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RE: In response to solicitation for comments to the Prospectus for the UK Smart Metering Implementation Programme

UK Prospectus

The ZigBee Alliance again appreciates the opportunity to provide its perspective to the UK Smart Metering Rollout Programme. Per the solicitation in the UK prospectus, in addition to our submittal on the 28th of September, we provide our feedback to the various issues presented for consideration in the current timeframe. The Alliance fully supports the UK government's efforts, and stands ready to further support with technical expertise and participation by ZigBee experts and members.

The general nature of the questions for this period of feedback deal with HAN requirements, data privacy and security, consumer protection and how to approach the HAN or customer premise. The ZigBee Alliance membership, more than 380 companies worldwide, have spent countless hours tackling these principles, considering both policy and market drivers to arrive at base functionality and interoperability standards to afford consumer choice and control, and commercial best practices for security. At the core of the ZigBee Smart Energy Public Application Profile lies a well thought out and tested architecture which supports the ability of customers to choose from a rich ecosystem of service providers, while enjoying interoperability of devices and functionality. These principles, when appropriately followed both by policy providers, are and should continuously be driven by the notion that the customer is in control and of utmost importance.

Specific Question responses

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

The ZigBee Alliance membership through the Smart Energy Public Application Profile has taken the approach to ensure basic functionality with in-home displays, at a level that both ensures interoperability between devices and meters, and also energy service interfaces, or a

WAN/HAN interface. Important function here is to ensure core usage and pricing information that can reasonably be expected from meters by any installed manufacturer, but simultaneously allowing for flexibility by IHD manufacturers to innovate, meet consumer needs and win customers in the market. The Smart Energy Profile establishes the basic set of functionality which should support both interoperability and the flexibility for a flourishing market – the government's decisions around functionality and provision should adhere to an approach which allows for the competition for consumers' precious dollars. For specific technical requirements, please see our members' comments directly to the technical working group.

The ZigBee Alliance membership through the Smart Energy Public Application Profile has taken the approach to ensure basic functionality (Demand Response and Load Control, Time, Prepayment, Price, Simple Metering, Messaging) with in-home displays, at a level that both ensures interoperability between devices and meters (various: electric, gas, water, heat), and also energy services interface. Important function here is to ensure core usage and pricing information provided in local currencies that can reasonably be expected from meters by any installed manufacturer, but simultaneously allowing for flexibility by IHD manufacturers to innovate, meet consumer needs and win customers in the market.

The ZigBee Alliance supports the notion of a basic set of functionality which should support both interoperability and the flexibility for a flourishing market. In addition to what we have noted above, and what ZigBee members' comments have shown in technical working group work in conjunction with this, the following functions may be useful in consideration of a minimum set of functionality:

- * Ability to receive secure firmware upgrades over the air via the HAN communications.
- * Ability to receive a short text message from the energy supplier or utility and display it.

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

Generally, our members' standard development process has adhered to the principle that the customer owns the data, and should therefore be afforded as many protections in system architecture as are reasonable to expect, extending to best commercial practices.

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

With regard to the home area network devices connecting to the smart meter system, it is important to ensure the underlying systems use widely adopted, consensus-based standards that have been or are proven through commercial best practices in implementation. Resisting the urge for so-called 'security by obscurity' is an important element. This includes taking a system of systems view, to understand and safeguard appropriately the different type of data and commands which flow across the smart metering system interfaces. For instance, the Smart Energy Profile in its architecture is built on the assumption that devices can and will be compromised physically, and takes appropriate and best commercial practices. This is one example, but reflects the need to gain a level of confidence that the systems being used have both evaluated and appropriately mitigated risks associated with networks.

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