriate to commit to a preferred approach for implementing advocacy and advice services related to DSRSP services, as we do not want to duplicate functions. We expect to set out in more detail our approach for DSRSP related advocacy and advice services once work on consumer engagement in CLF has progressed further.

Defining 'vulnerable situations'

In this section of the 2024 consultation, we stated our intention to follow the approach of the Electricity Supply Licence and use a broad and inclusive definition of vulnerable situations, which would apply to domestic consumers only. We also noted that the openness of the definition would mean that it is not only disabilities, financial and living situations that classify a vulnerable situation, but also characteristics such as low confidence and not speaking English as a first language.

Question 21 - Do you agree with the proposal to use the definition of vulnerable situations used in the Electricity Supply Licence? Please give reasons for your answer and, where relevant, include reference to alternative or additional options.

Summary of responses

Out of 37 responses to this question, 26 respondents agreed with the proposal, 3 were neutral, and 8 disagreed. Overall, a strong majority agreed with the proposal.

Respondents who supported the proposal believed that the definition in the supply licence is comprehensive and well-established, and alignment would help to avoid confusion across the market. One respondent commented that there would be a risk that vulnerable customers are left behind in the transition towards smart technology if definitions are not aligned.

Some respondents asked for more evidence on how vulnerable situations are created or exacerbated by the provision of domestic DSR. One respondent asked how the proposals apply where non-domestic consumers, such as a landlord, contract for DSR services on behalf of a vulnerable consumer. Several stakeholders suggested there is limited evidence on how vulnerability intersects with demand flexibility.

Respondents who disagreed with the proposal raised concerns that this condition was an example of excessive regulation and that the market needed to evolve further before such a measure should be considered. One respondent remarked that DSRSPs need to treat customers fairly but should not be expected to meet specific protections or develop licenced specialisms in supporting vulnerable customers. One respondent said the current broad definition of vulnerable situations leaves too much ambiguity.

Government response

[35] https://www.gov.uk/government/publications/clean-power-2030-action-plan

Government has decided to follow the approach of the Electricity Supply Licence and use a broad and inclusive definition of vulnerable situations. This is in line with our expectation for a load control licence condition akin to SLC0 and our expectation that DSRSPs deliver equal outcomes to domestic consumers in vulnerable situations. We believe that the proposed definition effectively balances the consistency needed for DSRSPs to treat vulnerable domestic consumers fairly and recommend them suitable services, without being too prescriptive to exclude any diverse types of vulnerabilities that domestic consumers can face. It will be particularly important, for example, that domestic vulnerable consumers who rely on heating at particular times or medical equipment are not recommended a service that could compromise this.

Government acknowledges that more evidence on how vulnerability intersects with demand flexibility would be beneficial. Government also welcomes the feedback on how the requirement could impact domestic consumers on non-domestic contracts and we will be considering further how the licence could protect these consumers. We anticipate that compliance requirements could change as the market, government and Ofgem's understanding of how vulnerability intersects with demand flexibility grows.

Identification and record-keeping of vulnerable situations

In this section of the 2024 consultation, we proposed to initially require DSRSPs to keep their own internal records of consumers in vulnerable situations, in line with UK-GDPR. We also sought views on requiring DSRSPs to offer specified priority services and on defining priority services that DSRSPs must deliver, particularly those aligned with SLC 26.5 (a), (b), and (e).

For context, we explained that electricity suppliers must provide, when required, specified services related to communication, access and safety in relation to the Priority Services Register (PSR). Furthermore, the Electricity Supply Licence places requirements on suppliers to seek to identify and appropriately record consumers in vulnerable situations, including adding them to the PSR. We also noted that there is a longer-term ambition to develop a 'universal PSR' across many utilities.

Question 22 - Do you agree with the proposal that DSRSPs should seek to identify and maintain their own records of consumers in vulnerable situations? Please give reasons for your answer and, where relevant, include reference to alternative or additional options.

Question 23 - Do you think DSRSPs should be required to deliver the priority services defined in SLC 26.5 (a), (b) and (e), and/or any other priority services in the Electricity Supply Licence?

Summary of responses

In relation to question 22, out of 37 responses to this question, 21 respondents agreed with the proposal, 5 were neutral, and 11 disagreed. Overall, a majority agreed with the proposal.

Several respondents believed the proposal to be important to ensure consumers are treated according to their needs and not sold products or services that are inappropriate to their characteristics. One respondent highlighted that DSRSPs maintaining their registers of vulnerable consumers could facilitate the improved tailoring of communications to these customers. One respondent felt that the proposal was important to ensure consumers in vulnerable situations do not miss out on the benefits of participating in appropriate DSR services.

Several respondents supported the longer-term ambition of a single multi-sector PSR and the importance of the "Share Once" approach. Several respondents advocated for establishing a "single source of truth" for identifying vulnerable consumers through co-ordinating with DNOs and local authorities. One respondent flagged current initiatives exploring trust frameworks and SiF projects such as ViVID[36]. Several respondents re-iterated that industry would benefit from more evidence on how vulnerability interacts with the provision of domestic flexibility. Two respondents stated that DSRSPs who are not suppliers do not have access to PSR data. One respondent advocated for energy suppliers sharing their vulnerability data with DSRSPs.

Respondents who disagreed with the proposal were concerned that the requirement was disproportionate at this early stage of market development. One respondent suggested that the proposal would stifle growth, especially when DSRSPs do not have full market access. Several respondents focused on DSR being a non-essential service and one respondent asked for a more proportionate approach to reflect that where, unlike in energy supply, there is no continuity of service and no universal service obligation on DSRSPs. Two respondents stated that if a general principle of fairness is applied, DSRSPs will appropriately consider vulnerable situations without the need for additional reporting or record-keeping.

In relation to question 23, out of 36 responses to this question, 19 respondents answered "yes", 7 "don't know", and 10 "no". Overall, a majority considered that DSRSPs should be required to deliver certain priority services.

Some respondents in support of DSRSPs delivering certain priority services stated that the services defined in SLC 26.5 (a), (b) and (e) were the minimum requirements to protect consumers experiencing vulnerability and were crucial to enhancing their trust in and the safety of DSR services. One respondent remarked that some priority services could be adapted to help alleviate risks of detriment specific to the load control market. For example, adapting SLC 26.5 to require DSRSPs to help consumers operate their product or service.

One respondent asked for some light-touch standardisation and guidance about what information DSRSPs should maintain, complementing wider work on a cross-sector PSR.

Several respondents who did not support DSRSPs delivering certain priority services referred to their answers to Q21 and Q22. These respondents generally did not agree with the proposed approach to defining vulnerable situations or DSRSPs maintaining their own records of consumers in vulnerable situations. One respondent suggested DSRSPs could signpost customers to their energy supplier or DNO to join the existing PSRs and another commented

[36] https://ssen-innovation.co.uk/sif/vivid/

that, rather than defining the priority services that DSRSPs must deliver, government could, in the medium term, produce or point to existing guidance for supporting vulnerable customers.

Government response

Government has decided there will be licence conditions requiring DSRSPs to keep their own internal records of consumers in vulnerable situations and to offer them certain priority services.

At this stage, we believe that we should align priority services that DSRSPs must deliver with SLC 26.5 (a), (b) and (e):

- (a) the Domestic Customer receiving additional support to assist him or her to identify any person acting on behalf of the licensee,
- (b) a person nominated by, or otherwise legally entitled to act on behalf of, the Domestic Customer being able to receive communications relating to their account,
- (e) communications with the Domestic Customer in an accessible format that is, so far as is reasonably practicable, appropriate to the Domestic Customer's needs on the basis of their Personal Characteristics and/or vulnerable situation.

However, at this stage of the licence, we will not bring DSRSPs within scope of the full PSR requirements. This will mean there will neither be an initial requirement on DSRSPs to provide the full set of priority services offered by suppliers and DNOs nor a requirement to share relevant data related to their lists of vulnerable consumers with suppliers and DNOs, as is the case under the PSR. This is because, in line with certain consultation feedback, we believe some of the priority services are more applicable to the essential service of supply, and sharing relevant data to suppliers and DNOs could be expensive to implement and disproportionately create barriers to new entrants to the market.

Government shares the aspiration of many stakeholders for a universal PSR or 'share once' approach and still believes in the future that DSRSPs could benefit from efforts across other utilities to bring together PSRs in the future. We remain open to bringing DSRSPs within scope of the full PSR requirements in the future. We will continue to monitor progress on this longer-term ambition and how this could support vulnerable consumers in the DSRSP services market in the future.

Inclusive and accessible design and communication

In this section of the 2024 consultation, we proposed no new legal requirements around accessibility of DSR services in a licence and sought views on whether the Equality Act 2010 provides sufficient protection for disabled consumers.

We also stated our interest in stakeholder views on how government can use its position to drive forward accessibility in the smart energy sector, both in terms of service interfaces and services on offer to consumers.

Question 24 - Do you agree with the position that the Equality Act 2010 provides sufficient protection regarding inclusivity and accessibility of the design of DSR processes and services? Please give reasons for your answer and, where relevant, include reference to alternative or additional options.

Summary of responses

Out of 37 responses to this question, 26 respondents agreed with the proposal, 8 were neutral, and 3 disagreed. Overall, a strong majority agreed with the proposal.

Many respondents who agreed with the proposal believed that the Equality Act 2010 provides an appropriate framework for maintaining inclusivity and accessibility in DSR processes and services, and that DSRSPs should face the same requirements as suppliers.

However, one respondent felt that organisations would benefit from further guidance on how to make their products and services more inclusive and accessible. Several respondents noted that some vulnerabilities are not covered by the Equality Act and including vulnerabilities such as lack of internet access or digital skills, being a full-time carer, or recent bereavement, would ensure services are more inclusive. On a similar theme, another respondent flagged the risk that digitally excluded people would be excluded from the DSR market unless products and services are designed in ways that meet their needs. Two respondents noted that this approach may need to be reviewed as accessibility requirements become more obvious when smart technologies are more commonly taken up and ESA technology advances.

One respondent raised concerns over the way the protections will be applied by DSRSPs, particularly given the variety of DSRSP business models and difference in size of customer base and types of consumer interactions they have.

Government response

Government has decided that it will not introduce new legal requirements around accessibility of DSR services, as government believes that the Equality Act 2010 provides suitable protection for disabled consumers. Government acknowledges that concerns have been flagged that some vulnerabilities are not covered by the Equality Act (e.g., lack of internet access or digital skills) but would benefit from consideration to ensure DSR processes and services are accessible and inclusive. As the market continues to develop, beyond the launch of the licence, we will monitor whether there is the need for more bespoke requirements to drive forward inclusivity and accessibility in the sector.

Consumer control over a load control DSR service

In this section of the 2024 consultation, we outlined our expectation that consumers could be able to control the load of their ESAs being used for DSR through different user interfaces. For example, for EV charging services, we outlined that a charge point's load could feasibly be controlled through three different interfaces through an ESA interface (a physical interface on the charging hardware itself), or through an app/web interface provided by a charge point manufacturer, DSRSP, or another organisation. DSRSPs are able to control load through a

remote interface, should they have put in place the appropriate technical or contractual arrangements (either themselves or through a collaborating third-party load controller) with an ESA manufacturer to be able to affect this load directly on their own app.

We proposed that, in the instance that a DSRSP provides an interface which allows a consumer to change preferences for the load control of their ESA, the DSRSP must at all times provide a consumer the option through this interface to override the load control of their ESA, whether the load control is planned or in effect. We stated our view that the functionality to override a DSR action would be in addition to the override functionality we proposed at an ESA level in our ESA consultation. We stated our belief that this approach would give consumers multiple routes to override the load control of their ESA and will more likely result in consumers having a positive experience engaging in DSR services.

We also set out our plan that a DSRSP shall not impede any override request made through other user interfaces provided with an ESA. Also, we set out that, in the instance that a consumer has both a DSRSP user interface and an ESA user interface, they would be able to use both without any DSRSP impediment. Furthermore, and for the avoidance of doubt, we set out that the requirement for a DSRSP not to impede a change in load control action would not apply if this would cause a safety issue in the ESA.

Government acknowledged that at this stage of market development and with consideration of our objective to support diversity of approaches in the sector, we do not see it as appropriate to require DSRSPs to offer an interface separate from an ESA interface to control their service.

Question 25 - Do you agree with our proposal around requiring DSRSPs, in the scenario that they offer an interface to consumers to manage their service, to offer the option for the consumer to request cancellation of load control of their ESA? Please explain your answer.

Summary of responses

Out of 39 responses to this question, 31 respondents agreed with the proposal, 6 were neutral, and 2 disagreed. Overall, a strong majority supported the proposal.

Many respondents who agreed with the proposal believed that a cancellation option is essential and is vital to building consumer trust in DSR. Two respondents highlighted the importance of this requirement for vulnerable consumers.

Several respondents, who broadly supported the proposal, raised practical questions around this proposal. For example, one respondent asked how this requirement would work during low probability, high impact peak load events. Furthermore, two respondents raised concerns about imbalanced positions or customer load cancellations leading to more volume risk/volume discrepancies and the possible consequences this could have on benefits received by consumers. One respondent suggested this should be managed by DSRSPs offering consumer incentives to encourage reliability of load provision rather than penalising consumers for load cancellations. Another respondent commented that a ‘cooling-off period’ type approach could be beneficial and welcomed ongoing government monitoring of this issue.

Two respondents pointed to the HOMEflex Code of Conduct as covering this issue sensibly. One of these respondents, flagged the need for customers to be made aware that consumer cancellation of load control of their ESA may impact them financially. Two respondents sought clarity and guidance on the consequences for consumers overriding their services. One respondent believed that if a consumer repeatedly cancels the instructed behaviour, the DSRSP should have the power to reprice or cancel the contract.

Of those disagreeing with the proposal, one respondent suggested that consumers should be given the option to request cancellation if load control is being undertaken to provide market services, but they should not if load control is contributing towards safety, such as load limiting to avoid overload of a communal network.

