

# DESNZ issues outcome of Smart and Secure Energy System Consultation

Н	leadl	ine	assessment	
	leaui	1110	assessment	

Document:	<u>DESNZ</u>						
Date published:	23 April 2025						
	High: Flexibility Provider; Domestic Supplier; Non-Domestic Supplier						
Impact classification:	Medium: Transmission Network; Distribution Network Operator; Consumers						
	Low: Generator						
Action if desired:	Engage with DESNZ on proposed decisions for energy smart appliances and note upcoming consultations to develop these options.						

**01 May 2025** Elena Binns





Elena Binns Analyst e.binns@cornwall-insight.com

For more information about us and our services contact us on <u>enquiries@cornwall-insight.com</u> or contact us on 01603 604400.

#### Disclaimer

While Cornwall Insight considers the information and opinions given in this report and all other documentation are sound, all parties must rely upon their own skill and judgement when making use of it. Cornwall Insight will not assume any liability to anyone for any loss or damage arising out of the provision of this report howsoever caused.

The report makes use of information gathered from a variety of sources in the public domain and from confidential research that has not been subject to independent verification. No representation or warranty is given by Cornwall Insight as to the accuracy or completeness of the information contained in this report.

Cornwall Insight makes no warranties, whether express, implied, or statutory regarding or relating to the contents of this report and specifically disclaims all implied warranties, including, but not limited to, the implied warranties of merchantable quality and fitness for a particular purpose. Numbers may not add up due to rounding.

## **1** Assessment and recommendation

On 23 April, DESNZ published the outcome of its consultation on <u>implementing a smart and secure electricity</u> <u>system</u> (SSES), which sought views on new standards for energy smart appliances (ESAs) and organisations that can provide demand side response (DSR) services or can remotely control electrical loads.

New standards for smart appliances will mean that new heat pumps and certain other large electric appliances must be sold with smart functionality, which customers can use to access cheaper deals. The appliances, which also include electric vehicle smart charge points (EVSCPs) and battery energy storage systems (BESS), must be able to operate across different tariffs. The legislation will also incorporate existing specific EVSCP requirement into a single set of regulations for all appliances. Through a new load control licence framework, DESNZ will also licence organisational load control activities to complement regulation of relevant ESAs.

We recommend that interested parties continue to engage with DESNZ on these decisions, and to note the timeline in Figure 1 which sets out the publication dates for further consultations to solidify the framework and regulatory details further.

Cornwall Insight comment: The new standards on ESAs are an important step to enabling consumers to participate in flexibility markets in an accessible way, particularly in the context of Market-wide Half Hourly Settlement (MHHS) and the evolution of network revenue streams. There are a range of consultations and requirements to come across the next five years to set up this system for consumer-led flexibility and align with the Government's Clean Power 2030 initiative.

### 2 Background

DESNZ opened the consultation on <u>implementing a smart and secure electricity system</u> (SSES) in April 2024, which sought views new standards for ESAs and organisations that can provide DSR services or that can remotely control electrical loads.

The consultation set out a multi-year programme to support competitive and well-functioning markets in ESA and DSR services, and is split over three documents: <u>ESAs and proposals for their appropriate regulation</u>; <u>licensing regime and proposals for a load control licence</u>; and <u>tariff data accessibility and proposals on the scope and delivery approach</u>.

The key proposals in the consultation included:

- Regulating minimum standards for ESAs and a smart mandate for certain technologies.
- Establishing a load control licence for DSR service providers (DSRSPs) and load controllers.
- Introducing a tariff data standard to provide interoperability for ESAs and supplier tariffs.

More detailed background information can be found in our <u>previous alert</u> written on the consultation.

### 3 Energy Smart Appliances: Smart Mandate

DESNZ confirmed it will bring forward secondary legislation to establish a smart mandate for several technologies, including:

- Hydronic heat pumps (up to 45kWh rated thermal capacity).
- Storage heaters (up to 45kWh rated thermal capacity).
- Heat batteries (up to 45kWh rated thermal capacity).

- Standalone direct electric hot water cylinders and hot water only heat pumps (each up to 45kW rated thermal capacity).
- Battery Energy Storage Systems (in the event the market does not evolve towards smart capability with sufficient pace).
- Electric Vehicle Smart Charge Points.

The mandate will require that these technologies are put on the market with smart functionality, with consumers retaining the option to use their devices in non-smart mode. The mandate will also contain a set of minimum requirements in relation to smart functionality, cybersecurity and grid stability.

