BEAMA welcomes the opportunity to respond to this consultation on the Energy Smart Appliance Regulations for the Smart Secure Electricity Systems (SSES) Programme. We value the engagement shown by DESNZ to date on this consultation but note there are a number of uncertainties within the consultation that require further explanation and the urgent publication of guidance ahead of the publication of the regulations to give manufacturers the most time to ensure products meet the requirements of these regulations.

Our response reflects the perspective of manufacturers across a wide range of product categories for heating, EV, BESS, and energy management systems, and highlights where uncertainty may hinder on the ability of manufacturers to ensure compliance, how timelines are viewed at present and how Government can maximise the benefit to the grid and to consumers through appropriate and proportionate intervention for the benefits these regulations will provide to both.

Our role

BEAMA represents manufacturers across heating, EV charging, appliances, electronics, and wider electrical infrastructure. With deep experience in standards, regulation, and security, BEAMA is well placed to support government and industry in shaping governance that is practical, inclusive, and future proof.

BEAMA Response

General Comments:

Overall, BEAMA have responded to all five sections of the consultation and answered all the questions. Overall, BEAMA members express a willingness to support the regulations but have specific technical concerns regarding implementation.

In particular we wish to highlight:

- The need for DESNZ to have EVSCP requirements to align with other ESAs e.g. at the end of 2027 rather than having two separate timelines for EVSCPs which complicate, add cost and confuse industry at present.
- The need for DESNZ to consider equivalent cyber security compliance beyond simply ETSI EN 303 645, for example EN 18031.
- Concerns over MIR Class B interpretation, given the lack of detail on implementation and expectations in the draft regulations and consultation which is unsatisfactory to make educated decisions on product changes on at this moment in time.
- The need for urgent clarifications and guidance documents to be produced as soon as possible owing to the sheer number of questions BEAMA have had from its members already, suggesting the current wording in the

published documents is not sufficient to make informed judgements on how to comply.

- With the above taken into consideration manufacturers would welcome consideration of a transitional approach to implementation. One option could be to introduce a voluntary or transitional phase from 2027, followed by a permanent compliance date once Phase 2 requirements and associated technical specifications are fully defined. We expand further on this in our covering letter.

BEAMA Response

Part 1: Definitions

Q1: Do you agree with the changes to the definitions for EVSCPs set out in regulation 2: Interpretation? Please provide further information to support your answer.

BEAMA generally support the definitions for EVSCPs set out in regulation 2. However, we recommend some changes to ensure the definition remains workable in the future. At present the definitions are not clear on whether a bidirectional or vehicle-to-grid capable charge point would be defined as an Electric Vehicle Smart Charge Point or Battery Energy Storage System. This may owe to the variability of the device depending on what vehicle is plugged in i.e. is it V2G Compatible and whether the V2G or bidirectional function has been enabled.

We recommend that appliances facilitating the use of battery storage situated within a private electric vehicle be expressly incorporated within the definition of Electric Vehicle Smart Charge Points. To ensure a coherent regulatory boundary, such equipment should be explicitly excluded from the definition of Battery Energy Storage Systems.

BEAMA also observe that private EVs should be part of the wider defined relevant ESAs, to ensure competitive well-functioning markets, one of the stated intentions of SSES.

Similarly, while MIR-compliant metering cannot be applied to EVs themselves given their technical characteristics, absence of such metering in D2V models removes a consumers' ability and choice to participate in explicit flexibility, confining them to implicit flexibility delivered via half-hourly settled boundary meters.

Q2: Do you agree with the proposed definition for a heat pump for the purposes of the ESA regulations? If not, what elements of the definition do you

recommend should be changed and why? Please provide evidence or reasoning to support your answer.

BEAMA support the proposed definition with some caveats.

Members have expressed concern over bringing heat pumps up to 45kW into scope, which are very unlikely to be installed in domestic premises. Often, they would be a cascade of appliances where it would be unnecessary to have multiple ESA heat meters and could be more expedient at an aggregated system level. Therefore, a scope closer to 20kW maximum would be of greater use in covering the domestic sector but not compromising the non-domestic sector with additional cost and components that would not add value to the system or the consumer.

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.

BEAMA support the proposed definitions.

However, we would welcome clearer wording on how control systems are treated, particularly where optimisation or smart control is provided by an external energy management system. This would help avoid uncertainty about what is included within the regulated system boundary.

We would also suggest that DESNZ view existing industry standards that were designed with industry input and generally approved of by industry such as MCS MIS 3005-D which supports system design incorporating hybrid heat pumps. It focuses on the comfort and wishes of the user. DESNZ can see more about the design and control principle in paragraph 3.4.2 e) and f) of the revised MIS 3005-D: 2025 ISSUE 1.0[1]

Q4: Do you agree with the proposed definitions for a fuel boiler for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

BEAMA agree with the proposed definition.

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.

[1] https://mcscertified.com/wp-content/uploads/2025/02/MIS-3005-D-2025-V1.0.pdf

We agree with the proposed definition. However, BEAMA would value clarity from DESNZ on whether air-to-air heat pumps are permanently out of scope, or whether they are expected to be reviewed for inclusion in a later phase (for example 2029)? This is something that will be critical to understand for many businesses.

Q6: Do you agree with the proposed definition for a storage heater for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer

BEAMA disagrees with the proposed definition. Manufacturers of storage heaters suggest using the definitions started in **BS EN 60531:2000+A11:2019**, which is already used by industry and referenced across related frameworks, including SAP, the upcoming HEM, and the MCS thermal energy storage standard (MIS 3008). This helps to define storage heaters giving maximum flexibility outputs.

Q7: Do you agree with the proposed definition for a heat battery for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

We disagree with the proposed definition for a "relevant heat battery" as currently drafted, as it inadvertently captures indirect (hot water) heat batteries within its scope.

This outcome contradicts the Government's explicitly stated policy intent to exclude indirect heat batteries from the regulations. Including them creates an unlevel playing field by subjecting indirect heat batteries to requirements that do not apply to competing technologies with similar operational profiles, such as indirect hot water cylinders, which are correctly confirmed as out of scope.

To align the regulation with the stated policy intent and ensure indirect units are effectively excluded, we propose one of the following drafting amendments:

Primary Recommendation: Regulation 4(5)(c)(ii) should be amended to specify that the appliance:

"can be charged directly from the grid **only**."

