Responses to the Smart Metering Prospectus Consultation

By

SHARP LABORATORIES OF EUROPE LTD

Table of contents

1   Smart Meter Prospectus

The Smart Metering prospectus for the UK was released by the UK government (OFGEM/DECC) on 27th July 2010. It included a consultation process with responses to be submitted by 28th September 2010 and 28th October 2010.

Questions for response by 28 September 2010 cover three key areas:
- The proposed functional requirements catalogue and the approach for developing technical specifications for smart metering equipment.

- The proposed strategy for roll out including the consumer experience, proposals for a code of practice on installation, the use of installation targets and potential future obligations on local coordination.

- The proposed implementation strategy, including the proposal for a staged approach to implementation, the timeline for agreement of the technical specifications and whether there are any other ways OFGEM can bring the rollout forward.

Questions for response by 28 October 2010 relate to:

- Data privacy and security.

- Consumer protection.

- Energy displays and information provision.

- The approach to smaller non-domestic consumers.

- Responsibilities for customer premises equipment.

- The proposal for a new Smart Energy Code.

- The establishment and scope of the central data and communications function.

Responses are to be sent to: Margaret Coaster, Smart Metering Team, Ofgem E-Serve, 9 Millbank, London SW1P 3GE. Email: smartmetering@ofgem.gov.uk.

It is recommended that responses are sent in both electronic and hard copy formats.

This document catalogues the questions in the consultation process and provides responses to those that are relevant to Sharp and SLE.

2   Consultation questions

Only questions that have a bearing on potential Sharp's involvement in the Smart Metering Programme will be addressed.

2.1   QUESTIONS FROM THE PROSPECTUS

Responses requested by 28 October 2010 except for asterisked questions, where responses are requested by 28 September 2010.

Question 1: Do you have any comments on the proposed minimum functional requirements and arrangements for provision of the in-home display device?
We are in general agreement with the minimum functional requirements for the in-home display unit. However, we strongly believe that a minimum display size should be specified. This would guard against suppliers deploying IHD with very small displays that would result in poor customer experience.

Question 2: Do you have any comments on our overall approach to data privacy?
Concerns about Data Privacy should be at the forefront of the Smart Meter roll out. However, it should not be used as an excuse to stifle innovation in the industry. The approach should provide a clear route for third parties to access the required information in order to provide enhanced services. For example, communities or companies who wish to operate virtual power plants should have a way to aggregate necessary data, but only with the consent of the consumer.

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 unwelcome sales activity and upfront charging)?
The Smart Metering Roll out should learn lessons from the very successful digital switch over when it comes to customer experience. Upfront charging and sales activities while conducting the installation will have an adverse effect on people's experience.

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

Question 5: Do you have any comments on the proposed approach to smaller non-domestic consumers (in particular on exceptions and access to data)?

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?
We have concerns on the specification of the HAN element. It requires further clarification to make it clear that customers will have access to the HAN module and can integrate other devices and systems to it.

Question 7*: Do you see any issues with the proposed approach to developing technical specifications for the smart metering system?

Question 8: Do you have any comments on the proposals that energy suppliers should be responsible for purchasing, installing and, where appropriate, maintaining all customer premises equipment?
We support this approach.

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Question 6: Do you agree with the proposed minimum functional requirements for the IHD?
We generally agree with the minimum functional requirements of the IHD. However, we are of the opinion that the minimum display size of the IHD needs to be mandated.

Question 7: Do you have any views or evidence relating to whether innovation could be hampered by requiring all displays to be capable of displaying the minimum information set for both fuels?

Question 8: Do you agree with the proposals covering the roles of and obligations on suppliers in relation to the IHD?

Provisions of IHD to customers with special needs and disabilities need to be clarified. We suggest setting the minimum feature sizes for this class of customers. For instance audio feedback should be mandated for partially sighted and blind customers.

2.3 QUESTIONS ON THE IMPLEMENTATION STRATEGY

Responses should be received by 28th September 2010

Question 1: Do you have any comments on our proposed governance and management principles or on how they can best be delivered in the context of this programme?
We are generally happy with the governance and management structure. Our only concern is the composition of the stakeholder groups. We believe membership of these groups should be as wide as possible and transparent.

Question 2: Are there other cross-cutting activities that the programme should undertake and, if so, why?

Question 3: Do you agree with our proposal for a staged approach to implementation, with the mandated rollout of smart meters starting before the mandated use of DCC for the domestic sector?
The Smart meter roll out is going to be a complex programme and can only be implemented via a staged approach. The mandated roll out of smart meters ahead of the DCC is going to offer a considerable technical and commercial risk to the suppliers. In an ideal scenario, the roll out would not commence until the DCC function is in place.

