

Delivering smarter, low carbon energy systems for all British consumers

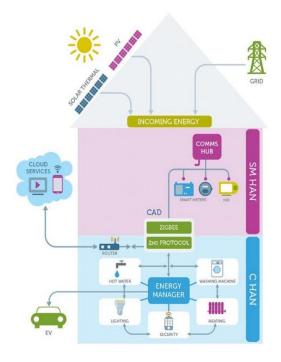
BEAMA policy recommendations for delivering truly connected homes and demand response.

BEAMA is the leading trade association that represents manufacturers of electrical infrastructure products and systems from transmission through distribution to the environmental systems and services in the built environment. The connected homes market is an important market for BEAMA and BEAMA members, including the mandated rollout of smart meters. BEAMA see significant opportunity for the UK to take a lead in

Europe in this sector and develop export opportunities. This document outlines BEAMA recommendations for how UK Government can help to develop a market for connected homes and related devices, ensuring the benefits from smart metering are delivered to consumers in a timely manner, and that a market for Demand Side Response is realised.

BEAMA cover the full supply chain for smart grids and connected homes. Working with our members we define the UK Connected Homes Architecture and the method of integration for the Smart Metering HAN (SM HAN) and Consumer HAN (C HAN).

Last year BEAMA published a white paper for DECC and Ofgem that outlined a series of recommendations¹, we feel many of these still stand and have summarised them in this paper, including more information and support for action. A number of BEAMA papers have been referenced to provide further supporting evidence.



Delivering GB Smart Metering Rollout -This is an essential element of the connected home. The SM HAN provides a fixed infrastructure in every property that enables tailored solutions for individual customers in the C HAN. The Consumer Access Device (CAD) and In Home Display (IHD) are absolutely critical elements in delivering this, and the timely implementation of CAD pairing processes must be agreed². The rollout must proceed as per the agreed spec, as intended, including the physical IHD. The presence of a physical IHD will be essential for effective DSR and timely switching, providing visibility of energy data. The Physical IHD is the most effective and inclusive solution for the widest cross section of the market³.

Developing Market Incentives for domestic consumers – BEAMA supports the need to implement half hourly settlement for domestic customers as a means to develop Time of Use tariffs. The connected home enables automated demand flexibility while maintaining customer control. Without a market for flexible demand and clear price signals for customers, enabled through smart metering, the full benefits of connected homes will not be realised.

¹ Demonstrating a Smart Grid, 2015 www.beama.org.uk

² BEAMA Guide, Consumer Access Devices - Applications for connected homes, 2014, <u>www.beama.org.uk</u>

³ BEAMA Response to the Government's Consultation on amending IHD licence conditions, 22nd September 2015



A clear market roadmap is needed — The timing of market reform in this area and the provision of demand flexibility in the market for domestic customers' needs to be mapped out so that manufacturers and the standards bodies can move forward. DECC need to take immediate action to start pinning down a timeline for this activity.

Communicating the full range of benefits from smart metering -

Smart Energy GB are tasked with developing a clear communications strategy for GB rollout. This includes articulating the additional functionality and benefits smart meters would enable. An effective communication strategy needs advance planning and it is vital that we co-ordinate the timely delivery of information to consumers on connected homes, include CAD pairing. This puts pressure on resolving the CAD pairing arrangements as well as developing a clear incentive for demand flexibility for domestic customers. This communication strategy should be delivered once a critical volume of meters have been installed.

Ensure interoperable connected homes and protect innovation in the Consumer HAN - BEAMA supports the need to ensure open standards in the C HAN as a means to achieving interoperability and to guarantee we do not lock consumers into one technology. BEAMA members acknowledge that very few consumers purchase devices and appliances from the same manufacturer and therefore, in maintaining open standards we will ensure the interoperability and inter-changeability of devices in the home. We consequently do not need to mandate the communication infrastructure in the C HAN, if we did attempt to mandate at this stage it would be very damaging to the market⁴. Attention needs to be paid to a number of European activities, including the Eco Design preparatory study on smart appliances and the Energy Performance in Buildings Directive. Both will determine the long term future of this market. BEAMA support the drive to ensure the EPBD can provide a role in incentivising system design in buildings.

Optimise heat and hot water system design for energy efficiency and demand flexibility – Significant potential lies in heating and hot water technologies to enable demand side response and the optimal use of distributed generation. It is vital building regulations and incentives do not result in the phase out of energy storage in buildings. Heating and hot water currently represents 80% of thermal energy use across EU residential buildings. BEAMA have recently called for a clear strategy from the European Commission for heating and cooling to drive national regulation and policy in this area, as we do not see this being effectively supported in the UK⁵. This included a call for a commitment to promote demand response tariff options across the EU by 2025, and a minimum water storage requirement providing up to 50ltrs in all new heat installations in single unit EU residential homes by 2025. Today 52% of homes have a hot water tank in the UK, due to the replacement of system boilers with combi boilers, this number is rapidly declining. Based on the decline in the last 4 years BEAMA have estimated a 1% annual decline in the number of hot water storage tanks in homes across the UK⁶, thus significantly reducing our capacity for DSR in the future.

⁴ The BEAMA Connected Homes Demonstration, Beyond Smart Metering - applications for connected homes, October 2015

⁵ Heating and Cooling – A pan European Strategy Linking Current Policies to Clear Objectives , BEAMA 2015 www.beama.org.uk

⁶ https://www.gov.uk/government/statistics/united-kingdom-housing-energy-fact-file-2013