

Empowering UK Energy Consumers:

A consumer-led vision for energy innovation

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Today we know very little about the energy we use on a daily basis – from how much we consume, to the cost, source and carbon content of our power. Smart solutions like smart meters, digital components and communications, and greater control and automation of our appliances and devices can unleash energy-saving innovations in homes and businesses. At the same time, these technologies can harness the power of millions of people to reduce greenhouse gas emissions and save consumers billions in energy costs.

Giving consumers better energy information and bringing information and communication technologies (ICT) into the electricity system will have a significant impact on emissions. For example, simply giving consumers access to more direct feedback on their energy use leads to 5-15% energy savings in households, according to Oxford studies. Even greater savings are possible if the information is combined with automation and smart policies used to drive further investments in sustainable living.

The UK has set ambitious goals around smart metering and giving consumers better information on their energy use. The UK government is planning a 47 million smart meter rollout to be completed by 2020, with the time frame likely to be brought forward to 2016. The plan calls for a central communications system to handle the data, but many parameters of the smart metering system have yet to be defined. This summer, the UK Department of Energy and Climate Change (DECC) is expected to outline a preliminary design framework regarding the flow of information between meters and energy companies; methods of presenting information to customers; and data privacy and security issues.

The energy information goals could be the first step to engaging consumers in an energy revolution in the UK. But many questions remain. How will consumers access their data? How can we create a system where information is easily accessible and useful? And can we use real-time energy information as a platform to build countless new products and services to help consumers save energy while protecting their privacy and security?

More broadly, policy makers must assess how empowering consumers with energy information and ICT integrates with other efforts in the UK to enable consumers to mitigate their carbon footprints, such as goals around carbon neutral buildings, electric vehicles and renewable energy. Giving consumers access to near real-time information and the ability to control everything in their homes via phones and other devices, may help drive investments in these areas as well. DECC must address all of these issues as the country embarks on this massive

investment in consumer information and the power grid technologies. One thing is clear: using ICT to help engage consumers in managing their energy use could very well be the “killer app” to fighting climate change.

Summary of issues for discussion:

1. **How will consumers access their energy information?** Meters alone will not transform energy demand; consumers will need access to information that is easily accessible, useful and actionable. The current mandate from DECC is for the smart meter to come with a standardised information display. Should DECC consider other options?
2. **How can we ensure an open platform where consumers have meaningful choices?** According to the U.S.-based American Council for an Energy Efficient Economy, utilities are not providing the right mix of feedback to achieve the maximum energy savings. Should other technology companies and third parties be allowed to provide energy monitoring and management services to consumers? How should that be facilitated?
3. **How can we best protect consumer privacy and security?** The UK government, utilities and consumer associations in the UK have all recognised the need to address security and data privacy issues before the massive rollout of smart meters. How can this best be accomplished without stifling innovation and use of ICT in consumers' homes?
4. **What other programs are needed to drive adoption and ensure consumers benefit?** These reforms could dramatically change the way customers interact with their energy providers. What customer education programs are needed? How can we ensure all customers, at all income levels, benefit?
5. **How can programs helping consumers monitor and manage their energy use intersect with other goals?** The UK has set aggressive goals around carbon neutral homes, adoption of plug-in vehicles, and renewable power generation. How can we use the intersection of energy information and IT to drive adoption in these other areas?

It is becoming clear that engaging consumers in smart grid - and smart metering at the outset - is a key element of success. Achieving sustainability, energy and climate objectives will require their full participation.