Government response

Government has decided that, where DSRSPs offer an interface to consumers to manage their service, they will be required to offer the option for the consumer to override the load control of their ESA. Government will also be mandating, through the ESA device regulations, that ESAs within scope of these regulations must include an option for consumer override through the hardware itself. Government remains committed to giving consumers autonomy of control over the devices they use and note the strong support for this. We also believe the option for consumers to request override of remote load control of their ESA should exist whether the load control is planned or in effect. Furthermore, we expect that a DSRSP shall not be able to impede any override request made through other user interfaces provided with an ESA.

Since consulting, further work to understand existing business models within the market has been undertaken. To ensure consumers maintain autonomy of control over the devices they use and are not impeded from any override, we are now considering further whether this requirement will need to be on DSRSPs, Load Controllers, or both. We will be working with industry to develop our understanding of how overriding load works in practice and which type(s) of licensee(s) should be required to meet this licence requirement.

At this stage of market development, government remains committed to its view that it is not appropriate to mandate that DSRSPs offer an interface, such as an app, separate from an interface provided with their ESA to control their service. As first phase ESA regulations will mandate that ESAs must include an option for consumer override, consumers will always have the option to override load control through the ESA interface itself, and therefore we believe that this approach supports a diversity of approaches while the sector continues to grow.

When developing draft licence conditions, we will be working further with industry and Ofgem, upon launching our Licensing Working Group, to ensure the wider consequences of consumers cancelling load control requests are adequately considered while ensuring the consumer experience of engaging with these services remains positive and autonomous. At this stage, we expect consumer incentives associated with DSRSP services to limit the amount that consumers override load control, and we do not expect DSRSPs to penalise consumers where they decide to override load control. However, we will continue to monitor this risk as the

market develops and remain open to developing a licence condition in the future to mitigate this risk.

Future guidance and requirements

In this section of the 2024 consultation, we stated that we are receptive, in the future, to making further requirements or guidance around how DSRSPs allow their customers to control their preferences for a DSR service, should it be clear it would significantly improve the consumer experience of DSR services. We also set out areas where future guidance or requirements could help improve the consumer experience such as a requirement that all DSRSPs offer an interface for service management or requirements around ease of access and cost of requesting load control override.

Question 26 - Do you think any further guidance or requirements related to the consumer's ability to request cancellation of a remote load control action through a DSRSP could be warranted now or in the future? Please explain your answer, making reference to the potential requirements outlined in the consultation as well as any further requirements not discussed.

Summary of responses

Out of 35 responses to this question, 18 respondents answered yes, 10 remained neutral, and 7 answered no.

Some respondents focused on the idea of guidance around user-initiated cancellation while other stakeholders focused on the possibility of a DSRSP interface. Of respondents in agreement, two believed that guidance and/or further requirements would be useful now and suggested requirements around specifying timeframes for cancellation requests as an example. Also, worked examples were seen by some respondents as a useful method of tackling questions around timeframes for cancellation requests or a way of further understanding costs associated with user-initiated cancellation. Three respondents flagged the importance of communicating to consumers the implications of requesting cancellation of remote load control. One respondent supported a DSRSP interface as they believe it would ensure a positive consumer experience by enabling consumers to manage their preferences and cancel DSR actions in an easy and accessible way.

Some respondents felt that further guidance was needed, as educating consumers would be crucial to ensuring a positive consumer experience. On the issue of education, two respondents agreed that this issue is relevant but flagged the need for industry to understand more. For example, more evidence on how often user-initiated cancellation occurs. For industry and government to increase their understanding, several respondents focused on the possibility of workshops to identify where uncertainty exists and suggested that guidance may be helpful following this. One respondent asked how DSRSPs would be informed of user-initiated cancellation if there is no requirement for a DSRSP interface.

Several respondents looked at the issue as a whole and suggested there is no need for further regulation in this area, although they noted that guidance may be helpful. One respondent

supported publishing further guidance to the market but asked that it be non-binding guidance. Several respondents advocated for revisiting the issue of further guidance or requirements after the market has had more time to evolve.

Government response

Government has decided not to make further requirements or guidance around how DSRSPs allow their customers to control their preferences for a DSRSP service at this stage of the licence. This is because we believe, in line with a number of responses, that further evidence is required to properly assess how further requirements and/or guidance could support licensees and consumers. We acknowledge some interest in revisiting a requirement for a DSRSP interface as the market evolves and will continue to work with industry beyond the launch of the licence.

Summary of proposed consumer protection measures

Question 27 - Does the proposed package of consumer protection measures offer sufficient protections to consumers while also enabling DSRSPs to develop innovative service offerings? Please explain your answer.

Summary of responses

Out of 34 responses to this question, 22 respondents agreed, 8 remained neutral, and 4 disagreed. Overall, a broad majority supported the proposed package of measures and believed it offers sufficient protections to consumers while also enabling DSRSPs to develop innovative service offerings.

Respondents who agreed with the proposed package, believed that it aligns well with existing requirements in the supply licence and will facilitate healthy competition in the market by providing a level-playing field between suppliers and DSRSPs. Some respondents also commented that the package was balanced and provides consumers with regulatory protection on products and services whilst giving organisations sufficient scope over how they implement the requirements. It was also remarked that the package was comprehensive and will establish a positive relationship between DSRSPs and consumers.

One respondent supported the package but requested that it was supplemented by guidance. Another respondent noted concerns over the exclusion of consumers manually controlling load themselves, suggesting this could lead to worse outcomes for the electricity system if some organisations chose to focus on manual DSR services due to lower regulatory barriers. Two respondents suggested that market monitoring was of high importance. One supported the package but advocated for monitoring the suitability of framework as the market evolves and ensuring measures can be adapted based on industry and consumer feedback. One stated that more monitoring was required before regulation was introduced.

Of the respondents who disagreed, there was reference to the nascency of the sector and the proposed package being a burden on DSRSPs to comply with. One respondent focused on the challenge DSRSPs will face in implementing the measures to support vulnerable customers.

One respondent felt that some requirements designed for gas and electricity suppliers do not necessarily work for DSRSPs.

Government response

We welcome the overall support for the proposed package of consumer protections and, at this stage, do not expect any further requirements to feature in the licence. Government is committed to ensuring that requirements do not create barriers to innovation and that consumers have confidence to engage in DSRSP services. We will test specific licence conditions with industry further upon launching our Licensing Working Group.

Ofgem will support the development and maintenance of the licence with regards to all the licence requirements, including consumer protections, through its administration of the licence. The enduring governance body may also have a role in advising on whether the licence adequately reflects up to date views of the technical and security working groups supporting the enduring governance function.

Question 28 - How do you anticipate that the proposed package of consumer protection measures will impact new entrants to the market, and do you expect that any mitigation is required to reduce barriers to entry?

Summary of responses

There were 28 respondents to this question.

Several respondents referenced the primacy of building consumer confidence in DSR services and that the measures will protect the market from irresponsible participants. On a similar theme, one respondent noted that any increased effort for new market entrants would not be to an unreasonable level. One respondent referenced that regulation, especially principle-based requirements, and innovation can go hand in hand. One respondent suggested that all of the consumer protection proposals were general good practice.

Several respondents highlighted that the proposed package would involve a degree of compromise between costs and benefits. From this position, many respondents took the opportunity to request clarity on the transitional arrangements as mitigation against impacts on new entrants to the market. Of these, one respondent said a roadmap for new regulation with clear guidance would ensure new entrants can plan and budget accordingly. One respondent requested that market participants receive “adequate time” to ensure compliance with any new regulations. One respondent referenced a “grace period” to support businesses transitioning into the market. However, one respondent advocated against transitional arrangements, citing their belief that introducing consumer protections is important and critical to ensuring that competition in the DSR market takes place on a level playing level field.

One respondent requested further clarity on the review process beyond the launch of the licence and how the measures could be re-evaluated and, if necessary, modified.

A few respondents believed the licence requirements to be premature. One respondent suggested that the requirements favour mature energy suppliers and risk centralisation of the market. One respondent stated that, if not applied sensitively, these measures risk materially harming new entrants and existing market participants.

Government response

Government's consumer protection requirements are intended to hold licensees to a minimum set of requirements. Government acknowledges the trade-off between ensuring organisations are held to a minimum set of consumer protections and not creating an unreasonably high floor or barriers to innovation. Considering stakeholder responses to the consumer protection proposals as a whole, government notes that there is broad agreement that the proposed package of measures strikes the right balance between protecting consumers and the market from irresponsible participants while continuing to enable innovation.

Nevertheless, government notes that some smaller organisations believe the proposed package of measures favour mature energy suppliers and will have an adverse effect on new market entrants. We will be working further with industry and Ofgem on draft licence conditions to ensure the package of consumer protection measures do not place an unreasonable burden on smaller organisations. As per our response to Q50, we will work with industry to determine an appropriate length for a transitional period, once we can provide more detail on the draft licence conditions.

Question 29 - Should government include any further requirements to protect consumers in the load control licence not covered in this chapter? Please reference specific requirements where appropriate.

Summary of responses

Of the 33 responses to this question, 9 answered that government should include further requirements, 7 remained neutral, and 17 answered that no further requirements should be included. Overall, most respondents were of the view that government should not include any further requirements. Some respondents chose to use this question as an opportunity to summarise their beliefs on the package of consumer protection measures.

Of those advocating for further requirements, one respondent suggested a requirement that DSRSPs proactively recommend a more suitable tariff or service when this is available, similar to the requirement for energy suppliers to inform customers when there is a tariff with better rates available. One respondent asked for a further requirement on licensees to be available via contact methods that meet customer needs, including via a free telephone line. This request would align the load control licence with SLC 31G.

One respondent, with reference to Q13, requested clarity on whether the full Standards of Conduct (under SLC 0.3) would apply to DSRSPs, or only the communications principle (part b of SLC 0.3). If the proposal is to include only the communications principle, the respondent asked that a further requirement includes applying the full Standards of Conduct to DSRSPs. One respondent requested further clarity on how the consumer protection requirements will be

effective in the context of DSRSP and DSR Load Controller interactions. Discussing an example where a Load Controller does not follow a DSRSP's request in relation to the needs of vulnerable customer, they suggested a DSRSP would need a mechanism by which to hold the Load Controller to account. One respondent took the opportunity to request the inclusion of a requirement on a licensee to ensure that domestic and/or communal wiring and network connection are not overloaded. The respondent felt that clarity, in terms of responsibility for safety and damage in case of an overload, was needed.

One respondent said that manual and behavioural load, not just remote load control, should be considered. Another respondent referenced the need for consumer protections to be levelised, specifically alignment between the proposed load control licence, the supply licence and the HOMEflex code of conduct. One respondent focused on requirements beyond the load control licence, expressing a view that direct regulation of Third-Party Intermediaries becomes more critical as the complexity of products and services available in the market increases.

Of those advocating for no further requirements, one respondent believed that no further requirements were needed, subject to the findings of the Licensing Working Group.

Government response

At this stage of licence development, government believes the consumer protection package we consulted on is proportionate to the risks to consumers in the market and note broad agreement that no further requirements are needed at this time. Government is committed to ensuring that requirements do not create barriers to innovation and that consumers have confidence to engage in DSRSP services. As the market develops beyond the launch of the licence, we remain open to re-evaluating the consumer protection package.

We welcome feedback related to ensuring licensees are available via contact methods that meet customer needs. We note that the 'treating consumers fairly' licence condition (related to Q12) will include a requirement on licensees to make it easy for a consumer to contact the licensee.

Please refer to our responses to Q12 and 13 for explanations on our approach to licence conditions covering treating consumers fairly and recommending suitable services, including our intention to align with the various parts of the Standards of Conduct included within SLC0. Noting concerns around ensuring the stability of the grid in response to a DSR request, government will have specific grid stability licence conditions placed on DSRSPs and load controllers and intend to consult on the detail of this as part of a future consultation on licence conditions.

Question 30 - For businesses in scope of the licence: Which resources (FTE) or costs (£) are you currently using to deliver consumer protection measures?

Question 31 - For businesses in scope of the licence: Which resources (FTE) or costs (£) would you have to use to comply with the consumer protection requirements set out in this chapter (ideally broken down by topic)?

Summary of responses

There were 14 respondents to question 30 and 31. 8 provided resource or cost evidence and 6 provided only qualitative insights.

Most respondents stated that they already have customer facing business units. Four respondents stated that the proposals are not detailed enough to provide resource and cost estimates and that costs will scale depending on the severity of licence requirements. According to those respondents who did provide evidence, the introduction of consumer protections measures would require additional resource between 1 and 10 FTE per company. Cost estimates ranged from £75k to £1m. This sample includes small, medium and large companies. Some of the large companies stated that their existing consumer departments would be able to carry out the required functions without significant additional resource.

Government response

Government will use the evidence provided in responses to produce a full impact appraisal of the new licensing regime, which will be published alongside the next consultation.

Consumer switching

Exiting a DSR service

In this section of the 2024 consultation, we explained our belief that domestic and small non-domestic consumers should be able to use their ESAs across different DSRSPs and Load Controllers easily and still expect a minimum level of DSR services.

We stated our view that the primary route to enabling our overall aim of an active DSR market with switching consumers was through enabling the technical interoperability of ESAs through requirements on device manufacturers and others placing devices on the market. To complement the foundation set by ESA-level technical interoperability, discussed in our ESA consultation, government believed a load control licence should include measures that ensure consumers can switch their ESAs across different DSRSPs without undue practical barriers such as a premises visit or financial barriers such as punitive exit fees.

We also stated our belief that a consumer who wishes to use an ESA as part of a new service (for which they would contract with a new DSRSP) should be able to do so in all reasonable circumstances.

Lastly, we outlined proposals on how to define "proportionate" costs associated with a consumer's service exit, seeking views on whether to take precedent from the Electricity Supply Licence[37] or to rely on the definition of "fairness" developed as part of the load control licence consumer protection principle.

