



Making a positive difference  
for energy consumers

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Dear Sir/Madam,

**Ofgem's response to [Building a market for energy efficiency – Consultation](#)**

Ofgem is the GB energy regulator and a non-ministerial government department. Our principal aim is to protect the interests of current and future energy consumers and energy efficiency is central to this aim. Energy efficiency has many benefits including reducing carbon emissions, reducing the cost of moving to a low carbon energy system, reducing consumers' energy bills, and in particular helping to bring vulnerable consumers out of fuel poverty.

We welcome the opportunity to respond to the BEIS consultation on Building a market for energy efficiency. This consultation is wide in its scope and touches on a number of areas outside of the remit of Ofgem. As such, we are limiting our response to selected questions as set out in the Annex below by reference to the specific consultation question.

Ofgem looks forward to continuing to work with the Department for Business Energy & Industrial Strategy (BEIS) to build on the success so far in moving to a cleaner, greener energy system. We see improved energy efficiency as a central pillar of this. Should you wish to get in touch with us please do so by emailing [chief.economist@ofgem.gov.uk](mailto:chief.economist@ofgem.gov.uk)

Yours sincerely,

Martin Crouch  
**Senior Partner, Improving Regulation**

## Annex

Text in italics refers to specific questions from the consultation.

*8) Are there other international examples we could learn from?*

*9) Are there any barriers preventing business models for energy efficiency that have developed in other countries from also developing in the UK?*

See response to question 37.

*11) Do you agree that the policy areas we have set out are the correct ones?*

To meet our future carbon budget targets, we will need to address heat and transport as well as electricity. Heat and transport haven't achieved as strong a reduction in emissions as electricity supply, but we expect that future developments will have significant effects on both the electricity and gas networks. Electrification of both can lead to increased electricity demand which, to avoid inefficient network reinforcement resultant from increasing peak demand and network constraints; will need to embrace smart flexible thinking and greater energy efficiency. Electrification of heat would also lead to a reduction in over demand across a well-managed gas distribution network. The introduction of hydrogen or other low carbon gases such as bio-methane offer possibilities to decarbonise heat as an alternative to electrification, although many questions remain over the cost, who would pay, safety and consumer acceptance.

*27) Have we captured all the main sources of additional value of energy efficiency?*

*28) What other ways could we seek to monetise the benefits of energy efficiency?*

We are reviewing network charges across both the electricity and gas networks, with the goal of better aligning charges with the cost that participants impose on the system. For electricity this includes the Targeted Charging Review (TCR), Access arrangements and forward looking charges. When coupled with half hourly settlement (HHS), provided through smart meters, there will be increasing opportunity to reward those who help keep system cost down (ie using cheap power when renewables are available, avoiding additional loads when not or when the network is near capacity /constrained).

*29) How could both Distribution Network Operators (DNOs) and Gas Distribution Networks (GDNs) be incentivised or required to deliver energy efficiency savings?*

*30) Do current market arrangements allow for DNOs and GDNs to fully realise the potential of energy efficiency savings? If not, what needs to change?*

Under the price control framework DNOs are already incentivised under the efficiency incentive to pursue energy demand reduction measures as a means of resolving constraints on the network if such measures are the most cost effective.

The RIIO framework does encourage/ incentivise network efficiency. So, for example, we have shrinkage and leakage incentives that incentivise the GDNs to reduce leakage and shrinkage from their networks. We also have a losses reduction mechanism for DNOs consisting of four components: licence obligation, losses strategies, annual reporting and discretionary reward for exceptional performance. These components combine to provide a strong incentive for DNOs to manage losses efficiently. Finally, the RIIO model includes an innovation stimulus package which supports network companies in trialling innovative

technological, operating and commercial plans which can have a positive impact in improving energy efficiency.

*36) Are there any ways that current regulations are preventing innovative energy efficiency products and services coming to market?*

Innovation can come in a number of distinct forms; innovation in energy efficiency measures, innovation in delivery and innovation in service. As the ECO requires measures to be installed at a domestic premises which result in demonstrable energy or cost savings, the provision of innovation in service might be difficult to accommodate.

