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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 appreciates the opportunity to provide its perspective to the UK Smart Metering Rollout Programme. We stand at a critical time and juncture in the introduction of technologies that can aid in the larger goal of cost-effective management and use of energy, in a manner which benefits both consumers and the environment. The Alliance's core mission, quite similar here, is to bring together quite literally hundreds of disparate stakeholders to arrive at and agree on open, common interoperable standards to enable just such an energy market, and we have enjoyed more than eight years bringing this concept to reality.

We are pleased to provide feedback to the regulatory authorities of the Department of Energy and Climate Change (DECC) and the Gas and Electricity Markets Authority (GEMA) in its published prospectus in this initial view, and commit to supporting the process through to its logical conclusion. Similarly, the ZigBee Alliance recognizes the accelerated adoption worldwide of both smart metering and the relevance for global standards in the HAN. To that end the ZigBee Alliance has initiated liaisons with several European standards organizations, supporting new work item proposals in appropriate technical committees, alignment with several national requirements setting efforts, and standards solution selection, and in general further harmonizing with existing European work.

Overview

Several points have been raised in this effort which bear some general response, in addition to specific replies to the questions posed per the prospectus. Below, answered generally, we have provided some discussion which should help illustrate the underlying approach the ZigBee Alliance has taken to both identify and address the interoperability standards needed to support energy markets contemplated in this programme.

Guiding functional design principles

We will provide additional feedback and input to the process as appropriate, and welcome any direct questions that may arise. In general, the Alliance supports as open and free a market possible for innovation to occur. Where industry is given appropriate boundaries within which to operate, manufacturers and energy providers have an opportunity to test their value with the ultimate authority, the consumer. Enabling customer choice requires government establishing the playing rules, and balancing those rules with the greatest amount of possible innovation. These types of input have driven the Alliance, through its many members, in designing its public application profiles, and underlying networking technology, so that manufacturers have the ability to adapt as needed to customer needs while relying on a consistent underlying interoperable platform. In addition, cost benefit tradeoffs and analysis greatly impact the design as well, assuring the greatest possible flexibility while balancing the need to realize full benefits from current investments, and not precluding the full realization of value from installed assets. Mitigating the notion of so-called stranded assets are at the core of energy service company benefits analysis. In its deliberation, it is also important for government to make commensurate policy choices which reflect these same market dynamics. The greatest flexibility in meeting those policies is warranted.

Open and interoperable approach to standards

Interoperability standards assure the greatest possible speed and breadth of adoption in the market. To realise the goal of energy management by both the consumer and the energy system operator, there needs to be a wide ecosystem of products and services to choose from. For companies involved in the manufacture and sale of energy management and sensor and control devices, an established open and multi-vendor approach provides a common platform upon which to innovate and offer customers this wide array of products.

To reach these goals, both cost-effectively and broadly by market segment, the use of common interoperable standards is key for a number of benefits. One important benefit is implementation lessons - lessons learned in early rollouts will accrue to the industry as a whole, whereas implementing closed systems, or selecting standards that do not have industry and broad manufacturer support delay both the grid benefits and the value to customers sought in the prospectus. As appropriately recognized in the summary, goals this large require the participation of a very wide spectrum of stakeholders, and the ability to continue to adapt.

Also a benefit of using interoperable standards is the ability to better enable grid operations to better adapt to the growing market trends which are on the rise, and will be regardless of government decision. One specific example is the increasing number of variable generation and variable load sources such as plug-in electric vehicles and renewables. Effectively having rolling household-equivalents (plug-in vehicles) from one distribution area to the next means a critical need to be able to intelligently respond, plan and manage distribution networks to prevent unwanted outages and negative grid impact. Ensuring those rolling or distributed loads are intelligently connected means they will need to adhere to interoperable communications standards.

Certification and testing

Relying on self-certification programs will not suffice in the UK scheme. In closed systems, where end-to-end ownership of each and every device, with no dynamic swapping, this principle is not as critical. In a free market contemplated by the prospectus, with consumers actively taking decisions on a daily basis which impact the delivery of energy and the addition, removal and interaction of multiple devices, strong certification and testing programs will be a cornerstone of success. Important in this outline will be the necessity to have available to the manufacturing base independent, and industry-accepted testing regimes in place, along with competitive testing facilities to choose from to ensure competition even in this arena. Simply put, success derives from assuring end-users of device interoperability with their meters, and further to appliances, vehicles and as-yet to be developed products in energy management systems. Interoperability branding will support this goal.

General Summary

Meter manufacturers, utilities and manufacturers around the world are recognising the importance of broad, industry-accepted interoperable standards as they witness the opening of these markets outside closed systems. In large numbers, they have worked together on the ZigBee Alliance Smart Energy Profile, and in large numbers utilities and energy providers are aggressively making investments around this approach, with more than 40 million meters under contract. The ZigBee Alliance will continue to support broad industry interoperability, with the end user and customer at the forefront, so that home energy users can better control their own world.

Specific Question responses

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 consumer is the driving element with Home Area Networks. The decisions taken by utilities have a direct, immediate and personal impact on consumers. The introduction of the HAN therefore has by extension a direct benefit, influencing this interaction between the utility and the consumer, but especially so by the consumer with their own energy usage decisions. While there are benefits that accrue to grid stability and demand-side management for utilities and energy service providers, the consumer benefit is simultaneously the one with the greatest potential benefit and potential for failure. The ZigBee Alliance enjoys a wide spectrum of members, many who exist completely on their ability to engage and sustain commercial relationships with customers, and so have a very significant stake. At its core, success comes from two elements in consumer engagement; first, timely and appropriate communications and expectation setting with affected consumers; and second, quality delivery of the program balanced with quick, transparent and flexible reaction to manage hurdles when they arrive.

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?

- The functional requirements for the HAN reflect many of elements and requirements captured in the architecture described in the ZigBee Smart Energy Profile. We would encourage the Ofgem staff and expert review teams to reference the ZigBee Smart Energy Profile (downloadable freely online through the download section of the ZigBee website at www.zigbee.org/Products/DownloadZigBeeTechnicalDocuments.aspx). In addition, the Alliance can make available experts to provide side-by-side comparison to the requirements noted, along with discussion around the original source documents, and rationale for the specific criteria. In addition, the ZigBee European Special Interest Group (EU SIG) has tackled UK-specific and EU-wide requirements for further elaboration to profile updates, and can provide a forum for additional feedback.