The voice of the energy industry

Energy UK response to Smart and Secure Electricity Systems Programme: First Phase Energy Smart Appliances Regulations

5th February 2026

Executive Summary

Energy UK is the trade association for the energy industry, representing companies investing billions of pounds to secure our country's current and future energy needs.

From growing start-ups to major electricity generators, grid and infrastructure developers and energy suppliers, our members are driving change across power, heat, transport and flexibility.

We provide a collective voice for the sector working with governments, regulators, charities and other organisations to provide crucial insight that shapes policy, offers solutions and promotes best practice.

Our broad view across the whole system supports evidence-based positions which are not tied to particular technologies, and are focused on delivering strategic benefits for people, businesses and the economy.

We champion initiatives such as our Vulnerability Commitment, which pushes suppliers to go beyond regulation to support customers with additional needs, and TIDE, the industry's drive for greater inclusion and diversity. Through our Young Energy Professionals Forum, we support the development of future leaders.

We are equally committed to our team and are proud to be recognised as a 'Gold' Investors in People employer.

Energy UK strongly supports the outcomes of the Smart and Secure Electricity Systems programme.

Energy UK members have outlined some key issues to the implementation of the regulations which should be addressed ahead of finalisation, namely:

- Government should cross-reference its regulations with NESO teams to ensure that device requirements are linked to the requirements of entering flexibility markets, enabling customers to access a greater range of flexibility offers.
- Clarity is needed on Phase 2 device regulations, which are subject to further review and are currently not yet published.
- As air-to-air source heat pumps are in scope of the Boiler Upgrade Scheme, the impact on the current uptake assumptions therefore needs to be monitored.
- The guidance pack should focus on outlining how to safely operate and optimise the asset, as the manufacturer will not be best placed to provide up-to-date information on the right tariffs available.
- Energy UK would suggest an outcomes-based requirement to meet 2% device metering accuracy, but to not require the full Measuring Instrument Regulations (MIR) compliance to ensure disproportionate product costs are not passed onto the consumer.

- The Government needs to publish their response on the MIR requirement for a physical display as soon as possible to ensure manufacturers can prepare in a cost-effective way for the introduction of new regulations.
- Government should be mindful of manufacturing timeframes to ensure the realistic implementation of smart appliances.
- Key learnings from the introduction of smart charging regulations (including resourcing of OPSS, and clarity of regulations ahead of implementation) should be followed to ensure that industry can implement the changes swiftly to help support the Government's targets.

If you have any questions about this response or wish to engage with Energy UK and its members, we would welcome further engagement.

Kind regards,
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Consultation Questions

Q3. Do you agree with the proposed definitions for a hybrid heat pump and hybrid heat pump system for the purposes of the ESA regulations? If not, what elements of the definitions do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

The consultation sets out that the purpose of the ESA regulations is to unlock consumer-led flex to enable the Government's Clean Energy Superpower mission, delivering cleaner, cheaper, and more secure power.

In this context, the Government should not focus on developing the market for fossil-fuel hybrids. Instead, Energy UK strongly urges the Government to focus their efforts on helping customers to switch from fossil fuel systems to low-carbon technologies. This aligns with the Climate Change Committee's 7th Carbon Budget, which does not see a role for fossil-fuel or hydrogen hybrid heat pump systems as part of its Balanced Pathway.

A hybrid heat pump should only be recognised as such if it operates in heat pump mode at least 80% of the time, in line with advice from the Climate Change Committee.

Q5. Do you agree with the proposed definitions for an air-to-air heat pump and airbased heating system for the purposes of the ESA regulations? If not, what elements of the definitions do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

The Government has taken the decision to bring air-to-air source heat pumps into scope of the Boiler Upgrade Scheme, and the impact on uptake therefore needs to be monitored, as this may challenge DESNZ's assumptions around low uptake.

Q15. Do you have any comments regarding how regulations 9 to 13 are drafted? Please provide further information to support your answer.

Device interoperability

Energy UK supports the principle of supplier interoperability as a key way to avoid consumer lock-in.