Current scheme delivery mechanisms are mostly focussed on technologies that are very close to market and seek to overcome the remaining barriers to delivery. The regulations in this respect don't prevent any alternative products or services coming to market, they just don't encourage them. The way in which a measure is delivered is not funded differently, so it needs to be competitive as soon as it enters the market. As such, without specific innovation directives in place the market will likely settle on the cheapest options to deliver the obligations as set out by legislation. However, there is a risk that overlaying this approach with additional mechanisms to encourage innovative products and services could add complexity and administrative burden to both the administrators and the obligated parties, which in turn can lead to non-compliance.

The current regulations are often delivered measure by measure, which side lines whole house solutions. Whilst a whole house approach was encouraged (through the use of primary and secondary measures) under ECO, barriers were often found in the non-integrated supply chain. There is potential for a whole house approach to retrofit to take place through the Each Home Counts outcomes. This encourages additional innovation in delivery.

*37) What changes should be made to the Energy Company Obligation to ensure that it supports the development of innovative energy products and services?*

In our view, the time has come to reconsider the role of energy suppliers as the primary route in funding and delivering the range of low-carbon support mechanisms, including ECO. As described above, the way in which the obligation is set incentivises suppliers to minimise cost of meeting obligations rather than deliver best value. Interactions with suppliers' commercial incentives are unhelpful and adding responsibilities for ECO arguably distorts competition in supply, particularly given the exemption threshold. Alternative models could make greater use of competition for funds, whether through market prices for savings or competitive auctions, and of area-based solutions, probably working with Local Authorities and potentially with network companies.

Notwithstanding these broader considerations, the current form of ECO is cost effective primarily because the measures it delivers are close to market, so they still benefit from market principles on cost efficiency. As long as the criteria is clear for what is and isn't allowed in the legislation then, due to the nature of the technologies in question likely being fairly commonly used already they need only overcome the small barriers to delivery, and as such the scheme delivers the products specified at good value for money.

Measures that are more innovative, i.e. earlier in the innovation value chain, are by definition further from market and have larger barriers to overcome. The example used in the consultation is Energiesprong, who deliver a whole house retrofit product, including insulation and heating upgrades. Energiesprong is currently at 'demonstration stage' in the UK, with associated costs of up to £65k per property. These costs are expected to reduce significantly once the 'demonstration stage' is completed, but by way of comparison, a wall insulation measure delivered to a single property costs several times less. Any scheme

that seeks to promote these types of innovative approaches and technologies would have higher costs in the near term, potentially delaying delivery of the key aims of lowering fuel poverty and carbon emissions through energy efficiency, which would need to be balanced against the potential benefits in the longer term.

As a practical matter, the impacts of new measures are likely to be less well known in advance. This makes the provision of lifetime saving scores, as given under ECO, difficult. As such, any amendment may place a greater uncertainty on the scores to be attributed. Additionally, there is a risk that untried technology introduced into households in fuel poverty might have a negative customer impact (eg. latent risks resulting in increased energy use in the long run).

Suppliers are unlikely to want to incur the costs of assessing newer technologies unless they are strongly incentivised to. The delivery of more innovative technologies, and in particular to develop the market for these technologies, is likely to be better suited to a separate scheme less focussed on delivery targets and value for money. This scheme could also be better designed to reflect the additional support needed to ensure that any new technologies have been sufficiently tested prior to delivery into people's homes, especially as the scheme is focussed on the vulnerable. However, with ECO up and running, we recognise that it may be easier to specifically include some form of innovation as part of the scheme. For example, there would be scope for 'deployment innovation' to be rewarded, such as through uplifts to scores, though these are likely to add to the administrative burden and when placed as sub-obligations may result in an increased risk of non-compliance. As noted above, this would likely reduce progress towards overall energy efficiency and fuel poverty targets as a result. The decision on this balance is a matter for BEIS.