Alternative Recommendation: Alternatively, the definition could be aligned with the drafting used for "standalone direct electric hot water cylinders". This would restrict the definition to appliances that:

“heat the fixed storage medium directly using the Joule effect in its electric resistance heating elements only”

Q8: Do you agree with the proposed definition for a standalone direct electric hot water cylinder for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

We disagree with the definition, as it would create a potential loophole that can be exploited to avoid falling into the scope of the regulation. The potential loophole consists of declaring the intended use of a standalone direct electric hot water cylinder as being connected to a combi-boiler for pre-heating and as such being connected to a centralised space heating device (albeit not to its space heating circuit).

We propose to alter the definition as follows:
(e) standalone direct electric domestic hot water cylinder" means a water cylinder that—

(i) is not connected to a centralised space heating device **for charging**, and heats water directly using the Joule effect in its electric resistance heating elements only.

Some members have also highlighted the need for a capacity limited (min and max) for direct cylinders to avoid large commercial calorifiers or small POU water heaters coming into scope. The capacity limit should be 60L to 300L to ensure the scope is fit for purpose.

Q9: Do you agree with the proposed definition for a centralised space heating device for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

BEAMA do not agree with the proposed definition.

BEAMA members highlight that the term "centralised space heating device" as used in 4.(5)(e)(i) and 4.(6) is not a term often if ever used by industry. We expect this is in reference to a "central heating system". BEAMA suggest 4.(5)(e)(i) is amended to "is not connected to a central heating system, and". And 4.(6) be amended to ""central heating system" means a system designed to provide space heating to multiple rooms or zones within a building; and which also may be utilised in combination to provide heating to a domestic hot water cylinder or a domestic hot water heat battery".

Q10: Do you agree with the proposed definition for a hot water heat pump for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

We agree with the intent of the proposed definition but consider it too narrow as drafted. Limiting the definition to a water cylinder integrated with a heat pump risks excluding common packaged or split systems as well as heat-battery based hot water heat pumps that deliver the same hot water function in practice. We recommend broadening the definition to focus on function rather than physical integration, to ensure consistent interpretation and enforcement. It is suggested that there are volume limits of 60 to 300 litres also.

Q11: Do you agree with the proposed definition for BESS 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.

We support limiting scope to *smart* battery energy storage systems and welcome the exclusion for replacement systems supplied to address defects. However, we have concerns that the current drafting risks ambiguity and inconsistent interpretation.

- The definition frames a BESS as a "battery pack", while the listed characteristics clearly apply at system level (battery, inverter, controls and auxiliary sub-systems). This should be clarified to avoid confusion over what is actually required to comply.
- The requirement that a BESS is "designed to become a fixture of a building" may unintentionally exclude common wall-mounted or cabinet-based systems that are permanently installed but not fixtures in a strict legal sense.
- The metering requirement is closely tied to current billing arrangements and may not be future-proof as sub-metering and alternative settlement models develop.
- The 1 kWh / 1 kW thresholds appear to act as policy scope limits rather than technical definitions and should be clearly framed as such.
- Further clarity is needed on how the replacement exemption will be applied in practice, particularly where updated or successor models are supplied.

Clarifying these points would better align the regulations with how BESS are designed and installed in practice and support consistent enforcement and compliance.

Q12: Do you agree that the Phase 1 ESA regulations should only apply to those manufacturers or importers who are placing a relevant ESA on the GB market as set out in regulation 6?

Yes, BEAMA agree with this approach. However, it is the view of BEAMA and its members that the EVSCP implementation timing should align with other ESAs

(end-2027), due to delivery risk if accelerated and considerations for additional requirements under the ESA regs. This risks creating two different product offers in the space of 18 months and it is not clear where the overlap with the existing smart charging regulations starts and ends as the start date becomes blurred with the two timelines.

It is unclear at present how devices with the first set of EVSCP requirements 6 months after legislation is brought forward are treated as they will still comply with elements of the EVSCP regulations meaning we are not certain if these products and services brought out for 12 months should be treated at time of replacement. E.g. would they be replaced with the same capabilities as per the regs or with a fully compliant new ESA device? It would naturally be less difficult to implement were all the EV regulations to start at the end of 2027 rather than in two stages.

We would also urge the Government considering it at the time of publication wasn't certain on how MIR requirements would be implemented that it reflects this with **a two-year grace period** given that these requirements are time and cost expensive. We believe this should be a voluntary compliance window for the first 24 months to enable industry to achieve the aims of the legislation without exemption applications which would be more resource intensive for Government.

Q13: Do you agree with the duty to take corrective action in respect of non-compliant ESAs placed on the market (regulation 7)? Please provide further information to support your answer.

We agree in principle with the duty to take corrective action where an ESA is found to be non-compliant. There needs be recognition between the difference of minor technical issues and serious non-compliance. We ask for the following clarifications;

1. how legacy, end-of-life, or unsupported products should be treated where full remediation is no longer feasible; and
2. how existing stock held by manufacturers, importers, or distributors should be managed if non-compliance is identified after the compliance date.
3. how corrective action should apply to products that are already sold and installed in consumers' homes;
4. whether withdrawal from the market is always expected, or whether corrective action can be met through software updates or other remedial steps;

This then avoids unnecessary withdrawal of compliant products and the premature redundancy of existing technologies.

We are also concerned that the current drafting does not sufficiently address the enforcement gap created by online marketplaces and direct-to-consumer imports.

Specifically, the risk of circumvention where non-compliant manufacturers outside of Great Britain ship devices directly to UK consumers via online platforms. In these scenarios, the "importer" is often technically the consumer (who is outside the scope of regulation), and the overseas manufacturer remains beyond the practical jurisdiction of UK enforcement authorities.

This creates a significant loophole in Regulation 7:

- If a direct-shipped device is found to be non-compliant or dangerous, there is no UK-based "economic operator" (such as a traditional importer or distributor) effectively available to fulfil the duty of corrective action, withdrawal, or recall.
- UK-based manufacturers and compliant importers bear the full costs of establishing compliance and corrective protocols. In contrast, overseas actors utilising online marketplaces can bypass these obligations, undercutting the market with non-compliant hardware while escaping the accountability mechanisms intended by this regulation.
- To close this gap, we recommend that the regulations explicitly extend the definition of "placing on the market" or "importer" to include Online Marketplaces and Fulfilment Service Providers. Where a manufacturer is based outside the UK and ships directly to a consumer, the online platform facilitating the sale should be deemed the "importer" for the purposes of Regulation 7, ensuring there is always a UK-accountable entity responsible for corrective action and compliance.