[37] Licence and licence conditions', https://www.ofgem.gov.uk/energy-policy-and-regulation/industry-licensing/licences-and-licence-conditions

Question 31 - Do you agree with government's proposal to include a requirement in the licence requiring DSRSPs to allow consumers to exit a service? Please give reasons for your answer.

Summary of responses

There were 34 respondents to this question. 31 respondents agreed with the proposal, 2 remained neutral, and 1 disagreed. Overall, a strong majority supported the proposal.

Many respondents who agreed with the proposal felt that it would mitigate against 'lock-in' situations and build trust between consumers and DSRSPs. A number of respondents also referenced the importance of this requirement to encourage DSRSPs to offer competitive pricing and quality services as a way of retaining customers. 1 respondent remarked that without the requirement switching would be reduced, providing fewer incentives for organisations to innovate. 1 respondent stated that consumer choice must be central to a DSRSP's value proposition and being able to exit a DSRSP's service is core to this.

A number of respondents supporting the requirement stated that their support was dependent on Q33 and the definition of "proportionate" exit fees. Some respondents, referencing impacts on service management, felt that further clarity on notice periods would be useful. 2 respondents remarked that a successful switching process should not be reliant on the outgoing DSRSP, with one noting that this was especially important if a switch occurs because of the insolvency of a DSRSP.

2 respondents highlighted issues around "bundling" and implementation of the requirement if consumers do not own an asset outright, an asset is installed as part of a long-term subscription service, and/or finance for an asset comes from a financing company. 1 respondent raised the issue of the private rented sector and if service exit arrangements will be able to fairly accommodate for changes in tenancy. 1 respondent that agreed with the intent behind the requirement believed that devising new regulation to enforce it was disproportionate and premature in view of the nascency of the sector.

Government response

Government has decided to include a requirement in the licence for DSRSPs to allow consumers to exit a service. We welcome the strong support for this proposal and continue to believe, in line with much of the feedback, that it is essential for consumers to maintain confidence in DSRSPs and to build a competitive market. The requirement will apply whether a consumer is exiting the contract with the intent of signing up to another service provider or deciding that they no longer want to pursue DSRSP services more generally; provided in both scenarios that the relevant contractual obligations have been met by the consumer.

Government also notes that for several respondents support for this condition was dependent on the definition of "proportionate" with regards to fees associated with a consumer's contract exit, and that questions around "bundling" and financing arrangements in the DSR domestic sector need further exploration. Please see our response to Q33 for our proposed approach.

Question **33 - Do you agree with government's proposal for a condition that fees associated with a consumer's service exit should be proportionate, and if so, do you have a preference as to how 'proportionate' is defined? Please explain your answer.**

Summary of responses

There were 34 respondents to this question. 29 agreed with the proposal, 4 respondents remained neutral, and 1 disagreed. Overall, a strong majority supported the proposal.

Respondents who agreed with the proposal noted that facilitating easy comparison of service costs, including exit fees, should: assist consumers in finding better value, increase the likelihood of switching, and foster a competitive market.

Respondents in support of this proposal also had different views about how the definition of proportionate should be approached. 3 respondents preferred taking precedence from the Supply Licence, where termination fees must be "proportionate" and "must not exceed the direct economic loss to the licensee […] including the costs of any Non-Energy Product". 1 respondent further noted that the definition of "non-energy product" regarding DSR would need reconsidering. 1 respondent said the definition should reflect the direct economic loss to the DSRSP, including costs associated with any Energy Service Aggregation devices. Another respondent noted that it should reflect the actual costs incurred by the provider due to the service termination, without including any punitive charges. 1 respondent believed a purely principles-based approach should be followed, as it would be challenging to define "proportionate". 1 respondent suggested that, due to business model variety, a "one size fits all" definition might be unfeasible.

Several respondents referenced the issue of "bundling" and the challenges associated with recouping costs where an ESA is not owned by a consumer and/or an ESA is being purchased by a consumer through particular financing arrangements. 1 respondent expressed the view that several cost elements within the DSR value chain would benefit from further consideration, ensuring that service exit cost is balanced across the value chain and risk shared equitably.

A small number of respondents suggested that a condition is unnecessary as it is already a legal requirement, and a load control licence does not need to replicate consumer law. 1 respondent disagreed with the proposal, suggesting that the requirement was unnecessary as there were no fees to exit their services and customers simply forfeit the benefits of the product or change to a new tariff.

Government response

Government has decided to include a licence condition that fees associated with a consumer's service exit are proportionate. Government welcomes the strong support for this proposal. At this stage, we are minded to follow the supply licence requirement, or something close to the supply licence requirement, that the exit fee be "proportionate", and "must not exceed the direct economic loss to the licensee… including the costs of any Non-Energy Product", noting as below that this will require further testing with industry, particularly around "bundled" services.

By requiring that exit fees must be proportionate and should “not exceed the direct economic loss to the licensee resulting from the Domestic Customer's termination of the Contract, including the costs of any Non-Energy Product comprised in any Tied Bundle that has already been provided to the Domestic Customer as part of the Contract”, the supply licence clearly links the maximum exit fee to the full costs incurred by the supplier. Following this approach will allow DSRSPs to recoup proportionate costs and prevent DSRSPs from being unreasonably financially exposed to consumer exits. We believe this approach supports the growth of the DSRSP market while maintaining consumer confidence in it.

Nonetheless, we expect to test this proposal further with industry, upon launching the Licensing Working Group, including gathering further evidence about associated financial loss to DSRSPs where a consumer exits a contract early; particularly around “bundled” services where consumers do not own all or part of the ESA they receive a DSRSP’s service for. Government will also be working with industry on whether any cooling off period and/or notice period for exiting a contract will be required, and how long reasonable periods would be.

Question 34 - Do you think any further requirements around service exit need to be included in the licence, for example around the visibility of exit fees at the consumer contract? Please give reasons for your answer.

Summary of responses

There were 37 respondents to this question. 26 respondents answered “yes”, 7 respondents answered, “don’t know”, and 4 answered “no”. A strong majority of respondents were of the view that government should include further requirements.

Of those advocating for further requirements, many referred to the importance of clarity or visibility of exit fees, with many suggesting that clarity around service exit will ensure consumers are fully informed from the outset and will enhance overall trust in service providers. It was also noted that transparency will be essential in driving a competitive market.

Many responses further clarified the suitable point at which they thought exit fees should be visible. A number of respondents stated that exit fees being displayed at the point of contract signing or “contract inception” was most suitable. 1 respondent advocated for the inclusion of exit fees within quotes provided to consumers.

A small number of respondents flagged the concept of a “principal term” and 1 referenced existing legislation. They mentioned that visibility of exit fees would likely be considered a “principal term” of any contract and/or that therefore exit fees would be required to be shared with consumers under general consumer law. 1 noted that exit fees would be highlighted to consumers at the point of contract as a “principal term”. 1 respondent advocated for the licence to go further in this area, requesting a condition like SSLC 23.1 whereby suppliers must communicate about “principal terms” in clear and intelligible language. 2 respondents raised the issue of exit fees and rental properties with one considering the possibility that DSRSP contracts could be novated to new tenants.

A small number of respondents who answered “don’t know”, noted that a requirement around visibility of exit fees might be covered by the proposed “treating consumers fairly” licence condition.

Respondents who disagreed with the proposal, suggested that exit fee protections were covered by general consumer protection rules or that including requirements similar to those in the supply licence would be sufficient.

Government response

Government welcomes both the support for further requirements around service exit to be included in the licence and the strong support for these further requirements to include measures on the visibility of terms, particularly on exit fees. Based on this feedback, government has decided to include a requirement that exit fees are visible to ensure that consumers are provided with upfront information and supported in making an informed decision about whether a particular service is suitable for them. We believe this approach will protect consumers from unexpected exit fees and underpin trust between consumers and service providers. We will work further with industry, upon launching our Licensing Working Group, to understand how proportionate exit fees can be calculated and the suitable point at which exit fees can reasonably be communicated to consumers.

Technical interoperability of ESAs provided with a DSR service

In this section of the 2024 consultation, we proposed no interventions in the licence at this stage around the technical interoperability of ESAs provided with a DSR service. This was on the basis of plans to put in place relevant interoperability requirements applying to the placing on the market of ESAs: which would also apply to all ‘bundling’ approaches by load control licensees.

Orderly switching

In this section, we set out our desire for DSRSPs taking on new consumers to do so in an orderly way.

In addition to measures that ensure consumers can switch their ESAs across different DSRSPs without undue practical barriers, we proposed that DSRSPs must not obstruct a consumer switching to another DSRSP provided all contractual obligations by the consumer (including proportionate costs) have been met. To support this outcome-level requirement, we sought stakeholder views on requirements that could enable the orderly switching of ESAs between different DSRSPs.

We suggested that requirements enabling orderly switching could include specifying the time periods that an exiting DSRSP can control a consumer’s ESA, instructions which the exiting DSRSP gives to consumers, or the format of personal data which consumers may port across different services under the UK’s current data protection framework.

Question 35 - Do you think there should be requirements for DSRSPs to enable orderly switching of ESAs between services? What specific measures do you think might need to be covered as part of these requirements – including those referenced in this consultation? Please give reasons for your answer.

Summary of responses

Of the 36 responses to this question, 30 answered “yes”, 5 answered “don’t know”, and 5 answered “no”.

Respondents who supported the principle of orderly switching believed it demonstrates consumer autonomy and will help build trust in the market. Encouraging greater interoperability and reducing consumer lock in were also noted as supporting reasons.

Several respondents expressed support for a requirement specifying the time periods that an exiting DSRSP can control a consumer’s ESA. 1 respondent flagged the value in defining acceptable lead times for switching DSRSPs due to the long lead times that currently exist in the market. 2 respondents advocated for exploring a central asset register, such as the government’s Automatic Asset Registration (AAR) programme, where all ESAs engaged by DSRSPs could be registered.

In reference to the possible requirement specifying the format of personal data which consumers may port across different services under the UK’s current data protection framework, 3 respondents noted a dependence on Ofgem’s work on Data Sharing in a Digital Future regarding consumer consent. 1 respondent suggested a general condition on orderly switching with the process set out in a code (e.g., REC for switching supplier).

3 respondents felt that further details on the technical solution for interoperability would be needed before specifying further requirements to enable orderly switching.

4 respondents agreed with the principle of orderly switching but felt that it was too early, given the nascent state of the industry, to set out specific enabling requirements.

Government Response

At this stage of licence development, government has decided there will be no further licence requirements for licensees to enable orderly switching. As mentioned in our response to Q33, we will be working with industry on whether any cooling off period and/or notice period for exiting a contract will be required and how long reasonable periods would be.

However, as second phase device regulations are developed beyond the launch of the licence, we expect to assess whether additional licence requirements on Load Controllers and/or DSRSPs will be needed to ensure they can integrate with specified minimum device standards.

We also recognise that better visibility of assets is beneficial for organisations involved in flexibility, and in the Clean Power 2030 Action Plan we stated that DESNZ and Ofgem will work with NESO to set out measures in this year’s Low Carbon Flexibility Roadmap.

Ofgem are also developing proposals on consumer consent on sharing personal data in their Data Sharing in a Digital Future workstream[38].

Costs to businesses

Question 36 - For businesses in scope of the licence: Could you set out the additional resource or cost you would incur for complying with requirements around consumer switching laid out in this chapter?

Summary of responses

We received 12 responses to this question comprising mainly qualitative evidence. Most respondents stated that proposals were not detailed enough to give cost estimates or that costs would depend on the technical implementation of consumer switching. 2 respondents provided qualitative evidence. 1 respondent stated that consumer switching would require approximately 0.5 additional FTE. 1 respondent stated that "a six-figure sum" would be required to implement a switching regime akin to the one in the supply licence.

Government response

Government will use the evidence provided in responses, as well as external evidence, to produce a full impact appraisal of the new licensing regime, which will be published alongside the next consultation.

Data privacy

Using the UK's Data Protection Framework

In this section of the 2024 consultation, we proposed that licensees should not be subject to any additional legal obligations for processing personal data beyond what is already mandated by UK data protection laws. We explained that industry would be familiar with the principles contained in the UK-GDPR alongside the extensive guidance on data protection provided by the Information Commissioner's Office (ICO), and that the UK-GDPR is an effective framework for data protection for licensed services.

We sought views on whether there could be data privacy risks related to licensed services that would not be addressed by the UK's data protection framework, and whether additional requirements could enhance consumer confidence in the sector. We remained open to implementing additional measures if required or if such measures significantly boosted consumer confidence and engagement.

We underlined the importance of informed consumer consent for sharing personal energy data and sought views on whether specific requirements on protection of personal data would improve consumer confidence.

[38] https://www.ofgem.gov.uk/consultation/consumer-consent-solution-consultation

Question 37 - Do you agree with our proposal for no further legal requirements on load control licensees around data privacy at this time? Please explain your answer.

Question 38 - Are there specific risks to consumers associated with the processing of personal data as part of load control services not addressed by the UK's data protection framework? Please explain your answer, referencing specific evidence where relevant.

Question 39 - Would specific requirements around the protection of personal data from load control services significantly improve consumer confidence in the sector? Please explain your answer, referencing specific evidence where relevant.

Summary of responses

In relation to question 37, there were 40 respondents to this question. 32 agreed with the proposal, 5 remained neutral, and 3 disagreed, Overall, a strong majority agreed with the proposal.

Of those that agreed, most stated that the UK-GDPR provided sufficient protection on data privacy. 1 respondent also suggested that any further requirements would add unnecessary complexity. Another respondent stated that there was no reason for load control licensees to be subject to an enhanced set of requirements beyond the existing data privacy and protection framework.

