REA response to BEIS Consultation on Smart Appliances

The Renewable Energy Association (REA) is pleased to submit this response to the above consultation. The REA represents renewable electricity, heat and transport, as well as Electric Vehicle companies and Energy Storage. Members encompass a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are around 550 corporate members of the REA, making it the largest renewable energy trade association in the UK.

Introduction

The introduction and adoption of smart appliances is expected on a widespread basis in the UK, as part of the shift to a more efficient, smart energy system, and due to changing technological uptake. The REA is the leading trade body for renewable energy and clean tech and our members include those involved in the manufacture, distribution, sale and installation of small scale energy storage batteries for homes and workplaces, a product classed as a 'smart appliance' in the consultation.

Answers to Specific Consultation Questions

1. Do you agree that the Government should take powers to allow for regulation on standards for smart appliances?

Yes, with caveats. There should be recognition that new regulation may slow down deployment of more smart appliances and a greater evidence base is possibly required to illustrate the benefits of regulation.

There should be no market distortion as a result of regulation, acknowledging that greater complexity creates difficulties for industry.

2. Do you agree that a label is a good way to engage consumers with smart appliances? Please include your views and experiences with key aspects of labels which are most effective at engaging consumers, including analysis on uptake of the relevant device.

Yes. This has worked well in the 'white goods' arena, in terms of educating consumers regarding energy efficiency and consumption. There are some concerns in the industry however that there is a lack of evidence for the benefits of labelling/greater regulation and there is an opportunity to conduct more research in this area.

3. The consultation stage Impact Assessment published alongside this consultation document explores the costs and benefits of the options considered for this policy. It indicates that mandating standards for smart appliances provides the greatest net benefits, compared to voluntary standards. Do you agree with our analysis? In particular, please consider the following, and provide analysis to back up your views:

a) Likely consumer uptake of smart appliances, including which type of consumers and anticipated time frame;

b) Consumer use of the smart function provided by smart appliances in relation to different types of tariffs, including fixed and variable;
c) Potential financial benefits to consumers through smart appliance usage in combination with smart tariffs and offers;
d) Monetised and non-monetised costs for industry to comply with standards, including consumer businesses, smart appliance manufacturing businesses, smart appliance service providers, supply chains and the electricity industry (such as Distribution Network Operators);
e) Potential impact on the price of smart appliances which comply with standards compared with non-smart appliances.
Don't know. On the one hand, to ensure consumer safety and peace of mind, standards should be mandatory and therefore prevent the risk of consumers being left with vulnerable products, and also to provide the maximum possible benefit to the country as a whole, with assurance that there is a minimum level of standards in existence. With most of these products at an early stage of take up, now is a good opportunity to put in place such criteria as manufacturers will be better able to adapt if necessary and there should not be considerable inventories of stock in place.

On the other hand, blanket mandatory regulation may not be appropriate for all appliance types. If applied inappropriately, mandatory regulations could slow deployment of highly beneficial devices for the system and lead to complexities that act as a barrier to entry or have adverse effects on the way in which a particular appliance type works. Care should be taken to make sure that the standards that are applied to individual appliance types are appropriate to that type. Government should work closely with industry to evaluate this.

Parliamentary time in light of exiting the EU will create a delay in implementing regulations and this will cause more damage through uncertainties and an uncertain investment environment.

Again, more evidence would be beneficial in terms of the benefits and costs. Any standards will need to be compatible with international standards, especially in the light of a changed regime after Brexit, and this is an additional essential consideration.

4. In this document, we have proposed minimum functionalities for each principle. Do you agree with these functionalities? What functionalities should be considered in addition to those listed above? Please divide your responses according to:
i) Interoperability;
ii) Grid-stability and cyber-security;
iii) Data Privacy;
iv) Consumer Protection.
Yes, we broadly agree.