Part 2: Requirements in relation to relevant energy smart appliances and obligations on manufacturers and importers

Q14: Do you agree with the proposal to require that relevant BESS must have a digital user interface as per regulation 10(3), as is the case for EHAs?

We understand the intention behind this requirement and agree that users should be able to access clear information about system operation.

However, the proposed requirement for a digital user interface in regulation 10(3) seems to be prescriptive and not consulted with heating (EHA) manufacturers. We ask that the regulation defines functional outcomes in order to allow manufacturers to choose the most suitable, cost-effective solutions for their products. Our EHA manufacturers have asked that a separate consultation with EHA manufacturers is carried out.

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

We support the intent of regulations 9 to 13 but consider that several elements would benefit from further clarification to ensure the requirements are deliverable, future-proof, and consistently interpreted across the supply chain. As currently drafted, a number of the obligations depend on technical standards, processes, or market mechanisms that have not yet been defined, which creates uncertainty for manufacturers and risks inconsistent enforcement.

In particular, **Regulation 9** requires products to send and receive information via a communications network, but does not specify the communications standards, protocols, or data and command structures that would be required. Without this clarity, manufacturers risk designing solutions that meet Phase 1 requirements but are misaligned with future interoperability arrangements under Phase 2, leading to re-engineering and additional cost.

Regulation 10 would benefit from clearer definition of the term "digital interface". This could reasonably be interpreted to include on-device numeric displays as well as remote digital interfaces. If the policy intent is to require access via a smartphone application or web-based interface, this should be stated explicitly to avoid inconsistent interpretation.

For **Regulation 11**, we recommend clearer alignment between electrical and thermal storage technologies. Part 2(b) would benefit from additional wording that reflects the charging, storage (retention), and controlled discharge characteristics of thermal storage products such as storage heaters, heat batteries, and hot water cylinders, to ensure these technologies are treated consistently with electrical batteries in relation to flexibility.

Regulation 12 assumes the existence of back-end systems and processes to manage the redirection of communications when consumers switch energy suppliers or flexibility service providers. At present, there is no clarity on how this will be implemented or when the necessary specifications and guidance will be available. Without this, manufacturers are unable to plan development activity or ensure compatibility with future interoperability mechanisms.

Finally, for **Regulation 13**, where external or user instructions are overridden, the appliance should notify the user or connected system that the instruction has not been carried out, with an indication of the reason, where technically feasible. This is important for transparency and consumer trust in automated or remote-control scenarios.

More generally, the drafting would benefit from greater consistency in terminology and clearer cross-referencing between requirements, particularly where obligations differ between appliance types. The regulations should also recognise that some ESAs may be temporarily switched off or disconnected from mains power, which could otherwise lead to false alerts or perceived non-compliance.

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.

There are concerns about the cost, complexity, and practicality of applying full MIR Class B requirements to all ESAs, particularly where devices already rely on system-level or external metering. It is also difficult to comment when Government themselves didn't know how the MIR requirements would be implemented when this consultation was published. At this present moment we are not aware of the full implications of these regulations as they are not known. This information failure means we cannot comment on whether we support these regulations at this time.

A more prudent measure would be greater alignment with the European MID that is further developed. It for example allows for a remote display over a fixed one, a key concern for BEAMA members at present. It is possible that this alignment will be achieved through DBT's response to its consultation on MIR, but we are sceptical it will achieve the greatest degree of alignment. Indeed, we would support equal recognition for a MID meter.

It is also worth noting that for EVSCP that they act as a reference point rather than the primary billing device, and therefore requirements for a pule output for debugging or measurements accuracy is not strictly necessary given the EVSCP acts as a sub-metering device. The product itself should also have enough capabilities to detect and report faults in metering already.

We would therefore value clear guidance and statements that the use of an approved meter, within the manufacturer's operating condition boundaries, is sufficient to deem a product compliant. The object of MIR is the meter, not the appliance or service it meters.

Members have also noted that to be fully compliant with MIR the meter must hold both module B (type approval) & module D (verified) where the certificates are issued by a UK approved notified body. There are a lot of technical concerns like this expressed that we don't have sufficient clarity on. Given this won't be clear for businesses responding to this consultation, the timelines do not seem wholly sufficient to undertake this ask, and a grace period will be required.

It is highly likely that existing testing centres for MIR will not have the testing capacity to manage a large influx of ESAs. These testing centres would not normally test full ESAs like charge points and would therefore likely need additional time to perform the tests as they begin to understand the unique

changes that will be required for heat pumps, charge points etc. In the UK there are only 5 testing centres we are aware off which we do not feel is sufficient given the above to ensure compliance and full testing by the December 2027 timeline. Therefore, it is necessary to delay enforcement of the ESA regulations through a two-year voluntary/grace period before full mandatory compliance in December 2029.

Heat Specific Points:

We support the objective of accurate and reliable measurement within energy smart appliances. However, for heat appliances installed in private domestic dwellings, we do not consider it proportionate to require full compliance with all obligations that MIR places on Class B active electrical energy meters.

In particular, the tamper-proofing requirements associated with MIR Class B meters are overly onerous for domestic heating appliances that are routinely serviced by a wide range of agents. Managing tamper status following legitimate servicing activity or drawing all service agents into a formal quality or reset regime, would be impracticable in a domestic heat context.

We also have concerns about the EMC requirements referenced through MIR 2016. Smart heating appliances already comply with the appropriate EMC standards for domestic environments. Applying the more stringent MIR Class B immunity requirements would add cost and complexity without a clear consumer or system benefit, particularly where multiple heating appliances may be installed within a single home.

We therefore support the intent of Regulation 14 but recommend that heat appliances in domestic settings are exempted from full MIR Class B compliance, with requirements instead focused on functional accuracy and reliability appropriate to device-level measurement used for control and flexibility rather than billing.

Concerns regarding gaps in MIR:

BEAMA also have concerns regarding recertification owing to the need for repair of ESAs through different engineers etc, as expressed frequently in this consultation response. In scenarios where, for example, a heating ESA requires a non-metrological sub-assembly replacement (such as PCB, control panel) and the integrated meter panel must be temporarily removed and reinserted, MIR offers no explicit mechanism to ensure compliance once reinstalled. Ideally, there should be a process or code to verify that no changes to metrological performance have occurred during reassembly. In case of an independent meter, this is verified using a seal and WELMEC firmware/code version identification and checksum.