Of those that disagreed with the proposal, 1 respondent suggested that without additional requirements, the activities carried out by the licensee would not be held to the same stringent standards as suppliers and network operators. The same respondent stated that this could possibly lead to a two-tier system, with consumers offered a lower protection by the load control licence. This respondent also suggested updating the Data Access and Privacy Frameworks to include load control licensees. A few respondents expressed concerns that data on consumer behaviour could be used to identify individuals and their location and therefore suggested that further requirements were necessary to safeguard data privacy.

In relation to question 38, there were 35 responses to this question. 22 supported the view that the UK-GDPR offered consumers sufficient protection around the processing of their personal data, 7 remained neutral, and 6 responses highlighted specific risks. There was a strong consensus amongst respondents that existing legislation addressed the risks associated with the processing of personal data in load control services.

1 respondent stated that the data processed within the licensed activity would be similar to the sensitive data processed in other sectors such as in banking, and therefore the existing legislation was sufficient. Some respondents suggested that to maintain consumer confidence, government should continue to monitor the sector and work with Ofgem on their Data Sharing in a Digital Future workstream.

However, some advocated for additional requirements, for instance on the need to protect consumer behavioural and lifestyle data. Some respondents stated that they were unclear on the type of data that could be considered personal data. Some raised concerns on data

sharing and sought further clarity from the Information Commissioners Office (ICO). Another respondent suggested that security controls like encryption are necessary to protect against unauthorised access.

In relation to question 39, there were 33 respondents to this question. 18 agreed that specific requirements were not needed to improve consumer confidence, 10 remained neutral, and 5 respondents suggested that consumer confidence in this sector could be improved by further requirements around the protection of personal data from load control services. Overall, there was consensus that specific requirements were not needed.

Most respondents agreed that the UK-GDPR provided sufficient protection of personal data for licensed activity. 1 respondent suggested that normalising smart energy management and demonstrating that existing data privacy laws provides sufficient protection can lead to an increase in consumer confidence in the load control service. 1 respondent proposed that a statement of compliance by the licensee with existing data privacy consent framework would increase consumer confidence in the sector. Some respondents supported the ongoing work by Ofgem to improve data sharing requirements and aligning them with relevant data protection, privacy and security standards.

There were some responses advocating for additional requirements. For example, 1 respondent stated that manufacturers of devices should be prevented from accessing usage data at an identifiable user level. Another respondent stated that transparency and accessibility are essential for consumers to have a positive experience and feel confident in how their personal data is being used. 1 respondent suggested a code of conduct or guidance for a licensee would support consumer confidence in this sector. Another mentioned that Ofgem's work on 'Data Sharing in a Digital Future' assesses the specific requirements that are needed to improve consumer confidence in the sector.[39]

Government response

Government has decided not to impose any further legal requirements on data protection and privacy through the licence and welcomes the strong support from respondents on this approach. In line with much feedback, we believe that UK-GDPR is an established and well tested framework for data protection and privacy within the energy market and therefore provides sufficient protection for consumers.

Government welcomes the feedback on the risks to consumers from the processing of personal data as part of load control services and the concerns raised by some respondents on consumer consent. Ofgem are developing proposals on consumer consent related to sharing personal data in their Data Sharing in a Digital Future workstream.[40] We also note the ICO have published guidance on personal data[41]. We have therefore come to the view that, at this stage of licence development, the licence is not the right vehicle for addressing additional

[39] https://www.ofgem.gov.uk/consultation/consumer-consent-solution-consultation
[40] https://www.ofgem.gov.uk/consultation/consumer-consent-solution-consultation
[41] https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/personal-information-what-is-it/what-is-personal-data/what-is-personal-data/

data processing risks. Government will continue to monitor how personal data risks could cause consumer harm in the market as it develops.

Providing assessments of data processing to Ofgem

In this section of the 2024 consultation, we sought views on whether load control licensees should be required to proactively share assessments of their high-risk personal data processing to Ofgem for monitoring purposes, in instances where this assessment has been deemed necessary by the licensee. We suggested proactive sharing of Data Protection Impact Assessments (DPIA) could help Ofgem and the government better understand data processing activities and determine if further action is needed. While Government did not expect Ofgem to take regulatory action based on these assessments, it was proposed that they could use them to evaluate whether future requirements may be needed. It was also mentioned that the interactions between Ofgem and the ICO regarding this monitoring role would need further consideration.

Question 40 - In the instance that a load control licensee has produced an assessment of its processing activities, do you think this assessment should be pro-actively shared with Ofgem? Please explain your answer.

Summary of responses

There were 32 respondents to this question. 9 respondents supported the view that assessments should be proactively shared with Ofgem, 7 remained neutral, and 16 were against. Overall, there were mixed views about this proposal.

Of those that supported the view that assessments should be proactively shared with Ofgem, 1 respondent stated that monitoring existing and emerging risks would help Ofgem assess if further requirements are needed. Another respondent mentioned that regular reporting and audits should ensure conformity with licence conditions. 1 respondent agreed that a standard process for all licensees would help Ofgem understand how effectively consumer data is managed and the effectiveness of the proposed data processing regime in protecting consumer data associated with licensed activities.

Of those that disagreed, many respondents questioned the need to proactively share a DPIA with Ofgem. Several respondents also cited the additional costs and burdens on the licensee to produce and then proactively share the DPIA with Ofgem. Another respondent stated they were unclear on how Ofgem would use this information. 1 respondent questioned Ofgem's expertise in data protection and therefore suggested that Ofgem were unsuitable for reviewing DPIAs. The same respondent also highlighted that they maintain extensive records of processing activities (ROPAs) that are commercially sensitive and therefore are not comfortable with sharing such documents with Ofgem. 1 respondent suggested that if required the DPIA could be audited by the ICO.

1 respondent was unsure why a DPIA would be required as it was not necessary for consumers to share high-risk personal data with load control licensees. The same respondent questioned the merit of including this condition in the licence. Another respondent mentioned

that organisations conducted impact assessments for a range of data processing activities without the need to proactively share them and expressed concerns around treating load control licensees differently.

Government response

Based on the feedback received in the consultation, government has decided that it will not be introducing a licence requirement for licensees to proactively submit DPIAs to Ofgem. We note that Ofgem will still have the power to request an organisation's DPIA through a request for information (RFI). Licensees will be required to comply with RFIs as part of their licence requirements.

Using codes of conduct

In this section of the 2024 consultation, we remained open to developing specific data protection guidance for the demand flexibility sector, such as a UK-GDPR Code of Conduct, with the view that this could help load control licensees comply with UK-GDPR. We suggested this sector-specific guidance could define and encourage best practices for processing personal data associated with licensed activity.

We explained that UK-GDPR Codes of Conduct, as outlined by the ICO, are sector-specific guidelines created by trade associations and representative bodies to address important data protection issues, that these codes are approved by the ICO and tailored to the needs of different processing sectors, including small and medium-sized enterprises, and that signing up to these codes is voluntary.

We sought views on whether a sector specific guidance would be beneficial for consumers and licensees.

Question 41 - Would the creation of sector-specific guidance, like an ICO-approved UK-GDPR code of conduct, be beneficial for consumers and load control licensees? Please explain your answer.

Summary of responses

There were 36 respondents to this question. 17 supported the view that sector-specific guidance would be beneficial, 11 remained neutral and 8 disagreed. Overall, there were mixed views.

Of those that supported the view that sector-specific guidance would be beneficial, some suggested it would be beneficial to have additional guidance on interpreting the UK-GDPR within this sector as this would help new market entrants and enhance consumer trust. A few respondents believed that guidance would aid transparency, ensure consistency and/or give consumers confidence about data privacy. 1 of these respondents supported the creation of codes of conduct in general, as it would provide detailed guidance on processing activities related to the sector specific activities and mentioned that there are currently no approved sector specific UK-GDPR codes of conduct. Another respondent suggested it would help

define and encourage best practices for processing personal data in relation to licensed activities.

1 respondent suggested that if guidance was pursued, where possible, the guidance should align with existing codes, both mandatory (such as the ICO-approved UK-GDPR code of conduct) and voluntary (such as HomeFLEX). The same respondent mentioned that the additional guidance would be particularly useful for licensees without supplier licences, who may lack the internal resources to research and apply wider codes of conduct.1 respondent stated that since signing up to such a code of conduct is voluntary, it would lower entry barriers for smaller flexibility providers entering the market. Another respondent stated that creating a code can help a sector proactively address common vulnerabilities, boosting consumer trust and confidence, and offers a cost-effective way for businesses to ensure data protection compliance without continuous regulatory oversight, unlike UK-GDPR certification. 1 respondent stated that sector-specific advice can be helpful if it remains at the guidance level but cautioned that introducing mandatory sector-specific requirements could create confusion regarding their interaction with the UK-GDPR. 1 respondent stated that any guidance should not be overly prescriptive, allowing licensees to design their own processes and follow their existing compliance frameworks, rather than creating additional bureaucracy.

Of the respondents that advocated against sector-specific guidance, most stated that the UK-GDPR framework is sufficient for protecting people and businesses, and creating additional rules within something such as a code of conduct would be unnecessary. 1 respondent stated that existing regulations are sufficient as DSRSPs do not handle highly sensitive data. Another respondent suggested that codes of conduct could offer flexibility but might also impose constraints and require regular reviews, which translates to costs and more bureaucracy for the provider. Another respondent stated that it is too early for sector-specific guidance due to a lack of operational data. 1 respondent mentioned that they supported the HOMEflex guidance and therefore additional guidance was not required.

Government response

Government has decided not to develop sector-specific guidance related to data protection and privacy at this stage. This is because, despite the potential benefits associated with guidance, further work would be required to assess the precise risks and varying needs that need to be addressed by sector-specific guidance or a code of conduct. Furthermore, any sector-specific guidance would need to consider any duplication or conflict with existing UK-GDPR legislation and guidance. At this stage, we do not believe undertaking this work is proportionate to the risk at hand, particularly given the UK-GDPR is already an established and well tested framework. Government will continue to monitor how guidance and/or a code of conduct could support consumers and load control licensees as the market develops.

Management and financial controls

Management controls

In this section of the 2024 consultation, we outlined that there is a risk that organisations could operate irresponsibly. This could cause significant detriment to consumers and the electricity system if senior personnel are not 'fit and proper'. To mitigate such risks, we proposed there should be specific requirements around the people who take senior positions in companies requiring a load control licence.

We also proposed that licensees would be subject to a licence condition to ensure they have the necessary operational capability, systems, and processes to deliver their services effectively. We noted our expectation that organisations would need strong systems and processes to comply with licences, in addition to providing good services to consumers and to the electricity system. We therefore proposed a licence condition to support this.

Question 42 - Do you agree with the proposal for a condition requiring licensees to have fit and proper senior personnel? Please explain your answer.

Summary of responses

Out of 38 responses to this question, 30 respondents agreed with the proposal, 3 remained neutral, and 5 disagreed. Overall, there was strong agreement with the proposal.

The majority that agreed with the proposal stated that the condition would mitigate the risks to consumers and the electricity system. Some respondents cited poor demand management, including asset overloading, safety risks, economic damage and distress to consumers (especially the vulnerable) as some of the consequences of not having a fit and proper senior personnel in the organisation. Many respondents agreed that this condition would provide accountability, competence and enable management of sensitive data.

The small number of respondents that disagreed with the proposal suggested that there was not sufficient rationale or that it was not proportionate to include this condition in the licence at this stage. One respondent argued that this condition was not necessary as load control licensees will not keep significant customer credit balances and will not be responsible for collecting charges on behalf of other market participants.

Government response

Government has decided it will include a requirement for load control licensees to have in place fit and proper persons in senior positions. Ensuring there is oversight of senior personnel will ensure the licensee is accountable and competent, which will support the intention to maintain consumer trust and confidence in a nascent market. Government expects the condition to reflect SLC 4C in the Electricity Supply Licence. Government will work with industry, upon launching our Licensing Working Group, to ensure the load control licence condition is proportionate to the needs of the market.

Question 43 - Do you agree with the proposal for a condition around the operational capability of load control licensees, and how might a load control licence approach this? Please give reasons for your answer.

Summary of responses

Out of 37 responses to this question, 24 respondents agreed with the proposal, 10 remained neutral, and 3 disagreed. Overall, a broad majority agreed with the proposal.

Of those that agreed, some stated that it aligned with the requirements on electricity and gas suppliers that are contained in the supply licence and that inadequate operational capability would harm consumer engagement with DSRSP services. Some respondents stated that the proposal on operational capability will protect consumer confidence and the wider market and therefore is a reasonable expectation to have on the licensees. One respondent stated that they agreed with the proposal as the operational capability of load control licensees should already be sufficient for the services and market they intend to provide and serve. Another respondent suggested it would be prudent to ensure licensees have the appropriate systems and processes in place to enable them to provide a quality service to customers.

Of the small number of respondents disagreeing with the proposal, some stated that it was disproportionate to impose a licence condition on operational capability at this stage. One respondent suggested that organisations will resolve this independently if the market is competitive.

Government response

Government has decided to include a requirement on licensees to have the necessary operational capability, systems, and processes to effectively deliver their services at the required standards around operational capability. In line with much consultation feedback, we believe this supports and encourages good practices and aligns with existing practice in the sector. We expect the condition to align closely with condition 4A in the Supply Licence. Upon launching our Licensing Working Group, we will work with industry to ensure the licence condition is proportionate to the needs of the market.

Financial controls

In this section of the 2024 consultation, we proposed the inclusion of a financial responsibility principle to encourage market participants to develop their businesses responsibly. We stated our intention to keep requirements around financial responsibility at a high level initially and sought views on how this should be approached.

We further proposed that insolvency of load control licensees would be addressed under existing insolvency law. We set out certain consumer risks associated with insolvency such as disruption of DSR services, inconvenience, loss of financial benefit to consumers and ESAs reverting to default settings. However, despite these risks, we proposed that at this stage of market development it was not proportionate for a bespoke insolvency process for load control licensees, such as Supplier of Last Resort (SoLR) or Special Administration Regime (SAR) for

insolvent suppliers. We remained open to the development of guidance to encourage consideration of an insolvent licensee's customers and reduce risks to the wider electricity system.

