



elmhurst
energy

Date: 25/09/2019

Elmhurst Energy's response to:

Call for Evidence on facilitating
energy efficiency in the electricity
system

Prepared for: BEIS

1. Introduction

Elmhurst Energy is pleased that BEIS is seeking a consultation on how best to facilitate energy efficiency in the electricity system.

Elmhurst has provided an overview of the issues and our proposals, then responded to all the questions on which we have sufficient experience to comment.

We hope you find the responses constructive and useful for taking the changes forward.

2. Elmhurst Response

Our two key messages surround;

- 1) Providing the building owner the knowledge, information and guidance necessary to understand how the building should perform (an asset assessment through an Energy Performance Certificate), how the behaviour of the occupants is impacting that energy efficiency (an occupancy assessment) and the actual energy consumed using measured data from smart meters.
- 2) Ensuring that retrofit improvement works are only ever attempted when they are right for the building and right for its occupants.

Government should take comfort that the UK leads the world in this regard with an established methodology for assessment of buildings (SAP/RdSAP and SBEM), an army of trained and competent energy assessors producing Energy Performance Certificates (EPCs). A new standard (PAS 2035) which ensures that improvement projects are planned, managed and overseen by trained and competent individuals ensuring that retrofit improvement is done correctly, maximising the opportunities for improvement and meeting client expectations.

3. Questions and Answers

Q1: Do you agree with the market barriers to energy efficiency investment described? Do you think there are additional barriers?

The major barrier to investment in energy efficiency is a consumer market that does not understand the way in which buildings perform, how their behaviour impacts energy consumption and how much energy they do consume. Secondly, investors do not have the confidence that retrofit improvements will meet client expectations and the work delivered to a high quality, without adversely impacting the fabric of the building.

Q2: What are the ways we can overcome the market barriers to energy efficiency investment?

The major barrier to investment in energy efficiency is a consumer market that does not understand the way in which buildings perform, how their behaviour impacts energy consumption and how much energy they do consume. Using EPCs, occupancy assessments and smart meter data will explain what is possible and how improvements and changes in behaviour can reduce that consumption.

The second barrier is confidence that a measure will be effective. For this, industry has developed PAS 2035 (the publicly available standard for Retrofitting dwellings for improved energy efficiency) which introduced the concepts of Retrofit Assessors and Retrofit Coordinators to assess properties create a Retrofit Plan which maximises improvement opportunities that are right for the building and for the occupiers of that building. By undertaking Retrofit Improvements as a planned activity, using competent individuals who are independent to any particular solution, projects will meet the expectations of the client. When confident that retrofit improvement can be delivered to a high standard then banks and investors will, we believe, be willing to lend again into this sector.

The PAS standard is currently applicable to domestic retrofit, but there is an intention to roll out a similar standard for non-domestic buildings.



Q3: How can we leverage current markets to facilitate energy efficiency? For example, markets flexibility technologies can access such as the Capacity Market, National Grid Energy System Operator's (ESO) balancing services markets or Distribution Network Operators (DNO) tenders for alternatives to network reinforcement.

A key point to consider when attempting to leverage current markets is the education of both public, government and other key stakeholders on the importance of energy assessments. This can be done through various means, the easiest and most important being correct implementation of EPCs and other similar energy assessments. These should be enforced for all buildings whether owned by members of the public, businesses or indeed government, with incentives and fines being used to ensure correct use. To leverage the current market further, an amalgamation of current energy assessments should occur. Using EPCs, DEC's and real life meter readings in conjunction with each other will result in a clear process that not only displays the standard of the asset, but also how the occupational use should affect the property/building, as well as real life use of the property/buildings. An understanding of all three of these metrics will allow people to effectively manage the energy demand and overall performance of their property/building. Energy providers and generators should be included in any new process with fines and incentives also applying to them. The greater an interest energy providers have in efficient use of energy, the more involved they will be with correct use of procedure as generally supplying/generating less energy is not at the forefront of their company's interest.

Q4: How we can create new markets for energy efficiency? Please provide suggestions on how to design the different mechanisms.