For embedded or inbuilt measurement circuitry, this is a significant grey area for industry and creates uncertainty about how compliance will be ensured when ESAs with embedded metrology require maintenance or component replacements.

In summary, in its current shape and form, MIR doesn't provide a path to re-verification. It doesn't explicitly say that "remove an assembly, do some work and put it back unchanged" but the approval still remains valid. Also, it doesn't provide a MIR mechanism for an embedded or sub-assembly kind of measurement circuit.

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?

Across BEAMA membership, practice varies. Some manufacturers already include device-level meters, while others rely on external meters, system-level measurement, or data provided through EMS platforms.

Not all existing device meters are MIR Class B compliant. Therefore, we are asking for transition times to be amended for all ESAs to comply at the same time and as per Q16. We also ask for the following clarification:

1. Can DESNZ clarify why the statutory instrument refers to “all requirements imposed on such meters” when supporting guidance appears to focus on Class B compliance?

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.

Yes, many members support alternative ways of meeting the policy objective.

Options could include allowing system-level metering, recognised external meters, or validated software-based measurement where appropriate. These approaches could reduce cost and complexity while still delivering accurate data.

Q19: For EVSCPs, would you recommend that measured consumption excludes the electricity consumed by the charge point itself when in use? Is this in line with current practice?

Yes, we recommend that measured consumption focuses on the electricity delivered to the vehicle, rather than including the charge point’s own internal consumption. This would represent best practice; however this is not yet common practice across the whole market. Internal charge point consumption is a known issue, and there is a clear desire within industry to address it in order to provide more accurate metering. Any move in this direction should be accompanied by

clear guidance and realistic implementation timelines such as moving the timelines for EVSCPs or all EV manufacturers in line with the Phase 1 implementation date.

There is a risk also that including energy used by the meter rather than solely energy going from device to vehicle will confuse customers where they will see energy is being taken by the vehicle even if it isn't plugged in, as EVSCPs are internet enabled and will therefore register as consumption.

Indeed, any energy consumed by the EVSCP when not charging a vehicle would be picked up by the main utility meter.

Q20: Do you support this clarification regarding global override? If not, please explain your answer.

BEAMA agree that consumers should retain an appropriate level of control over their appliances. Local intervention must be allowed using an override facility on the EVSCP that overrides all events

.We would also support additional clarity on global override, as would be supportive of ensuring that a permanent override option remains available to consumers. This is important as there are a number of scenarios where a randomised delay is not suitable and creates an interruption to a consumer's experience of using their ESAs.

1. **Inherent Randomisation:** Where the commencement of the charging event is already subject to sufficient stochastic distribution. This includes instances managed via an automated load controller or through manual intervention (the act of connecting the vehicle), which is itself a random occurrence.
2. **Preservation of Advanced Smart Functionalities:** Where the application of a randomised delay would prejudice or preclude the effective operation of high-value system functions, specifically:
    - **Micro-generation Optimisation:** The dynamic tracking of solar photovoltaic (PV) generation to facilitate solar-optimised charging.
    - **Demand Side Management:** The real-time adjustment of charging loads in response to the aggregate energy demand of the premises.
    - **Bi-directional Integration:** Operation involving Vehicle-to-Home (V2H) or other energy export protocols.
3. **Standalone (Off grid) Operation:** Where the charging equipment is operating independently of the national electricity transmission or distribution networks.

There are also broader concerns about how global override is defined and applied.

Can DESNZ provide further guidance on how manufacturers should interpret and implement randomised delay requirements, particularly for heating appliances?

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

BEAMA strongly disagrees that the clarifications at present adequately take in to account the evolving and complex ecosystem, of connected ESAs. We therefore require understanding the intent of the clarifications, particularly the role of randomised delay in mitigating the risk of large, synchronised load events and supporting grid stability as well as additional changes to the draft legislation to better reflect how ESAs work and how consumers expect them to. For our EHA manufacturers, this variability is inherent by nature — influenced by factors such as differing system characteristics, heat-loss levels, and consumer behaviour. While randomised delays of up to 10 minutes may help avoid demand surges caused by simultaneous start-up of devices, the regulations do not appear to address the equally important risk of large numbers of devices turning down or switching off at the same time, which could also affect grid stability.

For heating appliances and EV charging in particular, it is important that energy delivery is completed by the time the service is needed. This suggests that anti-herding measures should focus on ***staggered start times within a defined charging window,*** rather than applying delays at the point of start. Where devices can signal an available operating window, flexibility service providers could schedule start times across that window to smooth demand more effectively.

This approach would also work better alongside half-hourly time-of-use tariffs. Fixed random delays risk reducing consumer value by causing devices to miss part of a low-cost period or extend into a higher-cost one, undermining both consumer trust and flexibility outcomes.

There are also clear lessons from the EV Smart Charge Point Regulations implementation that should have been carried over and appear absent. The random delay should only apply to events where there is a herding risk. A single charger for example turning on when a consumer randomly plugs in at the middle of the day should not have a random delay applied. The event of plugging in to start charging immediately is random in itself. We explore this in more detail further down in our answers to this question.

Whilst not mentioned in the draft regulations, the charger turning on due to changing circumstances within the boundary meter of the property (e.g. excess

solar export) should also not be applicable to the random delay. This was clarified by OPSS for EVSCP regs but should also be included in these regulations.

Furthermore, it would be beneficial to have greater written clarity that only the charge point owner and/or the CPO has the authority to modify the randomised delay.

We have additional concerns that the current approach may lead to unintended consumer detriment in certain use cases, particularly where flexibility events or tariff windows are short (for example, half-hourly dynamic tariffs). In these scenarios, a fixed randomised delay of up to 10 minutes could materially reduce or eliminate the consumer benefit of participating in flexibility services, potentially undermining trust and engagement.

We therefore consider that further refinement is needed. In particular, we would welcome clarification on whether:

1. the impact of randomised delay on short-duration flexibility events has been assessed;
2. delay parameters could scale in proportion to the duration of the flexibility event or charging/heating cycle;
3. alternative or exempted approaches could apply where devices are locally optimised or consumer-initiated rather than centrally dispatched.