Question 44 - Do you agree with the inclusion of a financial responsibility principle in the load control licence and how might this be approached? Please explain your answer.

Summary of responses

Out of 37 responses to this question, 23 respondents agreed with the proposal, 8 remained neutral and 6 disagreed. Overall, a majority agreed with the proposal.

Of those agreeing with the proposal, many stated that it aligned with good industry practices. Some respondents stated that the requirement would prevent harm to consumers. A few mentioned the importance of aligning with the requirements on gas and electricity suppliers in the supply licence. One respondent stated that confidence in the sector could be compromised without financial resilience of the licensee.

Of those disagreeing with the proposal, many suggested that imposing a licence condition at this stage would be disproportionate. Another respondent highlighted that similar requirements do not exist for the distribution network operators, generators, or non-DSRSP manufacturers of Energy Storage Assets and therefore questioned the proportionality of including this condition on load control licensees. For example, one respondent stated that imposing a financial responsibility requirement at this stage could impose burdens on smaller businesses and that this could inhibit growth and competition in the market. Other respondents suggested that existing audit requirements would be sufficient.

Government response

Government has decided to include a financial responsibility principle within the licence. We continue to believe, as set out in the consultation, that requirements around financial responsibility should be kept at a high level initially. We are still considering the best way to achieve this and whether aspects of the supply licence condition 4B would be the simplest and most effective way to manage risks associated with load control licensees being financially irresponsible, or whether a bespoke licence condition would be more suitable. We do not expect mandatory rules, such as minimum capital requirements or ringfencing to be part of a load control licence requirement as we believe these could present barriers to new entrants and therefore stifle innovation at this stage of market development.

While we acknowledge the importance of protecting customer's money, particularly in the instance of an insolvency, we also believe some of the financial risks to DSRSP consumers are relatively lower than those same risks to supply consumers. This is because:

- We expect tariff based DSRSP services in most cases to reward consumers by lowering bills through their supply service rather than through their DSRSP (even where their DSRSP is not also their supplier) and therefore the supply licence requirements will

provide certain financial responsibility protections to these consumers. We do not generally expect DSRSPs to accumulate customer's credit balances where they are not also the customer's supplier.

- We expect non-tariff based DSRSP services to have relatively low financial rewards to consumers at this stage of market development.

We will be testing our understanding of this, as well as our approach to the financial responsibility licence condition, upon launching our Licensing Working Group. Draft licence conditions will be subject to a further consultation. We also remain open to introducing more financial responsibility requirements on licensees in the future, as the market matures further.

Question 45 - What risks to consumers do you anticipate may arise from the insolvency of load control licensees?

Question 46 - Do you agree that specific processes for insolvency of load control licensees are not required? Please explain your answer.

Summary of responses

In relation to question 45, there were 18 responses detailing the risks that may arise from the insolvency of load control licensees.

Some respondents suggested that insolvencies were a low risk to consumers, unless the load control licensee was also the energy supplier. One respondent stated that the risk and impact to consumers would be greater if the load control licensee was the DSRSP. Other respondents stated that the impact on consumers, as a result of an insolvent load control licensee exiting the market, was mostly the inconvenience caused to consumers from losing this service. One respondent noted that as demand flexibility is essentially a value-added service and not a requirement (unlike having to be registered with an energy supplier), consumers could autonomously choose a new DSRSP to provide their service without suffering too much detriment. One respondent noted that the risk would be lower if interoperability was achieved.

However, several respondents also suggested that the insolvency could undermine consumer trust and placed importance on robust guidance to protect consumer interests. One respondent noted the impact on vulnerable customers, if they are left without essential services such as heating.

In relation to question 46, there were 38 responses; 20 respondents agreed with the proposal, 6 remained neutral, and 12 disagreed. Overall, there was a small majority that agreed with the proposal.

Of those agreeing with the proposal, some respondents suggested that a specific insolvency process was not required because the risks were low and most likely constituted an inconvenience to consumers. However, some suggested the impact of insolvency should be monitored as the market develops and grows. Several respondents suggested risks to consumers were low, unless the load control licensee was also the energy supplier. Some respondents stated that there was minimal risk to consumers as they would be able to choose

new providers in the event of an insolvency. One respondent however suggested the risk would be higher on the Distribution System Operators (DSOs) (who rely on flexibility to manage the grid) and an insolvency could potentially impact the grid.

There was agreement among several respondents that complex insolvency processes were not needed (such as a process similar to SoLR). However, some noted this was dependent on whether the new licensee would be able to operate devices without any action from the failed licensee. They suggested this could require a specific process and guidance. One respondent noted that the risk would be lower if interoperability was achieved. Of the respondents disagreeing with the proposal, several advocated for a process like the SoLR. Some suggested this process would allow Ofgem to assess and identify the best licence holder(s) to take on the customers of a failed licensee based on key assessment criteria such as the level of technical interoperability an incumbent licensee could provide, if several approved interoperability standards are used across the market. Some respondents recognised a longer-term risk where the insolvency of the load control licensee could impact the grid if contracted flexibility is no longer available, particularly in the future where the market becomes more embedded within the energy system. They suggested that government should consider developing guidance to outline how contractual arrangements can be managed to ensure the continuity of services.

Government response

Government has decided that insolvency of load control licensees should be addressed under existing insolvency law and, in line with many responses, a detailed specialist insolvency process such as SoLR or SAR is not proportionate at this stage. We recognise the consumer risks associated with an insolvency of licensees such as disruption of DSR services, inconvenience, loss of financial benefit to consumers and ESAs reverting to default settings. However, based on the consensus amongst respondents that specific processes for insolvency of load control licensees are not proportionate to risks, we will not be pursuing a bespoke insolvency process through the licensing framework at this stage. In line with the feedback, we will continue to monitor the impact of insolvency as the market develops and grows, particularly as interoperability requirements are introduced through second phase technical frameworks regulation.

At this stage of licence development, government has decided that it will not be developing a separate guidance. This is because a guidance aimed at mitigating the risks is unlikely to have a material impact, where insolvency legislation requires insolvent organisations to act largely in the interests of creditors. However, Ofgem will consider how it can support the market against risks associated with insolvencies, through monitoring the operational capability and the financial responsibility conditions in the licence.

47. Are there any other financial controls that government should consider including in the load control licence?

Summary of responses

There were 24 respondents to this question. 17 answered that they did not want any other financial controls to be included in the load control licence, 5 remained neutral, and 2 supported the inclusion of further controls.

A number of respondents stated there was no need for specific processes for insolvency of load control licensees at this time. Several respondents stated government should monitor the DSR market as it grows and expands and respond if needed. One respondent re-iterated that a specific insolvency process may not be needed if an incumbent licensee can operate devices without any action from the outgoing insolvent licensee. Other respondents referred to a similar process to SoLR and stated that it was not required at this stage as consumers can switch providers should a licensee become insolvent. One respondent stated that requirements such as notifying Ofgem of trade sales and purchases could introduce administrative burdens without providing clear additional benefits at this stage. Some respondents sought the inclusion of additional controls and suggested that companies must be registered in the UK, have their tax domicile in the UK, and not engage in offshoring. They also stated UK load should not be included in EU demand mechanisms to avoid arbitrage risks.

Government response

Based on the responses, government has decided it will not include any other financial controls measures in the load control licence beyond what has already been outlined in this section. We believe, at this stage, there is sufficient general commercial and tax legislation that mitigate wider financial risks. We will continue to monitor financial control risks as the market develops.

Question 48 - For businesses that would be in scope of the licence (as either a DSRSP or Load Controller): Could you set out the additional resource or cost you would incur for complying with the management and financial controls proposals in this chapter?

Summary of responses

Out of 14 responses to this question, 3 respondents provided resource or cost evidence and 11 provided only qualitative insights.

Half of the respondents stated that the costs of proposals to them are minimal and do not present a major barrier to enter the load control market. Two respondents for large and medium sized companies estimated the costs at approximately 1 FTE. One respondent representing a small company raised that the costs of the proposals, which they estimated at 3 to 5 FTE, would render their business unviable. More than a third (5) of respondents stated that more detail was required to gauge the cost impact of the proposal.

Government response

Government will use the evidence provided in responses to produce a full impact appraisal of the new licensing regime, which will be published alongside the next consultation.

Timelines, implementation and next steps

Timelines

In this section of the 2024 consultation, we declared that it is government's policy intent that Ofgem will have the necessary powers under the Electricity Act 1989 through enabling secondary legislation to start the process of assessing applications and awarding load control licences by the end of 2025. We also declared our expectation that there would be a 'transition period' between when Ofgem can begin to issue licences and conditions of the licence becoming fully effective and sought views on the appropriate length of this period. We proposed that all requirements for all load control licensees are introduced at the same time and sought views on whether approaches on phasing the introduction of different measures would be beneficial.

Question 49 - Do you agree with government's proposal for Ofgem to be able to start the process of assessing licence applications by the end of 2025? Please explain your answer.

Question 50 - Do you have views on the length of the 'transition period' between the licence application process opening and the conditions in the licence being effective? Please explain your answer.

Question 51 - Do you agree that all requirements in the licence should be introduced at the same time, or should some requirements be phased? If you think requirements should be phased, how should this be approached? Please explain your answer.

Summary of Responses

In relation to question 49, there were 35 responses to the question. 20 respondents agreed with the proposal, 11 remained neutral, and 4 disagreed. Overall, a small majority agreed with the proposal.

A number of respondents agreed that the timelines proposed were reasonable in principle. However, many respondents also commented on the need for more clarity on the detail of the licence before concluding on what reasonable timelines were. A small number of respondents commented that these were ambitious timescales. 1 respondent suggested this was too short a timescale if government were due to consult on the detail of the licence in 2025, with another respondent suggesting that 6-12 months from this consultation response was a reasonable timeframe. 2 respondents commented on the need to ensure Ofgem readiness too.

1 respondent raised concerns about the impact of mandated timelines for newer entrants to the market that may need additional support and/or time to comply with new obligations. 2 respondents suggested the timeframes needed to be brought forward to protect consumers sooner. They cited the P415 changes which will amend the Balancing and Settlement Code (BSC) to allow VLPs to participate in the GB wholesale market, and the gap in consumer protections this could leave with P415 changes being implemented in 2024. 1 respondent suggested that the end of 2025 should be the latest to bring in protections.

In relation to question 50, there were 32 responses. 18 respondents agreed with the proposal, 10 remained neutral, and 4 disagreed. Overall, there were mixed views about the length of the 'transition period'.

Many respondents commented on the need for more information about the detail of the licence and/or the importance of early engagement and support, with 1 suggesting this engagement and support should immediately follow the second consultation.

Of those that commented on the length of the transition period, 2 suggested between 12 and 18 months would be appropriate, 1 suggested 12 months, 3 suggested between 6 and 12 months, 1 suggested within 6 months, and 5 suggested as short as possible or no transition period at all.

2 respondents mentioned the importance of allowing transitioning so that they would not need to stop their DSR services until they had ensured compliance with the licence requirements. 1 respondent took the opportunity to suggest phasing requirements as a desirable approach.

In relation to question 51, there were 33 responses. 14 respondents agreed with the proposal, 13 remained neutral, and 6 disagreed. Overall, there were mixed views about whether requirements should be phased.

Of those against the proposal, there was not a consensus on which requirements were the most important and therefore should be imposed at the launch of the licence. 2 respondents highlighted the need to prioritise consumer protection while another suggested that cyber and data requirements should be phased in first. 1 respondent commented that information gathering regarding customer circumstances, including any vulnerability, should not be part of the first licence.

1 respondent mentioned that the Controlled Market Entry approach under REC could be considered to support applicants prepare for the licence. 1 respondent suggested the possible need for an intermediary solution to protect consumers, particularly due to P415 changes to the BSC. The same respondent suggested setting up an interim solution for protecting consumers which is more enforceable than industry/voluntary standards, such as making HomeFlex a mandatory contractual requirement for all VLPs entering the wholesale market.

Government Response

Government has decided it will be taking a phased approach to implementing the licence. This will mean that we will be introducing some of the consumer protections and management and financial controls, cyber security, and grid stability requirements first. We will also be requiring licensees to be party to the enduring governance code at the point the licence comes into force. This is to align with the expected transition phase for governance. To give licensees additional time to adjust to the first set of licence requirements, we expect there to be a transition phase and will be working with prospective licensees and industry, through the Licensing Working Group, to test our approach to this before consulting on it in our next consultation.

We welcome the feedback across the whole consultation that government should be mindful of newer entrants to the market. Following further discussions with Ofgem and noting some appetite from respondents for phasing, we believe phasing is an implementation approach which supports newer entrants to the market effectively, while still ensuring that the needed minimum standard requirements are introduced into the licence within timelines which will continue to support consumer confidence in DSRSP services and protect our electricity system.

While we received some limited feedback about which aspects of the licence should be prioritised, there was no consensus amongst respondents. We have therefore decided to prioritise the aspects of the licence which we believe are the highest priority to mitigate risks of poor uptake of DSRSP services while being lowest risk to delaying overall licensing timelines. We will set out our approach to phasing further through the Licensing Working Group.

We now expect the licence application window to open in mid-2026, with a transition period following this to allow for applications to be assessed and processed by Ofgem before the licence and first set of licence conditions come into force. As above, the transition period approach will be subject to further engagement with prospective licensees and industry through the Licensing Working Group. We expect the second set of licence conditions to be consulted on and introduced into the licence in 2027-28. We may also consider consulting on additional licence conditions related to consumer switching in order to align with interoperability standards introduced through second phase device regulations, as set out in our response to Q35.

Ofgem will provide additional clarity on the implementation of the licence through the Licensing Working Group which we will launch to support the development of draft regulations and licence conditions. We will be consulting on draft regulations, the first set of draft licence conditions and timelines as part of our next licensing consultation.