To create new markets, we should focus of the same procedures as above. The use of "Asset, Occupational and Real" helps give people a greater understanding of the property at hand, including the way in which it is operated. The "asset" showing the building fabric and services, "occupational" showing the way in which it is operated and "real" which displays real time energy use. To further enforce energy assessments, more triggers should be incorporated. This will result in a wider array of public being forced to involve themselves with energy assessments in an attempt to evaluate their property. A wider array of public becoming involved due to these triggers will in turn create a greater understanding of energy assessments and how they can be used to benefit us overall, thus leading to the possibility of potential further markets.



Q5: What can we learn from other countries' electricity systems from an energy efficiency perspective?

Rather than look at other countries, we should start by looking at previous mistakes we have made within the UK. ECO (Energy Company Obligation) is a good example of a government initiative that was well intended yet ill-performed. The EHC (Each Home Counts) review identified 27 possible improvements to the current model however these are yet to be implemented. Another factor to be considered is an investigation in to funding and the way in which it is delivered. It should be ensured that this is not a "tick the box" exercise, and that funding is only given in cases where an actual benefit is provided rather than "cavity for cavity's sake". This will ensure work and services are carried about by the necessary contractors, resulting in more accurate education for the public in regards to their homes. To limit confusion, processes should be consistent for across the residential and commercial building sectors.

Q6: How could networks ensure that energy efficiency can compete fairly with other solutions as a potential alternative to network reinforcement?

It is within a networks best interest to put resources into improvements within the industry as this can in turn save them time and money. The creation of new policies can also result in more funding for networks and providers. That being said, a more appropriate model must be thought of in regards to funding, ensuring it is moved from the end, to the forefront of the retrofit improvement process. For example, a building must be assessed before improvement measures can be selected, rather than "improvements" being made without proper research.

Q7: Are there potential benefits from combining EE and flexibility? How can we maximise these benefits?

Any company within the energy industry should encourage the use of flexible energy. Incentives should be incorporated, showing the public the benefits of utilising storage for energy generated at times of low demand to then be used during peak times. The incorporation of storage using batteries as well as all self-generation technologies, can help smooth the process of energy generation and distribution. People will have greater control over the energy consumed within their building when given the ability to store/generate on site. To encourage the use further as well as properly document its benefits, improvements need to be made to the EPC methodologies to incorporate on site battery storage as well as other new technologies.



Q8: What is the role of aggregators?

No strong opinion.

Q9: How should we best align with existing policies, particularly those referenced in section 2.4?

First point of action, as with most of the queries raised in this document is to follow through and implement all the recommendations set out by the Each Home Counts (EHC) review. To further align policies, it must be ensured that they work in conjunction with each other, rather than contradict i.e. exemption from EPC should mean exemption from Minimum Energy Efficiency Standards (MEES). As mentioned previously, it would be extremely beneficial to develop a system that incorporates already existing policies which produces one set of results showing the "Asset, Occupational and Real" ratings of a property. These results should be clear and easy to understand for the general public and will produce a more accurate visual on how the building actually performs, filling in holes in current policies. Existing policies should focus on very clear goals, each of the methodologies for 'asset', 'occupation' and 'real' (metered) can deal with either saving energy, saving carbon and/or saving money. The issue in the past has been that policies often stop and start and change between the different measurements. It is vital to be clear and set a strategic goal, giving the information necessary to the building owners/occupants, and incentivising behaviour that gets to the chosen goal.

New more stringent regulations for new homes are coming but it is critical that the transitional arrangement which allows developers to delay their implementation for many years cannot be allowed to continue. New homes should comply with the building regulations that apply on the date the building is first occupied. Extended transition periods, which can currently exceed 8 years, will undermine government efforts to halve the energy demand from new homes by 2030.

EPCs and their triggers should have policies for ALL building types i.e. privately owned or privately rented. This stops people offloading "faulty" properties that cannot be improved without serious renovation.



Q10: Should we support behaviour change? If so, should it be supported in the same way as energy efficiency, which requires installation of measures?

Key ways to influence behavioural change are to continue to educate on the effective use of energy in homes and commercial buildings. The creation of an “Asset, Occupational and Real” rating system as mentioned above would be a good way in educating public to the potential benefits within their properties. Apathy of owners can be rectified with incentives and fines, possibly using council tax as a medium. This may also be used to incorporate owners that live in their own properties and therefore they should have responsibilities to keep the building at a certain level, even if it is not being rented.

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