DECC consultation on smart meters

I warmly welcome the Department of Energy and Climate Change's efforts to help individual consumers reduce their personal carbon emissions by gaining access to easy-to-understand information about their own energy usage through the use of smart meters.

I would like to see some exploration of the possibility of taking advantage of a nationwide implementation programme for smart meters, in order to carry out a thorough survey of the energy efficiency of the UK's housing stock.

Finally, I would draw attention to the concerns expressed by many campaigners about the potential health risks associated with the government's plans to install wireless smart meters in every UK home.

Nationwide implementation of smart meters – an opportunity

The logistical task of visiting every single home in the UK for the purpose of smart meter installation represents a unique opportunity to carry out the fullest possible assessment of the UK's housing stock and the potential for reducing emissions from residential properties.

Ideally, an installation visit should include a comprehensive survey of the household's energy efficiency and patterns of energy use, as well as the physical installation of a smart meter. Surveyors would also be well-placed to perform other types of information-gathering, such as whether a given household can be identified as 'fuel-poor'.

A study by Oxford University suggests that smart meters alone cannot reduce energy use but I am confident they can play a role if part of a coherent strategy. Giving advice on how to reduce household energy use has hitherto been a piecemeal exercise. Broadening the scope of a nationwide smart meter installation programme in this manner would provide an invaluable source of accurate and detailed information on household energy use, not only for policymakers but for householders themselves, and at potentially little extra cost to the public purse.

Potential health risks

A number of health concerns were raised during the previous government's consultation about the proposed scheme. They centre on the dangers for anyone already sensitive to electromagnetic radiation and the risks more generally from exposure, which can for some include effects on the central nervous system, cancer initiating and promoting effects, impairments of certain brain functions, loss of memory and cognitive function.

In consumer focus groups carried out by Ofgem there appears to have been little discussion, and therefore little understanding on the part of consumers, of the fact that the proposed smart meters will use the same microwave transmission technology as mobile phones and home Wi-Fi routers. Accordingly, there was no mention at all of any health implications of the wireless technology involved in smart metering.

The European Environment Agency acknowledges that not enough is known about the potential health risks of exposure to high levels of electromagnetic radiation (EMF), and recommends that policy-making be guided by the precautionary principle, pointing out that 'waiting for high levels of proof before taking action to prevent well known risks can lead to very high health and economic costs, as it did with asbestos, leaded petrol and smoking'. Such an approach would seem to be particularly advisable in relation to new emitting technologies such as smart meters.

I believe it should be possible for householders to opt out of having a wireless smart meter installed in their homes. It should be possible for a non-microwave-based alternative system to be made available, for example an ADSL router based system. The Bio-Electromagnetic Research Initiative has explored the potential of Visible Light Communication (VLC) technology as an alternative which would avoid the health issues connected with conventional wireless technology.

Further progress on the national rollout of smart meters should give proper consideration to alternative systems of implementation. Such measures are necessary to ensure both that people with strong reservations about smart meter technology are not excluded from the energy-saving benefits offered by smart metering, and correspondingly, that this very welcome and appropriate measure to reduce the UK's carbon emissions achieves maximum effectiveness, by being applied to the largest possible number of households.