We also note that clearer guidance on how randomised delay interacts with dynamic tariffs and future market arrangements would help ensure the requirement remains proportionate and fit for purpose as the system evolves.

We explore 1-3 in more detail below:

For EV charging load control may schedule a charge to occur at midnight, making the charge point function through a time clock. At this point randomised delay is effective. However, through OCPP which fulfils this function, it can track solar power and anticipate the next few hours profile from the solar, and schedule charging based off availability of solar. However, as it stands the Government are saying that those with solar panels cannot charge their vehicles optimally through solar and still have a randomised delay, up to 30 minutes, which renders the optimised charging schedule through solar less effective. This legislation is essentially as worded blocking optimised charging from other Energy Smart Appliances and devices and makes achieving the Government's own flexibility targets harder.

In addition, in instances where sites are off grid, either domestic households, farms or for example fleet charging through battery storage units, the randomised delay function still applies. This again contradicts purpose of these regulations and

ideally a way to permanently disable randomised delay should still exist. These regulations have already proven highly controversial when implemented solely for EVs in 2021/2022 and are likely to be more so as more consumers with a range of ESAs and potential to function off grid is greater. It is therefore imperative that a permanent way to switch off randomised delay is allowed, otherwise Government risks reducing how well EVs integrate into a smart household.

As DESNZ will appreciate what is highlighted above is not something that can effectively be implemented in the space of 6 months and will need further thought. Therefore, it is more appropriate that the timeline for randomised delay changes for EV charging should take place at the end of 2027 in line with other ESAs.

Indeed, when the Smart Charging Regulations were first consulted on by BEIS officials at the time indicated that plug in events rather than scheduled charging would not face randomised delay requirements. This is a crucial opportunity for DESNZ to address and make changes to the wording that accidentally brought all plug-in events in scope. The reality is at present the wording of these regulations will not only delay urgent plug in EV events but also permanently put heat pumps in a permanent randomised delay cycle as they are by nature always on. This will likely have a material impact on consumer comfort and result in significant consumer complaints when consumers own an ESA Regulations compliant device for the first time. As it stands the randomised delay function is therefore not fit for purpose and should not be rushed through for EV and amended ahead of implementation to reflect these concerns.

Regulation 15 (3) should therefore be amended to say "A relevant energy smart appliance must be manufactured or configured so that the delay referred to in paragraph (2)(a) will not operate where it is providing response flexibility services at the relevant time; is responding to a signal from a vehicle; or is continuously performing its smart function."

For heating appliances randomised delay also conflicts with and makes impossible compliance with other standards. Namely the product performance regulations and standards, where products are tested against 24h simulated use cycles. The addition of a randomised delay to the operational logic of an appliance would invalidate all test results currently achieved and may make it impossible for an appliance to meet the test requirements at current set points. This would then in turn require higher set points to be used to trigger charging earlier, which could impact the tests to a level that would mean the product is not able to achieve compliance anymore.

As an intermediate measure, randomised delay should only apply to occasions where charging is occurring at the start of a scheduled period, not where it is

occurring randomly based on appliance internal parameters during a period in which charging is allowed (which could be a scheduled period or all the time, depending on consumer preferences).

Q22: Do you support the introduction of the proposed requirements for ESAs in response to interruption to supply or communications as set out in Table 2? If not, please provide a rationale and options for improvement.

Manufacturers agree that ESAs should behave safely when power or communications are lost or restored, however, the clarification in Table 2 is still not clear enough for consistent implementation; this sits in line with Q20 and Q21 where we require clarity.

Additional clarification is also required on what counts as a 'communications interruption' and what evidence/assurance is expected?

We also disagree that as it stands that ESAs should not perform to their previous schedule prior to interruption. This contradicts existing regulations including the Smart Charge Point Regulations (Regulation 7) and risks a case where should communication with the FSP not be restored quickly there is an interruption of service e.g. loss of heating or ability to charge vehicle. This should be further reviewed with justification for any decision on this published alongside.

Q23: Do you agree that the proposed recommendations should be introduced on a voluntary basis alongside Phase 1 regulations and become legal requirements with the introduction of Phase 2 ESA regulations? Please explain your answer.

A voluntary approach in Phase 1 is supported. It gives manufacturers time to test how the measures work in practice, particularly where technical detail and guidance are still developing.

This approach allows issues to be identified and resolved before requirements are made mandatory. Any transition to legal requirements in Phase 2 should be based on clear guidance, further engagement with industry, and evidence that the measures can be applied consistently across different appliance types therefore we ask for supporting trials and feedback in between the phase implementations.

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

Yes, we support the use of ETSI EN 303 645 as a baseline for cyber security but also equivalents. We ask DESNZ to clarify how these requirements should be applied in practice to ESAs, particularly where products rely on third-party platforms or energy management systems. We ask for the following clarifications;

1. What is the policy justification for mandating ETSI EN 303 645 specifically, rather than allowing compliance with equivalent international or EU standards where cybersecurity outcomes are demonstrably comparable?
2. Would DESNZ consider formally recognising equivalence between ETSI EN 303 645 and ETSI EN 18031 to avoid unnecessary duplication and recertification costs? Noting many members already operate using EN 18031 and note that recertification would be both a high financial and time cost that would negatively impact these businesses and effectively punish them for looking to achieve high levels of cyber security to date using existing best practice.
3. Will DESNZ publish clear criteria for what constitutes a "reasonable equivalent" cybersecurity standard or assurance approach?

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?

We support using ETSI EN 303 645 as one option for baseline cyber security but would urge the government to consider equivalents as well to reduce costs.

DESNZ should clarify - 1. how the requirements apply where ESAs rely on third-party platforms, cloud services, or energy management systems; 2. how compliance should be demonstrated for products made up of multiple components.

We do however have concerns expressed by members regarding adherence to the ETSI EN 303 645 cybersecurity standard which entails significant recurring costs, primarily driven by the requirement for regular, secure ESA updates. For certain manufacturers, this creates challenges regarding commercial viability. Furthermore, establishing consistent market surveillance and enforcement presents a significant obstacle, particularly concerning low-cost imports from jurisdictions with less stringent regulatory frameworks. There is a risk that such products could displace fully compliant solutions through aggressive pricing, thereby causing market distortion. Consequently, until these enforcement disparities are resolved, the proposed implementation is arguably impracticable

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

With BEAMA's large membership we have a range of views. Broadly we agree with the concept, however we need clarity on what level of tamper protection is expected in practice. Manufacturers already have a level of tamper proof design and adding further requirements will increase costs and take up R&D time. In particular, clarity is needed on 1. the distinction between physical tampering, software interference, and legitimate user or installer access; 2. how tamper

protection requirements apply where devices are remotely controlled or integrated with third-party platforms or energy management systems; and 3. what evidence manufacturers are expected to provide to demonstrate compliance.