However, whilst this degree of basic interoperability is desired, full interoperability is dependent on Phase 2 regulations, which are subject to further review and are currently not yet published. Manufacturers will need to comply to the Phase 1 control requirements without knowing the constraints the Phase 2 communication layer may bring. If a customer switches, this places the responsibility for a device to be compliant in Phase 1 without the communication landscape actually being defined.

Government should clarify how this risk is managed to reduce the impact on both the customer and the market.

Note that this may be subject to contractual constraints or considerations – eg. where a charge-point has been bundled with a tariff or wider EV package, there may be break clauses if the customer wishes to break the contract early. Any interoperability outcomes should be cross-referenced with the introduction of licensing to ensure a holistic approach across the SSES programme.

Primary function

Energy UK supports the proposal to ensure devices perform their core function even if they lost connection to a communications network. However, members have noted the drafting around a device's 'primary function' is unclear – particularly when a device performs multiple

roles. For example, if a device is performing vehicle-to-grid (V2G) – this may be a secondary role to vehicle charging.

Q16. Do you support the requirement in regulation 14 that manufacturers and importers must ensure relevant ESAs have device meters that are fully compliant with the obligations that MIR places on Class B active electrical energy meters, including conformity assessment (as per regulations 46-52B and Schedules 1A, 1B, 1E and 1K of MIR 2016)? Please give reasons for your answer.

Q17. If you are a manufacturer or importer, do you currently produce or import ESAs that include a device meter? If so, is this device meter MIR Class B compliant?

Q18. If you disagree with Question 16, do you support achieving the metering policy objective by alternative means? Which approach would be preferable? What issues may arise? Please give reasons for your answers and include further approaches as appropriate.

Response to Q16-Q18

Energy UK members have noted concerns with the metering requirements – particularly around mandating full MIR Class B requirement. Energy UK would therefore suggest an outcomes-based requirement to meet 2% device metering accuracy, but to not require the full MIR compliance.

As outlined in NESO's 300MW Balancing Mechanism (BM) Operational Metering Derogation, sub-asset meters can have an accuracy of 2.5% (previously 1%) to participate in the BM, making it more accessible for small scale aggregated assets to participate. When these are aggregated at the unit level (noting it is the unit, not the asset, that trades into the market), this will bring accuracy down to the 1% accuracy needed by NESO.

The purpose of the derogation is to ensure that any assets unable to meet the 2026 device requirements can still access the BM.

Government should cross-reference its regulations with NESO teams to ensure that device requirements are linked to the flexibility markets – as this will enable customers to access a greater range of flexibility offers. Energy UK would note that MIR is linked to billing, but should also be linked to the operational requirements of NESO.

The current draft proposals also diverge with the requirements in the EU, namely the Ecodesign standards and the Measuring Instruments Directive (MID). Misalignment of these standards would add additional burden to the UK low carbon technologies market.

Members have also questioned the need for 12 months of telemetry data to be held on the device. As above, this would be a unique UK product requirement, adding additional manufacturing costs. This is not standard practice in industry to date, as this data is currently typically held by flex providers, making hardware/software updates complex.

Energy UK also urges Government to align with the EU approach on data storage, as supply chains are increasingly prioritising AI and/or cloud storage over on-device storage.

Government needs to publish their response on the MIR requirement for a physical display as soon as possible to ensure manufacturers can prepare in a cost-effective way for the introduction of new regulations.

Q21. Do you agree with the clarifications to the randomised delay considerations set out in the draft regulations? If not, please explain your answer.

Energy UK is broadly supportive, particularly as randomised delay doesn't apply when the device is providing a grid service. This helps to prevent frequency deviations from ESAs responding to system signals.

Members have noted need for clarity around this drafting, particularly to ensure that internal inverters – which operate outside of system signals – are not in scope. They have also noted that this should be aligned with the EU's proposal, whereby providing a range would be more appropriate to reduce the manufacturing burden.