Cyber-security in particular is essential for inter-connected 'virtual power plant' type of arrangements whereby large numbers of small battery storage units are controlled as one entity by a developer or aggregator. Virtual power plant arrangements offer considerable benefits to the system in terms of allowing for greater integration of variable renewables and sub-second responses to changes on the network. These potential system benefits need to be protected from the threats of hacking which can, as rightly noted in the consultation, pose a threat to system stability. Care

therefore is needed in the way in which interoperability requirements are defined so that unintended cyber-security risks are not created.

"Interoperability", in the way it is described in the consultation paper, is good in principle but needs more development with industry input. Clarity is needed on what exact functionality needs to be specified for different appliance types in terms of how they communicate and how they are controlled. It may be suitable for some appliances to be directly controlled at a local level by another appliance or via some kind of home area network (including one enabled by a smart meter). For other types of appliances, particularly those like battery storage units that can be aggregated to provide grid services, local level or direct control regimes may not be appropriate at all and it may make more sense for these to be controlled via a cloud-based approach instead.

One of our members commented that: "*it is important to distinguish between interoperability for devices that are intended to manage energy within a household, from interoperability for appliances that are to be used to provide grid services via an aggregator. The specific elements for interoperability in the case of the former, may not necessarily be suitable for the latter. Based on our experience, it is better to control appliances like battery storage units that have the capability to provide grid services as a group using a cloud-based platform rather than controlling these appliances individually. Using this approach, interoperability is achieved not by giving third parties (eg aggregators providing grid services) or third party devices direct access to individual devices, but by allowing these third parties to interface with the cloud-based platform. As such, we do not believe that it is necessary to require that interoperability cover communications with smart appliances in all directions.*"

In this light, we anticipate that different methods for achieving interoperability will continue to emerge as the smart appliance market develops and that there will be valuable reasons for the way in which they are tailored. Accordingly, standards and functionality specifications should not be defined in a way that prematurely restricts the methods by which interoperability may be achieved. Close ongoing consultation with industry in the development of standards therefore will be essential.

Data Privacy and Consumer Protection – we feel very strongly that consumers must be in control of their data and that it should be easy to opt in or opt out of smart energy management systems. As rightly noted in the consultation, not all appliance types will be suitable for 'plug and play' installation modes. Details of such standards and functionality requirements should be developed in consultation with industry and introduced only where the benefits of doing so can clearly be demonstrated. Consumer concerns about data privacy and preserving consumer choice over whether or not to buy a smart appliance should be respected to avoid consumer backlash. Such issues should be considered further in assessing options around whether it is necessary to mandate that all relevant appliances be "smart".

5. Do you consider that we have correctly outlined above the risks associated with smart appliances? Are there any that are missing and need to be addressed? Please provide evidence.

Don't know. It will likely be impossible to identify all relevant risks as new threats can emerge at very short notice. Consumer protection from mis-selling needs to be added to the list of risks.

6. Consumer protection is important to the Government, and we will continue to monitor and engage with this to ensure consumers are protected in a smart energy system. This work will include assessment of distributional impacts of smart appliances and consideration of product safety provisions. Do you consider there to be major principles of protection which have not been covered above which will be developed into standards for smart appliances?

Yes. One very important aspect is protection from mis-selling of smart appliances. Some of the existing arrangements from the renewable energy industry could be rolled across to the smart appliances sector, for example the use of a Trading Standards-approved code for installers of such equipment. One such example is the Renewable Energy Consumer Code (RECC) which protects individuals from company mis-selling and has over 2,000 companies signed up. It is also important that the principles of the Each Home Counts Bonfield Review are adopted where relevant, such as a kitemark for approved installers similar to that of the Gas Safe (formerly Corgi) approved installer scheme.

7. Do you agree that the standards should be applied as uniformly as possible across smart appliances, for example, horizontally, and should be catered to individual appliances only where necessary?

The application of over-arching principles would work best where treated as applicable to all, therefore a uniform application would most fit the requirements, providing evidence is provided that regulation will be beneficial. Whether it is appropriate to apply individual standards uniformly across all appliances should be carefully assessed for each appliance type. A clear set of standards to aim for should assure a minimum level of coherence among products. It will also be important to keep these under regular review to ensure they are kept up to date in relation to emerging risks.