Indeed, significant concerns have been expressed regarding the assurance of seal integrity. As the device will need to be serviced by a large, heterogeneous group of third-party installers, the ability to maintain a controlled environment is severely limited. The complexity of the technology suggests that repair rates—and therefore the frequency of seal breaches—will be variable. Consequently, without a mechanism to vet or monitor this dispersed workforce, the value of the physical seal as a security measure is significantly diminished

However, for our heat manufacturers we disagree with the proposed tamper protection requirement in regulation 17. It is carried over from EVSCP regulations and is not appropriate for EHAs. Heat pumps are installed on the consumer's premises and require regular maintenance and user interaction, making tamper seals impractical. There is no evidence of tampering issues in the heating sector. We recommend that tamper protection be reconsidered for EHAs as there is a lack of evidence that they are needed or will be sufficient/practical to maintain given the above.

Q27: Do you have any comments regarding how regulation 19: Off-peak usage for charge points is drafted? Please provide further information to support your answer.

The drafting closely mirrors the existing smart charging regulations, with the main change being a shift from a demand side response services exemption to a flexibility services exemption. We would like confirmation on how the change in terminology is to be interpreted, and does it represent a material change in scope or obligations compared with the existing smart charging regulations.

Members have also expressed concern over setting defaults. The current off peaks tariffs, operated by energy retailers, vary considerably across the industry and therefore would be very difficult to implement effectively. More consideration is required and justification on why this regulation is needed should be shared.

More broadly there are some concerns around future proofing the regulations. Off peak hours are likely to become outdated as consumers begin to shift their behaviours to respond to for example solar power. It would be better that such regulations are put forward as secondary legislation so that it is easier for a future Government to make changes should consumer behavioural patterns have changed sufficiently.

Q28: Do you have any comments regarding how regulation 20: Energy smart function for EHAs is drafted? Please provide further information to support your answer.

We support the intent of Regulation 20 and the flexibility to deliver the energy smart function through integrated or modular approaches. However, the lack of defined communication protocols and data and command structures make it difficult for manufacturers to implement Regulation 20(1) in a way that reliably supports interoperability.

Manufacturers would welcome greater alignment between Phase 1 and Phase 2 requirements, so the full set of compliance obligations can be considered together during product design. Developing to Phase 1 in isolation risks rework and additional cost where requirements evolve.

Clarification is also needed on the boundary of the ESA, particularly where cloud-based services support individual appliance operation and user interaction, and on the treatment of retrofit enablement and temporary versus permanent loss of smart functionality.

Q29: Do you agree with the proposed definition for an add-on module for the purposes of the ESA regulations? If not, what elements of the definition do you recommend should be changed and why? Please provide evidence or reasoning to support your answer.

We broadly agree with the proposed definition, however clarifications are required; 1. which party is responsible for meeting ESA requirements when smart functionality is provided by an add-on module supplied separately from the appliance; 2. how obligations apply where an add-on module is installed after the appliance has already been placed on the market. 3. How will this be enforced effectively? There is significant scepticism over how enforceable this will be and may enable those who don't follow the regulation to cut costs consequence free.

We would further value clarity regarding the regulatory classification of communications within the "add-on module" architecture.

The proposed definition states that an add-on module may consist of "capabilities delivered remotely through internet connectivity". We request confirmation that the communication channel between this remote add-on module and its corresponding endpoint within the manufacturer's cloud infrastructure is considered to be occurring effectively *within* the ESA's system boundary. It is our view that this internal data exchange is intrinsic to the device's operation and should therefore not be classified as "load control". Differentiating this internal signalling from external flexibility instructions is essential to ensure manufacturers

are not inadvertently classified as Load Controllers simply for maintaining the native connectivity and smart functionality of their devices.

Q30: Do you have any comments regarding how regulations 21 and 22 relating to offpeak usage and responsiveness status for EHAs are drafted? Please provide further information to support your answer.

The intent is supported but further clarification is needed; DESNZ should clarify:

1. how "responsiveness status" is intended to operate in practice, including whether it is a fixed capability or a dynamic state that can change due to user override, safety constraints, loss of communications, or participation in flexibility services;
2. how responsiveness status interacts with default off-peak operational hours, particularly where those default requirements do not apply because an appliance is supplied under an active flexibility agreement;
3. how core and non-core functions are expected to be treated when determining off-peak operation, given that this distinction is largely left to manufacturer discretion and will be addressed through guidance;
4. how these requirements should be applied where smart functionality is delivered via an add-on module or third-party provider; and
5. what information manufacturers are expected to expose or record to demonstrate compliance, especially where behaviour depends on external controllers or services.
6. has the behaviour of consumers with solar and BESS been factored in? Homeowners will want to charge their batteries in off peak periods but will want devices to use battery power when grid energy is at its highest, meaning prescriptive asks of consumers may well be undermined by attractive market mechanisms.

Q31: Do you agree with the proposal to apply the smart functionality requirements set out in Chapter 2 of Part 2 of the regulations to any relevant BESS sold as smart?

Broadly yes, however BESS manufacturers, members emphasise that BESS usually is managed via applications where these are controlled by different operational systems where the majority of these assets are managed by FSPs rather than acting as autonomous controllers. And support is further subject to changes to definitions as set out in question one.

Q32: Do you agree with the Off-peak usage requirement for BESS as set out within regulation 24? Please provide further information to support your answer.

An off-peak usage requirement for BESS can be supported in principle, but only where it preserves the ability for systems to operate flexibly in real time. Battery storage plays an active role in optimisation, aggregation, and the delivery of system services, and should not be constrained by requirements that assume static or predictable operation. Any approach taken must allow BESS to respond dynamically to network needs and market signals, rather than limiting how and when assets can operate.

Q33: Do you agree with the requirement for ESAs as set out within regulation 25: Provision of information regarding security? Please provide further information to support your answer.

In principle this is supported.

