Smart Metering Implementation Programme: Prospectus dated July 2010

[redacted] 19 November 2010

I am responding as a consumer of electricity and gas. I am basing my response on my own experiences of applying and engineering approach to reducing energy usage after smartening the meters currently installed in my home. I have documented this at [redacted]

Some contributions follow my talks with security consultants at my place of work.

Question 1: Do you have any comments on the proposed minimum functional requirements and arrangements for provision of the in-home display device?

Response 1:
This should also cover water as water is also a valuable resource.

When the IHD presents pounds and pence, what is this based on as the price of energy varies depending on how much is used.

Personally, I have not found any use for a display in pounds and pence as I find kW and kWh much more useful. I can then relate that to the average unit price of the energy for the period (including VAT) when I get the bill – I calculate this annually.

The meaning of high and low depends on what is being used, e.g. a kettle. What is important is the change in pattern of usage over time as this can indicate fault conditions. However a historical graph is essential.

I have no interest whatsoever in carbon emissions. Display of this depends on the type of generator (in the case of electricity) and the supply chain.

What happens when a property changes hands? Are the new owners/tenants entitled to obtain a free IHD from their energy supplier?

In practice, I haven't found the IHD that I developed as a web application has any impact of my attempts to reduce energy usage. In the case of electricity, I used a device to measure the usage of every electrical device in my house and built a model of our usage. I then looked at the highest usage devices to work out what to do and used the IHD to verify that the outcome was as expected. For gas, I used logging of gas usage to build a model of how gas was used for different activities. Again, I used this to decide what to do and then monitor using the IHD.

I haven't found any use for the advice provided by my energy suppliers. It usually repeats basic ideas in a generic manner without providing any evidence.

I initially had my meters reporting every 15 seconds. I found this to be too much information, both in terms of what I could read and the wireless traffic. So I reduced it to every 6 minutes and have found this to be ideal. My neighbour's electricity meter also reports every 15 seconds, so I

had to disable that in my receiver. Hence, the meter/IHD should allow the frequency of reporting to be controlled by the consumer.

My system is built around web technology and linux. Any solution should NOT assume the use of MS Windows. In our house there are NO computers running MS Windows.

We can already access our smartened meter information through the internet and on smart mobile phones. I wouldn't want any less than this.

What is the target energy usage for the IHD? My system, including reading the meters, consumes less that 5W.

What is the target price for the IHD? Presumably this will be recovered through higher energy charges.

Question 2: Do you have any comments on our overall approach to data privacy?

Response 2:
I think that access to smart meter information by a third party, including my energy supplier, is a gross invasion of privacy and riddled with security concerns.

I think that, by default, the smart meter information should only be available to the consumer. The consumer can then provide readings to the supplier when requested, i.e. e-mail.

In cases agreed by the informed consumer, then information can be exchanged with a third party. There needs to be some benefit to the consumer to do this.

I don't think that the Data Protection Act 1998 is sufficient in this case. All employees of the third party should have some security clearance before employment and should be a British Subject subject to British law. Penalties for breach of security should be extreme.

Obviously all information exchanges should be encrypted and the third party should be authenticated before access is allowed.

I am particularly concerned that the pattern of usage by a consumer can be used by a third party to act against the consumer. I have already sent you evidence that the third party could easily determine when a property was unoccupied and therefore safe for a burglary to take place.

What is the expected cost of securing data? How will this be paid for?

Question 3: Do you have any comments on the proposed approach to ensuring customers have a positive experience of the smart meter rollout (including the required code of practice on installation and preventing unwanted sales activity and upfront charging)?

Response 3:
I have a concern about the costs of moving to smart meters. Presumably the costs will be met

through higher energy costs. How much energy saving would the consumer need to make in order to cover these costs and what proportion is that of the expected savings that a consumer might make.

My system cost about £200 and didn't involve changing the meters. I don't expect to make any further energy savings so smart meters may cost me a lot.

In the past, changing meters has been a fairly painless activity although given that it entails a forced day off work it can't be described as pleasurable.

Question 4: Have we identified the full range of consumer protection issues related to remote disconnection and switching to prepayment.

Response 4:
I always read my meter for the bill. So my bill is always based on a meter reading.

What are the savings from not needing to send people to read meters?

I am concerned that switching off an energy supply can kill people, even if they have been informed. This will need to be carefully considered.

I am also concerned about potential fault conditions with the switch off device. Current meters are normally installed for a very long time. I would get extremely irritated it my supply failed because the switch off device in my meter was faulty.

Question 6: Do you have any comments on the functional requirements for the smart metering system we have set out in the Functional Requirements Catalogue?

Response 6:
I would like to see an LED or equivalent indication, easily accessible on the front panel of the meters, that indicated the rate of energy consumption to allow external systems to monitor energy usage.

I would like to see a target figure for the power consumption of smart meters.

Question 9: Do you have any comments on the proposal that the scope of activities of the central data and communications function should be limited initially to those functions that are essential for the effective transfer of smart metering data, such as access and scheduled data retrieval.

Response 9:
I think that the DCC should ONLY perform activities that are demonstrated to add value.

How much will the DCC cost? How will it be paid for?

Question 15: Is there anything further we need to be doing in terms of our ensuring the security of the smart metering system

Response 15:
Employees of the various companies involved in this initiative.

Feedback

1. I did not now about the process until I was asked to comment.
2. OK
3. Yes
4. It is opinion with little in the way of evidence.
5. I don't think that the case for networked smart meters has been made.
6. No.