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By email to smartmetering@decc.gsi.gov.uk

Consultation on Home Area Network Installations

Thank you for this opportunity to comment on the Home Area Network (HAN) aspect of the smart meter rollout. Citizens Advice has a particular interest in this programme having taken on the statutory duty to protect and promote the needs of energy consumers formerly held by Consumer Futures.

We are particularly keen that consumers benefit from smart meters, but fear that any benefit from energy saving behaviour may be wiped out by rising installation costs as these are effectively uncapped. In terms of this particular consultation, we do not think the Government proposal is the most cost-effective option for delivery of smart metering services to multiple dwelling units (MDU).

The Government proposes that energy suppliers should be required to take all reasonable steps to establish a SMETS compliant HAN in all consumer premises. We agree that all consumers should have the option of a SMETS compliant HAN to ensure they can access the benefits of smart devices. We disagree with the Government's approach. We are concerned about the costs of a supplier-led approach to works in common areas of MDUs, and the weakness of the requirement for 'all reasonable steps' to be taken. This would immediately lead to protracted negotiations on what is 'reasonable'.

We have additional concerns about the hassle for property owners, space constraints and health monitoring that would occur under the Government approach, and the missed opportunity to engage property-owners and residents.

Scale

The Government has calculated that 5% of households will require 'range-extending' technology on the basis of how radio waves propagate in and around UK properties¹. The

¹ Red M (2012) Smart Meter RF Surveys for DECC, <https://www.gov.uk/government/publications/smart-meters-rf-survey>

study left out high-rise buildings concluding that 'high-rise buildings might require a specific solution' due to the high density of meters (p30).

We are concerned the Government has underestimated the scale of the challenge by its focus on building fabric. Of the 23.4 million households in England and Wales, 21% live in a flat (high-rise, low-rise or converted house)², and we think a whole-building approach would be more efficient approach to installation in many of these buildings due to the particular risks in this segment of the market. Field research by Siemens suggests that around half of these households, 2.37 million, will need a different HAN solution to that proposed, significantly more than the Government currently envisages.

Particular risks in the MDU market

The Red M study suggests that the great majority of flats and non-flats can have successful installations. The modelling behind this calculation 'took into account the frequency or the number of external walls or floors along the direct path' but excluded high-rise buildings from its research. One of the particular problems with signal strength in high-rise buildings, other than just distance, is the likelihood of steel reinforced walls and floors, but other issues are common across a range of MDUs.

Buildings housing multiple dwellings (high-rise and low-rise) are more likely to have metal meter rooms (for security), which stop radio signals passing to and from the smart meter.

Multiple dwelling units (MDUs) are also likely to have greater constraints on the housing of meters, which is an issue because these spaces are now expected to house both a meter and a communications hub.

The Red M study notes a number of issues that affected radio signals during their research such as iron boards in a cupboard, foil backed garage walls, semi-concealed meters, antennas inside cavity wall. Management of these issues in MDUs will prove more difficult if each dwelling is subject to separate installations, or if the property owner (or their managing agent) does not attend each installation affecting the common parts of the building.

Also of interest is the amount of time taken to install equipment as part of the Red M study, not including the meter itself. It suggests it takes an hour to set up, test and sign-off the installation for each dwelling. Citizens Advice is concerned about the impact of multiple visits on the security of properties; on the patience of the property-owner, and therefore their willingness to allow access; and the cost of the duplication of effort in undertaking multiple appointments and surveys.

Citizens Advice also questions whether multiple booster signals running through the common parts of the building will interfere with each other.

Finally, in terms of risks, Citizens Advice are not health experts but do understand that Public Health England is monitoring the health implications of smart meters and that a small number of consumers report a condition called electro-hypersensitivity (also known as electro-

² ONS (2013) *Home ownership and renting in England and Wales – Detailed Characteristics*, <http://www.ons.gov.uk/ons/rel/census/2011-census/detailed-characteristics-on-housing-for-local-authorities-in-england-and-wales/short-story-on-detailed-characteristics.html>

magnetic sensitivity), that they attribute to electromagnetic fields from technologies such as mobile phones, VDUs and wi-fi. According to Public Health England 'People are exposed to the radio waves from smart meters and other devices, and it is important to assess exposure levels as part of ensuring devices are safe. Higher exposures are produced when devices are used closer to the body, when they emit more power and when they transmit for more of the time'. We would like an assurance that the Government will keep Public Health England apprised of the emissions coming from systems in MDUs, which are likely to emit more power or transmit for more of the time as they have to cope with more obstacles and more dwellings. There may be a particular risk from the accumulation of systems if a supplier-led approach is adopted.

Opportunities offered by multiple dwelling units

The Government's recent Community Energy Strategy recognises the important role that community-based action can play in the delivery of climate and energy policy. Citizens Advice thinks that multiple dwelling units (MDU) should be viewed as communities and a whole-building approach be taken to engage property-owners and residents. Rather than silo by technological offer (smart meter, insulation, renewable or district heating etc) and then splinter by flat number, for example, we would like to see the rollout of the smart meter services to the whole of a MDU at a single point in time.

A single visit would make the building 'smart-ready' without differential pricing between the early and later movers where obstacles are found; remove the risk that some residents on higher floors would be turned down due to 'unreasonable costs'; minimise the number of visits and therefore hassle to the property-owner (or managing agent); and minimise the use of assets, limiting the use of space and the cost of delivery. Beyond the smart meter policy silo, a single visit and the related engagement of the building owner, dwelling owners and their tenants would provide an opportunity for alignment with local area-based energy efficiency schemes (whether supplier or local authority led) to engage residents in how to use other technologies to maximise savings.

Cooperation between suppliers is likely to be limited by competition rules, but a competitive framework for the installation of the HAN in MDUs is still possible at the regional or sub-regional level. It appears that this would be most cost-effective through the DCC who already have the experience of contracting for the communications providers. This would be much more efficient than ad hoc partnerships between suppliers, potentially with each contract differing according to who the current suppliers of a building are (which is of course subject to change). We are neutral as to whether the HAN installers are tasked with proactively engaging MDU owners and completing installations; or whether they deliver an installation once requested by one or more supplier(s). We are also neutral on the funding of these installations, provided no additional upfront cost falls on residents.

In summary, we are concerned that the suppliers will fail to develop the partnerships and processes needed to cost-effectively deliver HAN installations in MDUs; as they will be able to claim that the costs of addressing these issues are unreasonable; leaving residents of MDUs without the benefits of the smart metering, despite paying for it through their bills. We do not want 'unreasonable' costs to be paid; rather we want to see the Government take the opportunity offered by these buildings to engage consumers and save money on the smart meter rollout.

Yours sincerely

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Citizens Advice