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

Not at this moment. DESNZ should clarify how guidance packs are expected to differ by appliance type, given the very different ways EVSCPs, BESS, and heating appliances operate. It is also the case that many manufacturers do not offer flexibility services of their own and so it would be up to the relevant third-party service to provide an accurate flexibility pack. Some manufacturers would be able to provide a list of flexibility providers but wouldn't be best placed to provide guidance on using a service they do not themselves offer. Some members also suggest such guidance could be part of the products user manual.

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?

We do not agree in its broad scope but acknowledge a user manual should come with any equipment. Energy suppliers should also provide additional guidance to consumers about individual tariffs, ensuring they are well informed across the different points of contact with the customer. Ultimately where manufacturers do not offer flexibility services it would seem they are not the right entity to offer guidance on utilising a flexibility service, when this is managed by a third party. Manufacturers who offer those services should in principle offer this pack perhaps as part of their user manual. The legislation should therefore be based off action not business type.

Q36: Do you agree with the Assurance requirement for ESAs as set out within regulation 27? Please provide further information to support your answer.

We broadly agree. However, for 2 (C) all tariffs should be compatible and configurable remotely. The explanation of these tariffs should be provided by a third party, such as the energy provider, not the manufacturer.

Q37: Do you agree with the different documentation required (flexibility guidance pack, statement of compliance and technical file) as part of regulations 26 and 27? Please provide further information to support your answer.

No.

The flexibility pack requirement must be based off action not business type.

However, we support and value the clarity in the consultation that the technical file must be made available by the manufacturer to the enforcement body upon request and does not need to accompany the ESA.

Q38: Do you agree with clarification of the register requirements? Please provide further information to support your answer.

No. Many members sell into distribution and have no idea what location they will be installed in / have any relationship with the end customer.

Section 3: Enforcement and Civil Sanctions

Q39: Do you have any comments regarding how regulations 30 and 31 on Service and Compliance Notice are drafted? Please provide further information to support your answer.

Overall regulations 30 and 31 are an expected part of such regulations.

We note the inclusion of delivery of enforcement notices by post. We understand the need for this but would urge Government to ensure such letters are delivered with proof of delivery.

We would value further clarity on regulation 31 (b) “bring the non-compliant relevant energy smart appliances into compliance with the requirements of these Regulations”. If this were to mean withdrawal from market and return to sender with an obligation to retrofit the devices this could be an incredibly costly and suboptimal result. Any compliance notice with such an action must be seen as a last resort option.

We value certainty that enforcement action via the Secretary of State would only occur after a manufacturer has been made aware of non-compliance and has been given appropriate time to rectify. As it stands there have been around 100

questions raised by BEAMA members regarding SSES demonstrating that to date language and communication has not been sufficient to provide certainty over the direction or meaning of the regulations. Therefore, there must be sufficient support to manufacturers in gaining compliance with a challenging set of regulations that is at present a narrow time window.

Q40: Do you agree that the current powers are sufficient to address non-compliance? Please provide further information to support your answer.

No. We have doubts at present based off enforcement of the EV Smart Charge Point Regulations where members still cite non complaint kit being sold. Indeed, it is often the case visiting trade shows that it is easy to spot non complaint kit even today. OPSS do not have the appropriate level of resourcing to enforce this as demonstrated by the number of businesses outside of the BEAMA membership who are non-complaint with existing regulations.

Q41: If you do not consider that the current civil penalties are sufficient, do you support the creation of criminal offences as set out in section 242(3)(a) of the Energy Act? Please provide further information to support your answer.

BEAMA consider the current civil penalties sufficient but only with appropriate enforcement.

Q42: Do you agree with the proposal to align the civil penalty calculation with the Ecodesign for Energy Related Products Regulations 2010?

Yes, this is a good approach.

Q43: Do you agree that the enforcement notices – compliance notice, notice of intent and final notice – follow a clear and logical set of processes and procedures (regulations 31, 33 and 34)? Please provide further information to support your answer.

Yes.

Q44: Do you have any comments regarding how regulations 33 on Notice of Intent, 34 Final Notice, 35 Appeals against final notices and 36 Enforcement of a civil penalty are drafted? Please provide further information to support your answer.

No.

Q45: Do you have any comments regarding how regulations 37 on Enforcement undertaking, 38 on Contents of an enforcement undertaking, 39 on Acceptance of an enforcement undertaking, 40 on Discharge of an enforcement undertaking, 41 on Appeals relating to the discharge of an enforcement undertaking, 42 on Inaccurate, incomplete or misleading

information and 43 on Non-compliance with enforcement undertaking are drafted? Please provide further information to support your answer.

For regulation 38 (C) "action (including the payment of a sum of money) to be taken by the manufacturer or importer to compensate any person affected by the breach" would be difficult to quantify and may result in claims for compensation beyond what could be considered reasonable. It is not clear as it stands how such claims could be handled.

For regulation 42 as reiterated elsewhere due to the incomplete information available to industry on how these regulations can be implemented a manufacturer providing inaccurate information could do so simply because the information is not available for them to work with. DESNZ must make certain that guidance is published urgently to help these regulations be rolled out successfully. This guidance must make an effort to provide technical as well as policy guidance on how these regulations should be implemented. For example, where should a tamper prevention device be fitted to a heatpump? This requires more than guidance that says a tamper protection device must be fitted. Where possible technical guidance must aim to allow flexibility in how manufacturers achieve the regulations.

Q46: Do you have any comments regarding how regulation 44 on Publication of cases of civil sanctions and enforcement undertakings is drafted? Please provide further information to support your answer.

No.

Q47: Do you agree with the application of the Consumer Rights Act Schedule 5 as set out in regulation 45: Amendment of the Consumer Rights Act 2015? Please provide further information to support your answer.

Yes.

Part 4 Revocation of the EVSCP regulations

Q48: Do you have any comments regarding how the regulations (46-49) in Part 4 are drafted? Please provide further information to support your answer.

Yes. Regulation 49 is critical in its wording. There must be guidance or a FAQ document published alongside these regulations which make clear that where a charge point was sold prior to the regulations coming into force that a customer/reseller cannot request to send back their stock/charge point as a result of the change in regulations. When the smart charge point regulations came in to force members report a number of customers trying to return charge point stock citing noncompliance with the smart charge point regulations as the reason. BEAMA will be drafting wording for its members to provide to customers who

request this, but it would be made easier by Government wording reinforcing and reiterating this regulation.