Question 4: Do you have any comments on the risks we have identified for staged implementation and our proposals on how these could best be managed?
The programme does not seem to have dealt with the issue of customers changing supplier during the rollout when some suppliers to their areas will be installing smart meters but others not.
A roll out organised by area substation or region would be less disruptive. Lessons could be learned from the digital TV switchover scheme which is being carried out transmitter by transmitter.

Also Utilities are going to be reluctant to install dumb meters between now and the start of the rollout knowing very well that they would have to replace them with Smart meters in the next few years.

Question 5: Do you have any other suggestions as to how the rollout could be brought forward, including the work to define technical specifications, which relies on industry input?
The overall timetable is very tight. However, the detailed design stage could be shortened by increasing the number of expert sub-groups (the system under design is modular). Each sub-group will have a reduced number of tasks which will be quicker to complete. The only disadvantage with this approach is the increased project management overhead but we do not think there will be a shortage of volunteer experts to sit on these sub-groups.

Question 6: Do you agree with our planning assumption that a period of six months will be needed between the date when supply licence obligations mandating rollout are implemented and the date when they take effect?

Question 7: Do you have any comments on the activities, assumptions, timings and dependencies presented in the high-level implementation plan?
The entire timetable depends on the detailed design phase run according to plan. This in turn will be affected by the composition of the expert groups and also project management from OFGEM.

2.4 QUESTIONS ON THE STATEMENT OF DESIGN REQUIRMENTS

Responses should be received by 28th September 2010

Question 1: Should the HAN hardware be exchangeable without the need to exchange the meter?

Among the requirements of the smart metering system is to reduce the number of visits to the customer premises after the initial set up visit. Being able to exchange the HAN hardware without need to change the meter will reduce the running cost to the utility but will likely result in a visit to the customer site. If the system is designed to be future proof (15 – 20 yrs), then the need to change the meter or HAN module will only occur when the system needs replacing. However, bearing in mind that HAN technologies are relatively immature, it may be necessary to upgrade the Hardware in order to improve the customer experience. In this situation it does not really matter whether the meter needs updating or not.

Question 2: Are suitable HAN technologies available that meet the functional requirements?

A number of HAN technologies have been demonstrated to meet the requirements. These include ZigBee and Power Line Communication (for the electricity meter only). The Bluetooth Special Interest Group has also released the Bluetooth Low Energy which is optimised for this application. At the moment it seems like ZigBee is the front runner wireless technology although powerline technologies have been deployed in other European smart meter roll out e.g. in Italy.

Question 3: How can the costs of switching between different mobile networks be minimised particularly in relation to the use of SIM cards and avoiding the need change out SIMs?

One of the options available is to use a solution that does not require the use of the cellular network. At least one such solution is undergoing trials at the moment. If a cellular solution is preferred then the mandate needs to make it easy for customers to change SIM cards. For instance the SIM could be in the form of a smart card (like the SKY viewing card) which most customers are familiar with.

Question 4: Do you believe that the Catalogue is complete and at the required level of detail to develop the technical specification?
The only area that requires further clarification is the HAN. It is not clear how the customer will integrate smart devices (appliances and control systems) to the Smart Meter system without having access to the HAN module. The Catalogue seems to restrict access to the HAN and the HAN module seems to be the property of the utility. We think it is important customers are able to interact with the HAN module.

Question 5: Do you agree that the additional functionalities beyond the high-level list of functional requirements are justified on a cost benefit basis?

Question 6: Is there additional or new evidence that should cause those functional requirements that have been included or omitted to be further considered?

Question 7: Do you agree that the proposed approach to developing technical specifications will deliver the necessary technical certainty and interoperability?

Question 8: Do you agree it is necessary for the programme to facilitate and provide leadership through the specification development process? Is there a need for an obligation on suppliers to co-operate with this process?

Question 9: Are there any particular technical issues (e.g. associated with the HAN) that could add delay to the timescales?

It is worth bearing in mind that none of the existing HAN technologies (except WiFi) have been deployed on a large scale and there are bound to be implementation issues. Furthermore it is widely expected that Smart Appliances and Home Energy Management Systems (HEMS) are going to increase in popularity in the next 5 to 10 years. There is therefore a need to make sure the smart metering system is future proof and able to be integrated with these systems.

It might also be necessary to build into the meter the possibility of using two HAN physical interfaces (wireless and wireline). This is because a wireless HAN may not be suitable for certain properties e.g. those with cellars/basements. Certain properties are also being insulated using Aluminium backed materials which effectively shield the property from electromagnetic emissions. In such cases a wireline solution would be better.

Question 10: Are there steps that could be taken which would enable the functional requirements and technical specifications to be agreed more quickly than the plan currently assumes?