Government should work with NESO and industry to ensure that default device aspects like randomised delay and default times are aligned and monitored in line with future system needs and grid stability, particularly with the growth of dynamic tariffs and low carbon technologies.

Q24. Do you agree with our proposed approach in regulation 16 to implement the ETSI 303 645 requirements? Please give reasons for your answer.

Q25. Do you support the alignment of EVSCP requirements with the ETSI EN 303 645 cyber requirements? Do you have any concerns with this approach?

Q26. Do you agree with our proposal to clarify the tamper protection requirements as set out in regulation 17? Please explain your answer.

Response to Q24, 25, 26

Whilst Energy UK does not have a strong position on cyber/security protections, members have noted concerns that the tamper protection requirements are outdated. Government should also be aware that during maintenance, ESAs often require to be opened – essentially breaking the tamper seal.

Energy UK would urge alignment with the EU on their device cyber policies, and members have suggested an alternative route to compliance through EN 18031 which is currently in the EU Radio Equipment Directive.

With increasing ESAs connected to the cloud, Government should explore the future of regulation for cloud security systems.

Q34. Do you agree that the flexibility guidance pack requirement in regulation 26 should also apply to EVSCPs and BESS?

Q35. Do you agree that the manufacturer should be responsible for producing the flexibility guidance pack, and that the entity placing the appliance on the market (manufacturer or importer) should ensure it is supplied with the appliance?

Response to Q34 and Q35.

The guidance pack should focus on outlining how to safely operate and optimise the asset. The manufacturer will not be best placed to provide up-to-date information on the right tariffs available, because tariff structures, prices, and eligibility change frequently and are determined by energy suppliers rather than equipment manufacturers.

Any guidance should not be done in isolation, and should be closely coordinated with broader DESNZ approach on providing flex guidance – particularly via the consumer-led flexibility consumer engagement workstream.

Key questions which should be answered include:

- How often will the guidance be updated? Advice changes frequently, as is currently evolving across markets.
- Does this interact with the licence, e.g. what communications are flexibility providers allowed or required to do?

On the assurance documents requirements, members have noted this should be aligned with the requirements of the Radio Equipment Regulations, as they will apply to all ESAs with wireless functionality.

Broader points

Across the SSES workstream, it's essential to ensure there is a holistic approach to the emerging regulation – not only focusing on suppliers, but ensuring a cross-sector approach to integrated, low carbon technologies and ensuring a level playing field across all market participants.

Approach to enforcement

Government should encourage a collaborative approach, and early engagement between regulators and companies to improve outcomes. Early engagement should be an opportunity for dialogue with industry over the nature of any non-compliance, instead of a one-way flow of information to the product regulator.

In the instance where there is a breach, the manufacturer should be able to get support from the regulator to rectify the error.

Customers are more likely to receive better outcomes if companies are actively supported in complying with regulations, especially if they are struggling with the introduction of new regulations.

Complexity in compliance and enforcement

Government should ensure the route to compliance and enforcement is clear. Achieving compliance, enforcement, and monitoring involves a wide range of companies, which makes the process complex and sometimes fragmented.

The responsibility for technical standards and compliance often gets passed around between regulators and operators. It's crucial to define clear responsibilities between the various entities involved.

Duplicate Meter Point Administration Number (MPANs)

The business case for flex (especially aggregated small assets) requires multiple revenue streams. To manage this, the market needs one simple and non-manual approach to manage 'duplicate MPANs' (MPANs claimed by more than one provider), which should apply across all relevant markets (such as NESO, DNO, wholesale market, and capacity market).

Energy UK expects that the Flexibility Market Asset Register (FMAR), can do this from 2027 but highlight that without an interim approach, this barrier will stall DSR scale-up. Whilst this issue is outside of the scope of the SSES programme, it will have broader impacts on the opportunities for device optimisation.

The current wholesale and capacity market approach (where providers need to contact each other) results in an administrative burden that 'pollutes' and reduces the wider business case for DSR.Government should be aware of this issue, and look to swiftly advance this workstream to ensure the broader SSES goals are realised.