This issue will be compounded by the current draft regulations requiring two changes to EV Smart Charge Points in the space of 18 months. OEMs would likely have substantial stock in distribution with multi month sell through periods. Rapid changes to regulations such as these risks stranded inventory and returns. The requirements of course also require potentially two redesign cycles within 18 months before a further redesign for phase 2. This is disproportionate for an industry that is formed predominantly of SMEs. Noting also the costs associated with doing so compounded for some businesses with the costs of licencing requirements.

Part 5 Review

Q49: Please comment on these data, assumptions, and methodology used in the Initial Impact Assessment. Please also provide further views on distributional impacts, and potential Equality Act considerations.

In section 2 of the impact assessment government acknowledges that there are five (a-e) key tools at its disposal to increase a more socially optimal level of deployment. Although SSES helps with many of these it does not act to change perhaps the largest single action (b). The limited consumer benefits will continue to undermine the entire SSES program. SSES will at present fail to achieve its desired outcomes without further incentives to participate in flexibility. Instead, it will result in consumers manually overriding or buying older non smart devices for a more convenient experience at a similar price point on bills.

It is BEAMA's view that government with the support of NESO has the tools at its disposal to provide better financial incentives to customers to maximise the impact of SSES. The demand flexibility service in the year 24/25 achieved only 9% of the 23/24 demand flexibility service volume[2]. It is well understood that the significant decrease in financial reward is likely the primary factor in this. The scheme only cost £11 million to run that year with a fund of £1.2 million for suppliers to participate and reward customers. This is a comparatively small level of funding to most government intervention measures being considered for the EV sector. Government could announce a fund of less than £100 million over the rest of this Government's term in office (2029) to incentivise greater levels of consumer participation in flexibility markets and have new consumers benefiting from SSES compliant devices actively participating for over a year before support

[2] https://www.energy-uk.org.uk/wp-content/uploads/2024/08/Energy-UK-response-to-Demand-Flexibility-Service-DFS-EBR-Article-18-consultation-August-2024.pdf

ends giving consumers the confidence to continue to do so thereafter without an impact on their comfort or routine.

DESNZ is reportedly due to publish modelling on the whole system value of consumer-led flex in April. BEAMA believes this modelling should be used to increase the overall value available from flexibility services. Expanding the value captured by flexibility service providers is critical to enabling sustainable operation and investment in light of new requirements and costs, while also increasing the share of benefits that can be passed through to consumers

In section 7 government states that the cost of the changes to the EVSCP regulations will not have a cost to manufacturers. This is inaccurate. The two-stage approach to changes will mean that ultimately charge point services may have to be changed twice in the space of 18 months. The first major change is the change to randomised delay and the second at the end of 2027 the requirements for a class B MIR meter and the present prescriptive cyber security requirements that make no mention of equivalents such as EN 18031 will add to costs where manufacturers have already invested in such equivalents. MIR meter requirements are themselves costly to implement and these should not be underestimated.

We would further like to highlight a significant gap in the regulations which will in time entirely undermine these regulations concerning the interaction between the proposed regulations and Direct-to-Vehicle (D2V) load control models. In these scenarios, flexibility platforms and energy suppliers communicate directly with the electric vehicle's onboard telematics to manage charging, effectively bypassing the 'smart' functionality of the Electric Vehicle Smart Charge Point (EVSCP).

This creates a distinct market asymmetry regarding compliance costs versus value capture:

Disproportionate Cost Burden: Under the proposed regulations, EVSCP manufacturers are mandated to incur significant upfront and ongoing costs to ensure their hardware complies with minimum ESA standards, including MIR Class B metering and ETSI EN 303 645 cyber security requirements.

Inability to Recover Costs: In a D2V model, the compliant utility of the charger is circumvented. The aggregator or supplier captures the economic value of the load control event, while the hardware manufacturer—whose device facilitates the connection—is excluded from the value chain. Because the device's smart features are bypassed, manufacturers are inhibited from recovering their compliance investments through the provision of flexibility services or data utilization.

While we acknowledge the technical and jurisdictional difficulties of applying ESA-equivalent standards (such as MIR or ETSI) directly to Electric Vehicles, the current

regulatory framework risks creating a scenario where ESA manufacturers effectively subsidise the hardware infrastructure required for D2V models. They bear the full cost of regulatory compliance while D2V operators reap the benefits of flexibility without contributing to the cost of the secure, metered infrastructure they rely upon. We urge the Department to consider how this disproportionate burden on one set of actors can be mitigated to ensure a fair competitive landscape.

We estimate based of publicly available data that around 20% of EVs on UK roads today are registered to such services. This represents a not insignificant part of the market and one that is likely to grow, meaning a increasing part of the market will not be feasible for EVSCP manufacturers to participate in through flexibility, undermining the investment case in the UK, where an adverse position will occur where the number of charge points sold will grow but the proportion using an ESA's flexibility services will diminish. This must urgently be addressed to ensure future investment in the UK by ESA manufacturers at the same anticipated scale before these regulations were laid.

Overall cost commentary:

For smart heating devices the costs vary significantly and there is concern that for smaller SME's the cost will be virtually prohibitive and create a situation where smaller UK manufacturers may feel they must exit the market given the 18-month time window for compliance.

For manufacturers complying with both the ESA and Licensing requirements the costs may be business critical and these regulations, particularly for businesses who may not be a member of a trade association and not aware of the regulations will find compliance dramatically difficult. Product cycles may be beyond the remaining time frame for compliance and the availability of funding after budgets are signed off to achieve compliance will be difficult. We expect the results of the ESA consultation to be published after the start of the financial year and therefore after budgets are signed off.

It is also hard for the impact assessment to be entirely accurate at present when how Class B MIR meters will be regulated is yet to be understood by the authors of this consultation, owing to a different government department holding the pen on interpretation who has yet to publish their response, which overall is disappointing given with two weeks to go until this consultation response is due we are yet to understand how MIR meters should be installed.

Where there are uncertainties in these regulations which are numerous (around 100 questions raised by BEAMA members deriving from unclear language or non-answers in industry webinars resulting in asks by BEAMA members for us to follow up with government) these will all have variable costs that will make budgets

difficult to forecast. Many businesses operating in these markets may not yet be profitable despite being themselves larger brands in, for example, the EV sector. Should such organisations be unable to bear the costs of the regulations and licensing regulations coming in force at the same time will have an impact on the end customer.

END