The Government also detailed that they are minded to mandate that ESAs in scope should be required to have a device meter in line with MIR Class B requirements (themselves subject to a DBT consultation which will be issued "soon"). This would allow consumers using these devices to participate in high-value DSR opportunities with greater technical requirements.

DESNZ intends that these requirements will come into force "by the end of 2027 at the latest", allowing for an approximately 20-month implementation period to enable production cycles to be updated. This is longer than the 12-18 month period set out in the initial consultation, based on responses from appliance manufacturers.

A second phase of regulations will mandate ESAs to use specified standards which are to be developed alongside industry. This secondary legislation will involve further protecting consumers who choose to participate in consumer led flexibility (CLF) by giving them the confidence that the ESAs they purchase can be used with different DSRPs, should they decide to switch. DESNZ details that this framework will need ESAs to comply with an interoperability standard and DSRPs to integrate with this standard, ensuring a base level of interoperability.

Standardising home energy management systems (HEMS) will not be prioritised 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 a heat pump. However, Government notes that it 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.

#### **3.1 Interoperability**

Industry agreement on interoperability was recorded in consultation feedback. Based on this, Government confirmed 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 if 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 looks to increase competition and innovation in the electricity supplier market and help prevent consumer lock-in, 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.

DESNZ also confirmed its commitment to proceeding with Time-of-Use Tariff Interoperability which, by mid-2026, will require energy suppliers to comply with a tariff data specification set out in the Retail Energy Code (REC), so ESAs can accessibly receive and respond to tariff information, unlocking tariff optimisation services.

#### 3.1.1 Tariff data interoperability

Suppliers will be required, under the Electricity Supply SLCs, to make the data required for optimisation available in accordance with the tariff data standard (TDS) in the REC. This licence condition would also provide derogations to be granted from the requirement to comply with the condition, for example for small non-domestic suppliers. Government will consult on licensing changes to gas suppliers once the minimum viable product (MVP) has been developed and rolled out with the intention of extending the requirement for tariff data interoperability to cover gas tariff data in a second phase of implementation.

DESNZ intends to consult on changes to the REC and SLCs in mid- to late-2025, with an aim to update the REC and SLCs by the end of 2025, setting out the technical requirements for tariff interoperability. Following this, suppliers will 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.

#### 3.2 Consumer engagement

The consultation response also confirmed that 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, while not preventing provision of a physical interface also. The digital interface must be able to enable users to set their preferences, ensure they are always able to choose whether to participate in CLF, and maintain control over their devices.

DESNZ also encouraged an increased role for manufacturers, energy suppliers, and DSRSPs in consumer engagement and device guidance and 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.

DESNZ also outlined its intention to publish a consultation in Summer 2025 on consumer engagement, including on the potential to better coordinate and amplify accurate messaging on consumer-led flexibility.

### **4 Regulatory approach**

#### 4.1Licensing regime

Complementing regulation of relevant ESAs, Government will, through a new load control licence framework, licence organisational load control activities. This will be single load control licence that will incorporate two separate activities: the control of load on an ESA through load control signals and entering into arrangements with consumers for their load to control.

DESNZ notes that it is developing a set of minimum legal requirements that licensees will need to comply with and which Ofgem will regulate against. Alongside its intention to align recovery costs associated with Ofgem's resource for regulating the load control licence with cost recovery mechanisms used on other certain licences in the sector.

In responding to consultation feedback, DESNZ acknowledged some limited concerns about the effect a licence could have on a nascent market, but noted that it remains committed to the view that this licence will protect consumers adopting consumer-led flexibility services which involve load control. DESNZ outlines this importance of this licence in relation to the risk that controlling load on ESAs poses to grid stability and the maintenance of electricity networks.

#### 4.1.1 Licence requirements

The document outlines that all load controllers within the SSES programme licensing scope, managing over 300MW of load, will need to meet specific cyber security licence conditions. For load controllers managing below 300MW requiring a load control licence, there will be a specific licence condition requiring assurance against the relevant Cyber Assessment Framework (CAF) profile.