The Local Authority Flexible Eligibility (LAFLEX) policy utilises local knowledge to target energy efficiency measures and, although it has only been in place for a short time period, the initial results have been positive suggesting that the policy could be widened to allow more measures to be targeted through this route.

*38) Are there other ways that Government could help improve access to data energy efficiency and performance of homes for research purposes?*

Effective data sharing is fundamental to the future development of energy systems and the research required to support this ("research information sharing"). With the advent of smart meters in the UK, and vast amounts of data that they have access to, there is the prospect of moving from estimated energy efficiency improvements of homes to improvements based on actual performance. It is also highly useful in the long term in improving the targeting of any household energy performance improvements as well as in driving down the costs delivery costs.

### **Privacy Impact Assessment**

We agree with the Secretary of State's position on the need to safeguard the privacy rights of consumers (paragraph 120) when undertaking any research information sharing. In the absence of proper safeguards, this could represent a high risk to the rights and freedoms of consumers, especially as the current eligibility criteria may cover sensitive personal information. As such, to ensure that these safeguards are robust and compliant with the new General Data Protection Regulation (GDPR), we recommend that the Secretary of State facilitates the energy sector in carrying out a Privacy Impact Assessment (PIA) on how best to implement any new research focused information sharing regime. If the PIA identifies the research information sharing as high risk, it may be necessary to consult the ICO before proceeding with this project (GDPR Article 36(1)). Furthermore, consulting furthers the new GDPR requirements on transparency and accountability.

### **Codes of Conduct**

Given the plethora of organisations that might desire access to the research information sharing database, the development of the related governance arrangements could be complex. With that in mind, we recommend that the Secretary of State facilitates the energy sector in developing the new GDPR approved codes of conduct (Article 40). This could be used by the energy sector as an overarching governance framework for the research information sharing, i.e. without the need for the administrative cost and burden of multiple bilateral information sharing agreements.

The outcome of any PIA could be used to inform the development of the approved code of conduct. Any significant risks identified, could be backed off within the framework of the code.

### **Overall**

The Government may not seek access to raw data, however we encourage careful consideration as this may limit how the research information sharing project is taken forward. Additionally, it is important that the outcomes of the research are accessible for use in designing and implementing policy at both BEIS and Ofgem. As seen under ECO, the use of more granular 'raw data' has provided the department with a better understanding of policy realisation than under previous schemes. With the desire for ECO to foster innovation, there is likely to be a need to understand more data going forward.

*39) What would be the impact on the market and investment in energy efficiency of the availability of better data on the actual performance of homes?*

All of the measures installed through ECO, whether based on Standard Assessment Procedure (SAP), Reduced Data SAP (RdSAP), the deemed scores methodology or another approved methodology are estimates of the effectiveness of the energy efficiency improvements of the technology. As such, there are blanket 'in-use factors' which provide estimates for the difference between laboratory and real life impacts of the measures. In theory, it then follows that the imprecision in the cost effectiveness of the measures installed will lead to an imprecision in the optimisation of the market. More tangibly, Ofgem's administration of the scheme is based entirely on these estimates and it must still be robust in its decisions prior to installation, even if the subsequent evidence in situ differs and an alternative measure / property may have been more appropriate, unless this was specifically introduced into the scheme. This is especially true with the continued move towards a less costly broader approach for estimates, away from the intensive detailed estimate (as seen by the inclusion of deemed scores in ECO2t) A method that could provide accuracy at low cost, whilst also taking up as little time as possible for both the household and Ofgem would be welcomed.

If the potential of the "virtual EPC" described in the consultation, developed from smart meter data, is realised then it could have both positive and negative impacts on the industry and wider supply chain, such as potentially removing the need for a number of services whilst allowing nascent industries to develop. Not only would it help to reduce barriers to market by identifying solutions immediately, but potentially also reduce costs or allow funding for a higher quality installation.