Tiering requirements for licensees

In this section of the 2024 consultation, we proposed that requirements for DSRSPs in the licence will not be tiered or scaled, noting that proportionality will be considered in Ofgem's regulatory approach for DSRSPs of varying sizes, in line with its existing regulatory principles.

We also re-visited proposals about the scope of the licence and sought views on our proposal that cyber requirements for Load Controllers would be scaled depending on the amount of load they control.

Question 52 - Do you agree with our proposal that all requirements for DSRSPs in this consultation should apply equally to all relevant organisations irrespective of size? Please explain your answer.

Summary of responses

There were 36 respondents to the question. 27 agreed, 3 remained neutral and 6 disagreed. Overall, a strong majority agreed with the proposal.

Of those that agreed with the proposal, most respondents mentioned that universal minimum standard consumer protections were essential for supporting consumer confidence. 1 respondent mentioned the possibility that tiering could lead to larger companies using small affiliated DSRPs to avoid obligations.

2 respondents mentioned the need for more information before concluding on whether tiering would be needed, with 1 suggesting that frequent reporting cycles could be problematic for smaller licensees and another stating that they needed more information on what government was proposing in relation to operational capacity.

Of those disagreeing with the proposal, 2 respondents suggested that energy suppliers already complying with their supply licence would gain an advantage without tiering. Another respondent raised concerns about costs to new entrants to the market, such as the cost of being part of an ADR scheme.

Government response

Government has decided that all requirements for DSRSPs will apply equally to all relevant organisations. We recognise the limited concerns about the proposal impacting smaller market participants. However, the licence is designed to be a minimum set of consumer protections and, in line with a number of respondents, we believe consistency across the market will be essential for supporting consumer confidence.

Other regulatory changes, such as P415 changes amending the BSC to allow VLPs to participate in the GB wholesale market, are targeted to support a more level playing field with more established market participants. We will work closely with prospective licensees and Ofgem to ensure compliance requirements and costs are proportionate to the market. An impact assessment will be published as part of our next consultation.

53. Do you agree with the approach on tiering requirements for Load Controllers based on how much load they have the potential to control? Please explain your answer.

Please see the ‘Government response’ in the ‘Assuring the cyber security of load controllers’ section. Question 53 has been addressed alongside Q10 and 11.

Proportionality and Ofgem’s regulatory approach

In this section of the 2024 consultation, we sought views on whether to endorse an approach where those applying for a licence could evidence compliance with certain licence conditions by showing compliance with recognised external standards. This included discussing the development of voluntary codes and standards around demand flexibility services by industry stakeholders – for example the HOMEFlex Code of Conduct developed by Flex Assure in partnership with Scottish and Southern Electricity Networks.

Question 54 - What role do you think external standards have to play in demonstrating compliance with the load control licence, particularly measures for DSRSPs? Please explain your answer.

Summary of responses

There were 24 respondents to this question. Overall, responses indicated that external standards could play a role in demonstrating compliance. However, 5 respondents commented that this should not be a requirement of obtaining a licence.

Of those that were supportive, a number of respondents commented that it could support alignment with the licence regime and/or be used as useful indicators of compliance. 2 respondents suggested external standards could be useful to support the transition to a licence. 2 respondents suggested the importance of existing industry codes and the role these could play in supporting cyber security requirements.

1 respondent commented on the need for independent assurance of external standards schemes where compliance was relied upon.

Of those that were against the role of external standards, 2 respondents commented on the voluntary nature of these standards and the possibility of a confusing consumer protection landscape. 2 respondents commented that external standards would likely duplicate or be superseded by a licensing regime.

Government response

Government notes that participation in any other external standards will not be a requirement for obtaining a licence. Please see our response to Q11 for detail on our decision to require licensees to comply with a relevant tailored CAF profile to demonstrate compliance with their cyber requirements. We continue to welcome the development of existing external standards schemes, such as Flex Assure and HOMEflex, and will endeavour to work collaboratively with them to assess how best these schemes can support a transition to and/or ongoing co-existence with a licensing regime, particularly where these schemes could offer additional support to the sector.

Interactions with the supply licence

In this section of the 2024 consultation, we proposed that electricity suppliers carrying out load control activities alongside their supply activities will need to apply for a load control licence, stating our belief that load control is a distinct economic activity from energy supply and should be defined as such in legislation.

Question 55 - Do you agree with the proposal for electricity suppliers to hold a separate load control licence? Please explain your answer.

Summary of responses

There were 35 respondents to this question. 25 agreed with the proposal, 7 remained neutral, and 3 disagreed. Overall, there was strong agreement with the proposal.

Of those agreeing with the proposal, many commented that load control and supply were distinct activities that should be regulated separately and a number of respondents also

suggested that equivalence should be achieved where possible to avoid regulatory burden and/or confusion. 1 respondent suggested separately licensing load control activities could aid a future scenario where regulatory divergence would be beneficial. Some respondents suggested that separate licences would aid a scenario where a consumer wanted to switch to another provider.

Of the respondents against the proposal, some referenced the risk of “double jeopardy” where a licensee may be penalised against both licences in relation to a single breach. Some respondents suggested that supply and load control products are co-dependent "stackable" products and that consumers perceive these to be a single service. Two respondents suggested there was a risk of inconsistent obligations across the licences leading to operational complexities and the possibility of suppliers choosing lesser obligations to comply with. 1 respondent also disagreed with the proposal because it could disincentivise suppliers not already acting in the DSR market from offering these additional services, hence stifling innovation.

Government response

Government has decided that energy suppliers undertaking licensable load control activities will be required to hold a separate load control licence. We continue to believe that load control is a distinct economic activity from electricity supply and that ensuring a level playing field between electricity suppliers and other licensees will be important for supporting an innovative and competitive market. We will be working further with industry, electricity suppliers and Ofgem to ensure that the implementation of any approach mitigates risks associated with double jeopardy and suppliers being granted “choice” over which obligations from their two licences to comply with.

In order to minimise administrative burdens, we are keen to minimise the risk of unwarranted divergence of practice and interpretation of consumer protection requirements over time between the electricity supply and load control licences. We are considering the best means to affect this, including assessing the viability of simply referring to relevant electricity supply licence conditions in the load control licence rather than draft whole new equivalent provisions.

Cost Recovery

In this section of the 2024 consultation, we proposed, in-line with certain other licences in the energy sector (for example, for supply and generation), that costs associated with Ofgem’s resource for regulating the load control licence would be recovered through a mix of fees for load control licensees themselves and Ofgem’s fees on other licensees (such as network operators and owners).

Question 56 - Do you agree with the proposed approach for recovering the costs of administering a licensing regime? Please explain your answer**.**

Summary of responses

There were 30 respondents to this question. 14 agreed with the proposal, 9 remained neutral, and 7 disagreed. Overall, there were mixed views about the proposal.

Of those that agreed, most commented that the proposal was reasonable and consistent with other licence cost recovery mechanisms. However, many respondents highlighted the need for more information, particularly in determining how costs should be distributed between load control licensees and Ofgem's fees on other licensees.

Some respondents commented on the need to ensure licensees are not over-burdened with costs which could risk entry to market and consumer confidence. 2 respondents suggested alternative mechanisms as potential avenues to be explored, with 1 suggesting following heat networks and socialising the costs across all gas and electric consumers until the size of the DSR market is more known, and the other suggesting that part of the cost could be recovered through suppliers of renewables over a given size. 2 respondents commented that NESO and the market facilitator are the principle users of flex and government should ensure that DSOs are not overburdened with cost.

Government response

Government intends to align recovery of costs associated with Ofgem’s resource for regulating the load control licence with cost recovery mechanisms used on certain other licences in the energy sector (for example, for supply and generation). This means we intend for load control licensees to pay an application fee directly to Ofgem and for all other costs to be recovered through Ofgem’s existing cost recovery mechanism which covers gas transportation, certain electricity transmission, and electricity distribution licences[42].

We recognise the mixed views, with some respondents in support of load control licensees bearing more of the costs while others in favour of network operators and owners bearing more. To ensure simplicity, particularly for the launch of the licence, we believe it’s important to align with existing Ofgem cost recovery mechanisms. We remain open to more costs being recovered through the load control licence as the market grows.

Ofgem have oversight of their cost recovery mechanisms including the general “annual licence fee” and provide guidance on the cost recovery principles which underpin it[43]. Adding additional costs to this levy will be subject to further Ofgem consultation.

[42] https://www.ofgem.gov.uk/publications/licence-fee-cost-recovery-principles-may-2024
[43] https://www.ofgem.gov.uk/publications/licence-fee-cost-recovery-principles-may-2024

Tariff data interoperability

In 2022, the government consulted on proposals to require energy suppliers to comply with a tariff data specification so Energy Smart Appliances (ESAs) can easily receive and respond to tariff information. These proposals aimed to unlock tariff optimisation services, which will give consumers opportunities to save on their energy bills while at the same time supporting our energy security and decarbonisation goals. Following analysis of consultation responses, which were supportive of our proposals, the government decided to take forward this proposal and consult further on the scope and delivery approach. The 2024 consultation sought views on the potential solutions for delivering tariff interoperability.

Since the 2024 consultation, we set up the Tariff Interoperability Working Group (TIWG), which comprises energy suppliers, DSRSPs and regulators, and have engaged with the group to further refine the proposals.

This response also makes references to how tariff interoperability will be managed. The Tariff Data Specification (TDS) is what we referred to in the 2024 consultation as the Tariff Data Standard, i.e., the overall tariff interoperability policy. The TDS will include:

- *Application Programme Interface (API) specifications which will prescribe what data, in what format and how it will be made available by suppliers to third parties and be used to optimise ESAs.*
- *API Governance which will provide information on API access, usage permissions, quality and performance standards, and data compliance.*

The principal obligation on electricity suppliers to make available their tariff data will be set out in the standard conditions of electricity supply licences. The detail of the API arrangements and ongoing governance of that detail will be set out in and governed by provisions in the Retail Energy Code. The TDS will be delivered in two phases, starting with a Minimum Viable Product (MVP) followed by a second phase. Throughout this response, there are references to the stages when various aspects of tariff interoperability will be brought into scope.

Technical Solution

In the consultation, we identified several technical solutions (minimum technical change, e.g., accessing tariff data direct from the smart meter, non-standard API, a supplier-wide standardised API and a centralised tariff provision) that could deliver tariff interoperability. These technical solutions included a methodology, cost assumption and were evaluated using RAG ratings against; cost, implementation, use cases, delivery risk, governance requirements, regulatory change and ease of use.

We proposed a supplier-wide standardised API as our minded to technical solution for tariff interoperability and sought views on this proposal.

Question 4 - Do you agree that a Supplier Standard Application Programme Interface (API) is the most suitable technical approach to enable interoperability of tariff data, based on the analysis set out in the consultation document and analytical annex? Please explain your answer.[44]

Question 5 - What is your view on the methodology and cost assumptions used in the cost appraisal as presented in the analytical annex?

Summary of responses

In relation to Question 4 there was strong support for the supplier-wide standardised API. Out of 45 respondents, 37 agreed that a supplier-wide standardised API was the most appropriate technical solution, 5 disagreed and 3 didn't know. Several stakeholders who supported the implementation of a supplier-wide standardised API confirmed that other options, such as the Minimal Technical Change or the Centralised Tariff Provision option, were not suitable as they failed to meet the objectives and RAG ratings outlined in the consultation. Respondents who were supportive of our minded to position also noted that a supplier-wide standardised API would provide a unified data source, lower costs for third parties, and reduction in data errors compared to the other options proposed. Similarly, a majority of respondents did not favour non-standardised API on the grounds that it could incur higher development costs and there would be an increased risk of unreliable data, which could lead to inefficiencies and an unreliable service.

Several respondents did raise concerns around the use of a supplier-wide standardised API, as it may not offer the same level of flexibility and innovation compared to a non-standardised API and that for either type of API we would have to ensure there is sufficient security enforced to prevent cyber-attacks.

In relation to Question 5, the majority of respondents agreed with the methodology and cost assumptions presented in the analytical annex. Out of 15 respondents, 10 agreed with the proposed methodology and 5 noted concerns. Several respondents emphasised that incorporating more evidence, such as having a greater understanding of the technical requirements for the API or understanding how many suppliers would need to update their IT systems, could lead to more accurate and credible methodology. Some respondents noted the possibility of shared development costs among suppliers which could significantly reduce the financial burden on certain companies. Some respondents also suggested that there should be an exemption from having to adhere to the tariff data standard for suppliers who only supply to a small number of non-domestic consumers. This would ensure that the costs incurred in developing the API are distributed more evenly, thereby lowering the cost per consumer.

Government response

Government welcomes the broad consensus in favour of the supplier-wide standardised API as the proposed technical solution and has decided to proceed on that basis (Q4). This

[44] The summary of responses is grouped by theme rather than sequentially, meaning that questions 1-3 are covered further down in this response.

approach aligns with stakeholder preferences that the solution requires reliable data. A supplier-wide standardised API is viewed as the best option as it scored best when RAG rated against cost, implementation, use cases, delivery risk, governance requirements, regulatory change and each of use.

Although the question had fewer responses, government also welcomes the support from respondents for the methodology and cost assumptions for calculating the cost of the proposed technical solution set out in the analytical index (Q5). Noting the feedback about the benefits of gathering further evidence, to supplement this work, we commissioned external research to provide further insights into the costs associated with API development. This involved engaging with energy suppliers and concluded that the costs for developing an API might be lower than the estimates in the analytical annex. External research suggested that the development costs for suppliers could range from £200,000 to £300,000, with additional annual maintenance costs between £60,000 and £150,000. Taking into account these findings and the support from most consultation respondents, government considers that pursuing a supplier-wide standardised API remains the most appropriate technical solution.

