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Delivering Smart Meters

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The Government has given the go-ahead to install around 50 million smart meters in all of Britain's 26 million homes and in most small businesses by 2020. Ofgem has accepted the task of managing the first stage of the smart metering programme.

How will Smart Meters help consumers?

Smart meters will empower consumers with the information to make intelligent choices about their energy consumption. At the moment, the only information consumers get about their energy consumption, is via a bill that can arrive months after they have actually consumed the energy. Even then, this can be based on information that is estimated and not a record of their actual consumption.

As part of the roll-out of smart meters, the Government is requiring energy suppliers to provide customers with up-to-date information to allow them to monitor their household's energy consumption. This could be provided via a display device in their kitchen or living room or via other media such as the internet, mobile phones or television.

Information could also be displayed in pounds and pence which would make it easier for customers to understand. By showing how much energy is being used and how much it's costing, smart meters can help household's cut down waste and make instant savings. With every household using smart meters, those savings will really add up.

The Department of Energy and Climate Change (DECC) estimates that smart meters will deliver a net benefit to consumers of around £5.98 billion over 20 years.

Benefits for consumers

Smart meters have the potential to deliver the following benefits to consumers:

- more control over their energy use and spending
- faster and easier switching between different energy suppliers and tariffs
- allow energy suppliers to offer a wider range of energy deals to consumers, for example cheaper electricity during the night when demand for energy is low
- mark an important step forward in providing network companies the information they will need to develop smart grids, which could deliver more network reliability to consumers
- make the introduction of microgeneration easier, as smart meters can measure electricity exported from the home to the electricity network, and
- allow consumers easier switching between payment methods, i.e. switching between credit and pre-payment modes using the same meter.

Benefits for environment

Initial estimates by DECC are that smart meters could save around 15 million tonnes of CO2 emissions over a 20 year period as people become more aware of the energy they are using. This is important as households in Britain are responsible for 26 per cent of the UK's energy use and carbon dioxide emissions. Some of these emissions are due to inefficient use of energy. For example, the Government estimates that over £900 million is wasted every year by leaving appliances on standby.

Benefits for the energy market

Smart meters will also generate benefits for the energy market, such as:

- more accurate measurements of consumption has the potential to reduce the amount of generation needed helping to reduce carbon emissions and costs
- better information will also help network operators run their grids more efficiently
- reductions in the costs to service consumers – no need for meters readers or having to deal with customers calls about estimated bills
- a reduction in energy theft through smart tamper alarms, and
- more effective purchasing of wholesale energy.

Ofgem and Government would expect these reduced costs to be passed on to customers in the form of lower prices due to the competitive pressure of the GB retail market

Ofgem's role

Ofgem's primary duty is to protect consumers and it will be making sure that consumers interests are placed at the heart of the industry framework to introduce smart meters. Ofgem will be putting particular emphasis on ensuring that consumer protection keeps pace with the additional functionality offered by smart meters. This will include ensuring:

- consumers' data is properly managed and securely protected
- progress on preventing disconnection is not undermined by the new technology, and
- smart meters take into account the needs of vulnerable and disabled consumers.

Next steps

Ofgem will now work with DECC and the full range of stakeholders, including industry and consumer organisations, on the first phase of the Programme. DECC and Ofgem hope to publish, by summer 2010, a prospectus document, which will include a statement on the functional requirements for smart meters and the commercial regulatory framework needed for their introduction. This will be followed by a detailed design phase and then implementation. The management of the first phase of the smart metering programme will be carried out jointly between DECC and Ofgem's delivery arm, Ofgem-E Serve. Ofgem E-Serve currently delivers Government environmental programmes worth £3.9 billion and has considerable expertise in delivering environmental programmes efficiently at least cost to consumers.

Key stages in the delivery of Smart Meters

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