Load controllers managing equal to or above 300MW of load, will be brought within scope of the Network and Information Systems (NIS) Regulations as Operators of Essential Services. This means that the detail of their cyber requirements will be housed in the NIS Regulations. This will include organisations who manage domestic and small non-domestic loads and 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. One of the other licence requirements will involve placing specific grid stability requirements on DSRSPs and load controllers through the licence, following concerns in consultation feedback surround ensuring stability of the grid in response to a DSR request. DESNZ intend to consult on the detail of this as part of a future consultation on licence conditions.

DESNZ is 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.

#### 4.2 Enforcing standards

On enforcement of the minimum set of standards for ESAs, DESNZ expects this to be carried out by the Office for Product Safety and Standards (OPSS) and notes that enforcement will be undertaken using a similar approach to that established in the Electric Vehicle (Smart Charge Points) (EVSCP) Regulations 2021. Enforcement will also provide for the application of the Consumer Rights Act (CRA) 2015 Schedule 5 investigatory powers, to further safeguard consumer interests. DESNZ notes that it will work 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.

#### 4.3 Elexon to lead smart appliance governance

Elexon has been confirmed to deliver the necessary enduring governance functions to maintain and supervise these standards and requirements through modifications to the Balancing and Settlement Code (BSC), with DESNZ set to consult this year on Elexon delivering SSES governance through the BSC.

DESNZ also noted that it is exploring how SSES governance functions could be delivered through existing industry structures such as the BSC. Alongside the option of recovering costs from electricity network licence holders, DESNZ 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 and 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.

#### 4.4 Those in scope and not in scope

Government has decided that a load control licence will only be required by an organisation if it is capable of controlling the load of: 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 where those ESA(s) are within domestic and small non-domestic settings. 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, with DESNZ still considering the best approach for implementing this.

Some examples of organisations DESNZ 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.

#### **4.5 Consumer protections**

DESNZ notes that the 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 without being unfairly locked into contracts.

The consultation response details that these protections provided by the load control licence will look to align with existing practices and protections, with DESNZ assessing the viability of referring to relevant electricity supply licence conditions in the load control licence instead of drafting new equivalent provisions.

In responding to consultation feedback, DESNZ outlines that government has decided to require DSRSPs to meet a general principle of fairness to domestic and small non-domestic consumers, akin to Supply Licence Condition (SLC) 0 in the Electricity Supply Licence.

DESNZ believes that Ofgem should 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.

On vulnerable consumers, 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. DESNZ currently envision this as aligning 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.

#### **5 Next steps**

Figure 1 outlines the illustrates the high-level timeline of the phased implementation of the proposals over the next five years.

Upcoming consultations include:

- Q225-Q425: Consultation on secondary legislation following its drafting.
- Q225-Q425: Consultation on changes to the REC and the SLCs for tariff data interoperability.
- Q225-Q425: Consultation on enduring governance.

DESNZ notes in the publication that, once secondary legislation is created, an approximately 20-month implementation period will follow, allowing 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.

#### Figure 1: The current timeline for developing and implementing the proposals

	2025					2026			2027			20	2028 2029		29	2030
	Q2 Q3 Q4		Q1-2		Q	3-4										
Phase 1 ESA Regulations	Secondary Legislation Drafted and Consulted Upon Lay Ley			gislation Window for proposals to become oper (implementation period)					rational	onal Phase 1 ESA Device Regulations In Force						
Phase 2 ESA Regulations	ESA Standards Design and Companion Specification Development				Test Co Specific Stan	Fest Companion Specification and Standards		ndary slation ed and ed Upon	Lay Legislation	Window	ow for proposals to become operational (implementation period)			Phase Dev Regulat For	2 ESA /ice tions In rce	
Tariff Data Interoperability	Consult on changes to the introduced within REC and the SLCs the REC and SLCs			Window for proposals to become operational (implementation period)					ill be required to comply with SLC and REC changes							
Establish Load Control Licence	Develop Draft Regulations and Consult on draft first tranche of regulations and first Licence tranche licence conditions			Lay SI load o activ licens Parlia	to make control Transitional period for Ofgem to vities process and accept sable in applications ament				Load Control Licence In Force							
	Cond	ditions				Develop second tranche of licence of					conditions Second tranche of licence conditions added to the load control licence					
Enduring Governance	Consult on Enduring Governance				Impleme Cha	ent Code nges	Governance Groups Operational									

Source: DESNZ



Cornwall Insight The Atrium Merchant's Court, St George's Street Norwich, NR3 1AB

T: 01603 604400

E: enquiries@cornwall-insight.com

cornwall-insight.com