Non-domestic Consumers

We proposed that tariff interoperability should include small non-domestic consumers and sought views on this proposal. The consultation proposed that we could use a definition of microbusinesses[45] for the scope of non-domestic consumers that suppliers would have to provide data for, albeit a specific minded to position on a definition was not detailed. If included, this would mean that suppliers who supply to non-domestic consumers would have to include the data required for optimisation for their non-domestic consumers within the API.

Question 2 - Do you agree with the government's proposal to extend the scope of public tariff data to all tariffs that are applicable to domestic and small non-domestic (microbusiness) consumers? If you do not agree, please explain why.

Summary of responses

In relation to Question 2, there was strong support to cover tariffs/contracts applicable to small non-domestic consumers. Out of 45 respondents, 38 were in favour of including small non-domestic consumers within scope for tariff interoperability, 2 disagreed and 5 indicated they didn't know. Some respondents, who were in support, noted that including data required for optimisation within the API for non-domestic consumers would provide benefits for those businesses who may wish to optimise their ESAs. Some respondents also noted the additional

[45] Electricity microbusiness customers are those with an annual consumption of not more than 100,000 kWh OR fewer than 10 employees and an annual balance sheet/turnover not exceeding £2 million. Gas microbusiness customers are those with an annual consumption of not more than 293,000 kWh OR fewer than 10 employees and an annual balance sheet/turnover not exceeding £2 million. This definition comes from: Ofgem, 'Guidance - Standard of Conduct (SLC0 and SLC0A)' (2019), https://www.ofgem.gov.uk/publications/licence-guide-standards-conduct (viewed 8 March 2024) https://www.ofgem.gov.uk/publications/licence-guide-standards-conduct (viewed 6 February 2025) with the balance sheet/ turnover value amended as per The Gas and Electricity Regulated Providers (Redress Scheme) (Amendment) Order 2024.

Consumer Led Flexibility (CLF) benefits which would be gained by including non-domestic consumers within scope.

Of the respondents who disagreed or didn't know, a few highlighted several areas that government should consider further. These respondents noted that non-domestic consumers are on bespoke contracts rather than tariffs therefore there are additional complexities if they are included within the scope and that government should consider including an exemption for certain suppliers. Including an exemption was also proposed as several respondents believe it would not be proportionate for suppliers who only supply to a small number of non-domestic consumers to bear the costs of developing the API.

The consultation proposed that the scope for tariff interoperability should cover small non-domestic consumers, however it didn't specify the exact criteria which would be used. Several respondents noted that there needs to be a clear definition of non-domestic consumers in scope. Several respondents highlighted their support for a particular definition, these responses were mixed between those who explicitly supported utilising the microbusinesses definition and those who explicitly supported utilising the small businesses definition.

These points were also raised during conversations with the Tariff Interoperability Working Group members.

Government response

In relation to Question 2, the government welcomes the broad consensus in favour of including small non-domestic consumers within scope for tariff interoperability, and has decided to include small non-domestic consumers within scope of the TDS.

We agree with several respondents' comments that there needs to be a clear definition of small non-domestic consumers for tariff interoperability. We have conducted further analysis and engaged with TIWG members. We considered whether the scope should include microbusinesses, small businesses or consumers supplied with electricity at designated premises as defined in the Electricity Suppliers' Licence: Standard Conditions[46].

- A designated premises is a non-domestic premises with a metering point in profile class 1-4 (as defined in the Balancing and Settlement Code on 30 November 2012)[47]

The designated premises definition is considered most appropriate as it will allow suppliers to easily identify non-domestic consumers in scope by using meter profile classes (using meter classes 1-4), rather than requiring assessment of a consumer's turnover, employee numbers or other similar parameters which we would expect to be more onerous, and will ensure that those with complex energy needs (meter profile classes 5-8) remain out of scope.

Government has therefore decided to define non-domestic consumers in accordance with the current designated premises definition. This means that the TDS will apply to consumers

[46] Condition 1

[47] A non-domestic premises is broadly a premises where electricity is not supplied wholly or mainly for a domestic purpose (the full definition, including certain situations where a premises is specified to be non-domestic, is set out in condition 6 of the Electricity Supply Standard Licence Condition)

supplied at non-domestic premises who only have Meter Types profile classes 1 -4. If a consumer has one or more Meter type 5-8 (which are used for maximum demand consumers), they will be out of scope.

The definition only includes a reference to electricity as defining the scope for gas is linked to making gas data available, which we have deferred to Phase two, as per Q3.

We are also aware that Elexon are replacing meter profile classes as part of Market-wide Half Hourly Settlement (MHHS). However, we do not consider this to be an issue for the TDS as premises will still need to be 'designated' in the future (the detail of which is to be developed through the work on MHHS). We will consider any additional changes to this definition once that detail is available.

We also note this definition of a non-domestic consumer may differ to that proposed to define non-domestic consumers in scope of the load control licence once this position has been finalised.

Several respondents expressed that there is a wide range of non-domestic consumers that are on bespoke contracts. The API will allow for bespoke contract information to be included only for the purposes of optimisation, and this bespoke information will only be accessible by an ESA device or an optimiser once the consumer has given consent.

One respondent proposed that we should include an exemption from having to comply with the TDS to exclude suppliers who only supply to a small number of non-domestic consumers. This concern was also raised by members of the TIWG. Changes for tariff interoperability need to be proportionate. DESNZ have decided that it would be appropriate that certain suppliers who supply only to a small number of non-domestic consumers will not have to comply with the tariff data requirements. This will ensure that small non-domestic suppliers are not under undue regulatory burden to comply with the licence condition that requires them to make data available TDS, whilst also ensuring that as many non-domestic consumers as possible can benefit from optimisation benefits provided by tariff interoperability. We will develop details of how this will work together with RECCO and Ofgem.

Gas tariffs

The consultation proposed to include gas tariff data in the scope for tariff interoperability and sought views on this proposal. If included, this proposal would mean that suppliers would have to make gas tariff data available within the API.

Question 3 - Do you agree that the data standard should be extended to included gas tariffs? If you do not agree, please explain why.

Summary of responses

In relation to Question 3, there was slight support for requiring suppliers to make gas tariff data available within the API. Out of 42 responses, 25 respondents were in favour of requiring

suppliers to make gas tariff data available, 8 disagreed and 9 indicated they didn't know. Several respondents, who were in favour, highlighted that including gas tariffs in the API would enhance certain consumers' ability to optimise their devices. For instance, homes with dual fuel heating systems could make informed decisions about whether to use gas or electricity based on real-time pricing, potentially leading to cost savings. Respondents who were opposed noted that gas tariffs are less flexible than electricity tariffs, which would limit the benefits of requiring gas data to be made available. There were also concerns that requiring suppliers to make gas tariff data available via the API could be an additional complexity and cost for energy suppliers without delivering substantial benefits.

Government response

In relation to Question 3, government recognises that requiring suppliers to make gas tariff data available is not an immediate priority for the Minimum Viable Product stage. Government however recognises that including gas tariff data, would allow consumers with dual fuel heating systems (two main examples: gas boiler and a hot water tank with an immersion heater; hybrid heat pumps) to optimise across fuels and prices. The number of hybrid heat pumps currently in operation is small and so the initial CLF benefits may be limited. These figures may grow in the coming years therefore the government has decided that a proportionate approach is for gas tariff data to be included within the TDS so that suppliers who wish to include gas tariff data from the outset can do so in a standardised way.

The government will not introduce an obligation on gas suppliers to make gas tariff information available through a Standard Licence Condition during the MVP stage, however, the government does intend to extend the requirement for tariff data interoperability to cover gas tariff data in a subsequent second phase of implementation. This will support consumers with dual fuel heating systems. The government will therefore consult on licensing changes to gas suppliers once the MVP has been developed and rolled out. The government will also ensure that the API that is developed under the MVP can be used to share gas tariff data on a voluntary basis, should suppliers so wish.

Phased approach

We proposed to deliver tariff interoperability using a phased approach and we sought views on this proposal. First, implementing an MVP focussing on a TDS that covers most consumers, tariffs and use cases from day one with, for example, currently less prevalent more complex use cases added later. The phased approach was proposed in order to introduce tariff interoperability as soon as possible whilst bringing more complex and currently less prevalent tariffs into scope at a later stage.

Question 6 - Do you agree with the proposed 'phased approach' to implementation; namely, to implement an MVP tariff standard for existing simple electricity and gas tariffs to meet use case A? If you do not agree, then please explain why.

Question 10 - What is your view on the government's minded-to position on the phased delivery approach to deliver the tariff data standard?

Summary of responses

The consultation proposed a 'phased approach' to implement an MVP, which would bring simple aspects into scope, and then bring more complex aspects into scope during phase two. In relation to Question 6, out of 42 respondents, 28 agreed with implementing the TDS through the proposed phased approach, 8 disagreed and 6 didn't know. The support for a phased approach was also shown in the responses to Q10, where out of 35 respondents, there were 25 respondents who agreed with our proposed solution to the phased approach, while 10 disagreed. Taking a phased approach allows for the initial development of an MVP while deferring more complex elements to later phases. Several respondents noted that the MHHS could influence tariff offerings, making the phased approach beneficial for accommodating market changes in phase two. Of those who disagreed with the proposed phased approach, some respondents argued that tariff interoperability could be achieved in a single phase. While there was general support for the MVP, several respondents noted that certain use cases and complex tariffs, which were proposed to be included within phase two, should be brought forward into the MVP. This is because for consumers to engage with tariff interoperability we need to ensure that we provide additional benefits other than those that can be gained by consumers inputting their preferences into the devices' interface.

Government response

Government welcomes the broad support in favour of achieving tariff interoperability via a phased approach (Q6 and 10) and has decided to proceed on that basis. Government acknowledges that a phased approach allows the development of a TDS based on the MVP as soon as possible, which will allow consumers to benefit from tariff interoperability at the earliest opportunity. Government however also acknowledges the views of multiple respondents seeking changes to MVP scope as outlined below.

Use Cases

We proposed that the MVP should include the following use case:

A) Support a third-party organisation in optimising energy consumption when a customer of the organisation knows their current supplier and tariff name (or can easily find them) and provides this information to the organisation.

We proposed that phase two should then include the following use cases:

B) Support a third-party organisation in optimising energy consumption if a customer of the organisation does not know their current supplier and tariff name (and cannot easily find them) but has previously consented to sharing this information.

C) Support a third-party organisation in optimising energy consumption of a customer when the supplier modifies the unit prices of a tariff (such as in the case of dynamic tariffs).

D) Support a third-party organisation in optimising energy consumption of a customer, without requiring the customer of the organisation to manually inform the organisation if they change their tariff or supplier.

We sought views on whether the use cases were appropriate for both the MVP and phase two.

Question 1 - Do you agree with the use cases proposed in this consultation for the MVP? Are there any other use cases that you believe should be included in the MVP for energy tariff optimisation services?

Question 8 - Do you support the government's proposal to deliver complex tariffs and remaining use cases (B – D) through future changes to the tariff data standard? If not, then please explain why.

Summary of responses

In relation to Question 1, out of 42 respondents, 35 agreed with the use case proposed for the MVP, 3 disagreed and 4 didn't know. Those who agreed were supportive of use case A being included within the MVP, however there were several respondents who expressed that the proposed scope for the MVP might be too limited. Several respondents noted that some of the use cases proposed for phase two should be moved into the MVP. Several respondents argued that aspects such as authentication functionality (use case B), all time-of-use tariffs (use case C) and webhooks (use case D) should be included in the MVP. The rationale being that we should be ensuring that tariff interoperability provides additional benefits above the current system of consumers inputting preferences into their ESAs. Several respondents argued that providing additional benefits for consumers will create a higher likelihood that consumers will engage with tariff interoperability and therefore greater optimisation and CLF benefits will be realised.

Similarly to Question 1, responses to Question 8 showed a belief from many respondents that aspects and use cases proposed for phase two should be in scope earlier. Out of 42 respondents, 23 agreed with the use case proposed for phase two, 12 disagreed and 7 didn't know. Several respondents expressed that the proposed MVP scope might be too limited and proposed that aspects of phase two should be moved into the MVP.

Government response

In relation to question 1, government acknowledges the challenges that several respondents proposed in relation to including additional aspects and use cases within the MVP TDS. Taking responses into account, and having further analysed and engaged with stakeholders through the TIWG, government has decided to refine the MVP TDS to include the following use cases:

> A) Support a third-party organisation in optimising energy consumption when a customer of the organisation knows their current supplier and tariff name (or can easily find them) and provides this information to the organisation.

B) Support a third-party organisation in optimising energy consumption if a customer does not know their tariff name (and cannot easily find it) but knows their supplier name, and is the bill payer.

C) Support a third-party organisation in optimising energy consumption of a customer when the supplier modifies the unit prices of Time of Use tariffs

D) Support a third-party organisation in optimising energy consumption of a customer, without requiring the customer of the organisation to manually inform the organisation if they change their tariff or supplier.

Some members of the TIWG have expressed that expanding the scope of the MVP could result in a longer timeframe, however government views that this risk is proportionate in order to provide increased functionality within the MVP. Extending the use cases for the MVP will provide the following benefits:

- Including a provision whereby ESAs can be optimised if a consumer doesn't know their tariff name ensures that consumers can easily optimise their devices and ensures that we provide benefits above the current system of consumers inputting rate switching times into ESAs.
- Including all time of use tariffs ensures that consumers' ESA devices will be able to be optimised using a wider range of tariffs.
- Including a provision whereby a consumer doesn't need to manually inform the organisation if they change their tariff or supplier will ensure that consumers' ESAs remain interoperable over a sustained period.

In relation to Question 8, we acknowledge that concerns were raised over some of the proposed use cases not being included in the MVP. The government has taken this into account and as per above has transferred aspects and use cases previously proposed for phase two into the MVP. Some respondents to the consultation proposed that we should bring all use cases into scope during the MVP, however following consultation and engagement with the TIWG, we recognise that this would be a challenge. We have therefore decided that some of the more complex aspects and use cases remain within phase two.

Government has decided that phase two will now seek to include the following use cases into the TDS:

E) Support a third-party organisation in optimising energy consumption if a customer of the organisation does not know their current supplier and tariff name (and cannot easily find them) but has previously consented to sharing this information. They may or may not be a bill payer.

F) Support a third-party organisation in optimising energy consumption of a customer for Complex Tariffs (eg Block).

The rationale to separate use case B and to bring the ability to optimise an ESA for a non-bill payer as part of phase two (use case E) is to take into account concerns raised by the TIWG.

These concerns were around how a consumer consents to share data from their supplier, related to tariffs and consumption in a property where they are resident, but not the bill payer. This issue has been raised across multiple digitalisation workstreams. There are existing solutions in other areas such as smart metering where someone living at the address can consent to access the consumption data on the smart meter, and not just the bill payer. We have also discussed this with Ofgem's current Consumer Consent workstream to align consent management which will be dataset-agnostic. We will continue to monitor developments in these areas.

The rationale to separate use case C and to bring complex tariffs (those that are not based on time of use) into scope as part of phase two (use case F) follows on from internal analysis and engagement with the TIWG. These highlighted that certain tariff types will create additional complexity and further delays to the MVP, hence the decision to bring into scope as part of phase two.

MVP data items

We proposed a list of data items which would be required to be within the API in order for consumers to optimise their ESA devices effectively.

We sought views on whether additional data items should be included within the MVP.

Question 7 - Are there any other data items that you believe should also be included within the list of proposed MVP tariff data items?

Summary of responses

In relation to Question 7, multiple respondents noted that unit rates and times for unit rates would be required for the MVP because these data items will be required for optimisation. Several respondents and TIWG members noted that other data items may be beneficial to be included. Other data items which were suggested by respondents were: region, timestamps, tariff contract end dates, grid carbon intensity data & DNO charging zone.

Government response

In relation to Question 7, government agrees that unit rate and times (e.g., past, current and future) for unit rates will be required to be included within the MVP data items. The government welcomes the suggestions provided by respondents. We will continue further analysis in collaboration with the TIWG to review and decide on a full list of the data items required for the MVP. These will be consulted on as part of our proposed next steps.

Regulations

We proposed that the most effective way to regulate tariff interoperability would be to introduce a high-level requirement on suppliers to make tariff information available through an obligation

in their Supply Standard Licence Conditions (SLCs). The TDS against which energy supplier API solutions are built would then be held within the REC.

We sought views on our proposed regulatory approach.

Question 9 - Do you agree with the government's proposal to host the tariff data standard in the Retail Energy Code? If not, then please provide reasons.

Question 11 - Do you support the proposed regulatory approach to implement the tariff data standard and technical solution? If not, please provide reasons.

Summary of responses

In relation to Question 9, out of 40 responses, 32 respondents agreed that the REC should host the TDS, 2 respondents were opposed and 6 didn't know. Many respondents who agreed reiterated factors outlined within the consultation, such as the fact that the REC spans both electricity and gas, that non-REC party members can propose amendments, and that the REC is retail focused. Some respondents who were opposed, however did note that the REC can be difficult to navigate and questioned whether the Smart Energy Code (SEC) could also be utilised to ensure that tariff data is integrated into the smart metering system.

The consultation proposed including provisions in the REC and updating SLCs (Q11). Out of 37 respondents, 24 respondents agreed, 11 indicated they didn't know and 2 respondents disagreed. There was no major opposition to the proposal that alongside updating the REC, government would also place an obligation to make tariff data available within the supplier standard licence conditions.

Government response

In relation to question 9, government welcomes the broad consensus and has decided that the TDS will form part of the REC. Government acknowledges that one of the benefits to utilising the REC is that non-party members can raise amendments. This is beneficial as it allows non-REC party members such as optimisers, ESA manufacturers or other parties to raise amendments to the TDS. Whilst government acknowledged suggestions that tariff interoperability should be linked with the Smart Energy Code (SEC), we do not consider this to be an appropriate solution as smart meter data is not consistent enough to facilitate optimisation of ESA devices. We also acknowledge the concerns of some respondents that the REC is difficult to navigate and will work alongside the TIWG and Retail Energy Code Company (RECCo) to ensure that any changes to the REC are easy to navigate for users.

In relation to question 11, government has decided to include a condition within the Electricity Supply Standard Licence Conditions requiring suppliers to make the data required for optimisation available in accordance with the TDS in the REC (the gas supply conditions will remain unchanged as gas tariff data will not be included in the MVP). The licence condition would also provide for derogations to be granted from the requirement to comply with the condition, for example for small non-domestic suppliers. The principal reasons for including a high-level obligation on suppliers to publish the information in SLCs are:

- We view the making available of the data as an obligation owed ultimately to energy consumers, not to contractual counterparties under the REC; placing the obligation on the face of the licence underlines its importance;
- and may improve clarity for consumers, and optimisers acting on their behalf, of tariff publication requirements.

Timeline

The consultation proposed the following timeline, which we sought views on.

Proposed/Indicative timeline	**2024**		**2025**		**2026**	**2027**	**2028**
Tariff interoperability	Details of proposals consulted on	Develop MVP data standard	Associated Code Change introduced	Prospective window for proposals to become operational	*Window for potential further Tariff Interoperability enhancements and implementation*		

Question 12 - Do you support the proposed timeline set out in Table 5? Are there any other factors or relevant events to consider? If so, what are these?

Summary of responses

In relation to question 12, out of 39 respondents, 19 agreed with the proposed timeframes, 12 disagreed and 8 didn't know. Respondents who didn't agree were split within their views. Certain respondents believed the timeframe should be reduced and others thought it should be extended so as not to overlap with MHHS. Several respondents highlighted that the timeframes lack ambition and that more should be done to bring dynamic tariffs into scope at an earlier point. It was mentioned that tariff interoperability should be developed at pace to encourage consumers to interact more with flexibility services. Other respondents highlighted that there will be a substantial amount of resource dedicated to the changes required by MHHS and noted that government should be flexible with their timeframes so as not to require industry to implement too many changes at once.

Government response

On balance, government has decided to adhere to the original timeframe as much as possible on the basis that we want the benefits of tariff interoperability to be realised as soon as possible. Delivering tariff interoperability as soon as possible will give consumers the opportunity to save on their energy bills while at the same time supporting our energy security and decarbonisation goals. We do however acknowledge that additional use cases have been added to the MVP as a result of responses to this consultation and due to engagement with industry through the TIWG.

Taking this into consideration, we intend to consult, according to our statutory duties under the Energy Act 2023, on the changes to the REC and the SLCs in mid to late 2025. Responses will be analysed and any required amendments made to the drafted REC and the SLCs changes. We then aim to update the REC and SLCs by the end of 2025. These updates will set out the technical requirements for tariff interoperability. Suppliers will then have a nine-month period before they are required to comply with the TDS and make data available as per the SLCs, expected to start in mid to late 2026.

The REC will also include details of how modifications to the TDS can be made for future developments.

Tariff Interoperability - Next steps

Below we have outlined the proposed timeframes for government's next steps in relation to tariff interoperability, these should be viewed as provisional and may be subject to change:

- mid to late 2025 – Consultation on MVP REC changes – approx. 2 months
- mid to late 2025 - Consultation on SLC changes – approx. 2 months
- early 2026 – Requirements introduced within the REC and SLCs.
- mid to late 2026 – Suppliers will be required to comply with SLC and REC changes.

Government will work with RECCo and industry to determine the exact 'go live' date for the MVP as part of the delivery phase of this work.

Glossary

Term	Definition
Anomaly Detection	A mechanism for detecting one or more messages that are intended to be remotely communicated to one or more devices and that are identified as being anomalous by virtue of either their content or their quantity.
Alternative Dispute Resolution (ADR)	Types of dispute resolution that do not involve having to go to court; an alternative to litigation.
Application Programme Interface (API)	Code that enables two software programs to communicate. In regard to the tariff data standard proposed in the Time of Use Tariff consultation, an API would be used as the technical solution to enable energy suppliers to share tariff data items.
Balancing and Settlement Code	Defines the rules and governance for the balancing mechanism and imbalance settlement processes of electricity in Great Britain. It is administered by Elexon.
British Standards Institution (BSI)	The national standards body for the United Kingdom.
Consumer-Led Flexibility (CLF) (formerly Demand Side Response)	Changing electricity demand to help meet the needs of the energy system, typically to benefit the transmission network, distribution network, or another third party.
Critical National Infrastructure (CNI)	National assets that are essential for the functioning of society, such as those associated with energy supply, water supply, transportation, health, and telecommunications.
Cyber Assessment Framework (CAF)	The framework of that name established by NCSC to assist in carrying out cyber resilience assessments.
Customer Energy Manager (CEM)	A logical entity with functionality for managing one or more ESAs inside a customer's premise to deliver DSR services. The CEM functions between ESA and the DSRSP, translating messages to allow interoperability.
Data Communications Company (DCC)	The company that communicates with Smart Meters in GB on behalf of energy suppliers and other parties.

Term	Definition
Demand-Side Response Service Provider (DSRSP)	An organisation entering into arrangements with a consumer that pertains to load control.
Distribution Network / Distribution Network Operator (DNO)	A network or the operator of a network that is authorised to be operated by the holder of an electricity distribution licence.
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.
Electricity System Operator (ESO)	The organisation that operates the GB electricity transmission system.
Electric Vehicles (EV)	Vehicle that uses one or more electric motors for propulsion. Unlike traditional internal-combustion engine (ICE) vehicles that rely on gasoline or diesel fuel, EVs operate using rechargeable electric batteries and an electric motor.
Flexibility Innovation Programme	An UK government programme, part of the government's Net Zero Innovation Portfolio, that looks to support innovative solutions to enable large-scale widespread electricity system flexibility.
Future System Operator (FSO)	Please see National Energy System Operator (NESO)
UK General Data Protection Regulation (GDPR)	A set of rules that govern how personal information is used by organisations, businesses, and the government in the United Kingdom.
Home Energy Management System (HEMS)	A device or system that controls and configures the energy usage or production of one or more ESAs, in order to optimise usage across all devices within a consumer premises and factoring in other elements such as local generation, tariffs and carbon intensity.
Interoperable Demand Side Response (IDSR)	One of a number of initiatives within the government's Flexibility Innovation Programme to trial the interoperable provision of DSR services from energy smart appliances.
Interoperability	The ability of a product or system to operate in conjunction with other products and systems. For the SSES programme, interoperability in reference to ESAs, specifically refers to the ability of the ESA to change

Term	Definition
	its DSR service provider without the need for a visit to the premises and whilst maintaining the ability to provide DSR.
Load Control	The activity of adjusting the immediate or future flow of electricity into or out of an energy smart appliance.
Load Controller	Any organisation undertaking the activity of load control.
Microgeneration Certification Scheme (MCS)	A scheme that defines industry standards for low-carbon energy technology products, contractors and their installations. This includes heat pumps, solar, biomass, small wind and battery storage.
National Cyber Security Centre (NCSC)	The organisation of that name established by the UK government to, amongst other things, provide advice in relation to cyber security.
National Energy System Operator (NESO)	Previously denoted as the Future System Operator (FSO), the National Energy System Operator will be the independent, public corporation responsible for planning Britain's electricity and gas networks and operating the electricity system. NESO will be launched in Summer 2024.
Network and Information Systems (NIS) Regulations	The Network and Information Systems Regulations 2018, that require organisations to meet specified cyber security requirements.
Ofgem	The Office of Gas and Electricity Markets, i.e., the organisation supporting the Gas and Electricity Markets Authority.
Operator of Essential Services (OES)	A person to whom the NIS Regulations apply.
Priority Services Register (PSR)	A free support service that makes sure extra help is available to people in vulnerable situations. The register helps energy suppliers and network operators look after customers who have extra communication, access or safety needs.
Publicly Available Specification (PAS) 1878	A technical standard that sets out requirements for DSR-enabled ESAs. It was developed through an industry-led, BSI facilitated process that was funded by government.
Publicly Available Specification (PAS) 1879	A companion document to PAS 1878, PAS 1879 sets out recommendations for DSRSPs for how to work with ESAs that are PAS 1878 compliant.

Term	Definition
Public Key Infrastructure	A system for managing cryptographic material that is used to secure and encrypt communications.
Remote	Means in relation to a communication, that is conveyed (at least in part) over a Wide Area Electronic Communications Network.
Retail Energy Code (REC)	A central industry document that sets out how centralised information is managed including, for example, which energy supplier supplies which consumer.
Smart Energy Code (SEC)	A central industry document that sets out how energy suppliers and other parties communicate with Smart Meters via the DCC.
Smart	Means, in relation to a device, the ability of the device to respond in real time to remote communication signals, using digital technologies, to deliver a service.
Smart Secure Electricity Systems Programme (SSES)	A DESNZ programme with the primary objective of unlocking the benefits of a smart and flexible electricity system for domestic and small non-domestic consumers, whilst protecting consumers and the grid
Tariff	The charges applied to a consumer for their energy supply (and the associated contract terms).
Tariff Interoperability	In relation to an ESA, the ability of an ESA to be used with a tariff from any energy supplier, easily and without a service provider visit to the ESA.
Tariff Interoperability Working Group (TIWG)	A government-established group comprised of external representatives and chaired by government that will develop and finalise the tariff data standards.
Time of use Tariff (TOUT)	An electricity Tariff under which the unit price for electricity varies throughout the day.
Vehicle-to-Grid (V2G)	A process whereby EV owners can provide balancing services back to the network to help manage the real-time operation of the electricity system.
Vehicle-to-Home (V2H)	The process whereby electricity that has been stored within the battery of an EV can be used towards meeting the demand of the owner’s domestic properties.
Vehicle-to-Everything (V2X)	This relates to the bi-directional charging and discharging of an electric vehicle’s battery, Bi-directional charging allows for the vehicle to not only

Term	Definition
	import energy into its battery, but also facilitates the export of energy held within the battery for a variety of use cases.

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