

**Citizens Advice
Response to DECC's
"Consultation on
Home Area
Network (HAN)
Solutions:
Implementation of
868MHz and
Alternative HAN
solutions"**



Introduction

The Citizens Advice service provides free, independent, confidential and impartial advice to everyone on their rights and responsibilities. It values diversity, promotes equality and challenges discrimination. Since 1 April 2014, Citizens Advice service took on the powers of Consumer Futures to become the statutory representative for energy consumers across Great Britain.

The service aims:

- To provide the advice people need for the problems they face
- To improve the policies and practices that affect people's lives.

The Citizens Advice service is a network of nearly 400 independent advice centres that provide free, impartial advice from more than 3,500 locations in England and Wales, including GPs' surgeries, hospitals, community centres, county courts and magistrates courts, and mobile services both in rural areas and to serve particular dispersed groups. In 2012/13 the Citizens Advice service in England and Wales advised 2.3 million people on 6.6 million problems.

Since April 2012 we have also operated the Citizens Advice Consumer Service, formerly run as Consumer Direct by the OFT. This telephone helpline covers Great Britain and provides free, confidential and impartial advice on all consumer issues.

In the last four quarters Citizens Advice Bureaux have dealt with 84,000 enquiries about fuel debt, while hits to the energy section of our website doubled in October and November, the period during which suppliers announced their price increases last year. Calls to the Citizens Advice Consumer Helpline seeking advice about energy doubled in the same period.

Initial Comments

It is important to note that the overwhelming majority (over 99%) of consumer benefits identified in DECC's impact assessment for smart metering come from services provided via the HAN¹ so ensuring that it works consistently and as promised will be vital. If it does not consumers are likely to regard their smart metering equipment as faulty and lose faith in the benefits of smart metering. The HAN is also where much of the most detailed, and therefore personal, consumer energy usage data will be found so ensuring robust privacy and security will be vital. Consumers consistently tell us that they will only engage with services built upon their data if they are confident that they will retain control over and have transparency of their data².

Consumers will ultimately bear the costs of the smart meter rollout through their energy bills and as such it is vital that the net benefits of smart to consumers be maximised and the consistency and reliability of service be achieved in the most cost effective manner possible. It will be vital that this balance be struck and the outcomes of this consultation will have an integral role to play in achieving this.

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https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/276656/smart_meter_roll_out_for_the_domestic_and_small_and_medium_and_non_domestic_sectors.pdf

² <http://www.consumerfutures.org.uk/files/2014/01/Smart-and-clear.pdf>

Question Responses

Question 1: Do you agree that the DCC should be required to provide a dual band (2.4GHz and 868MHz) communications hub in addition to the single-band 2.4GHz communications hub, but not a single band 868MHz communications hub? Please provide evidence to support your response.

We agree that a dual band communications hub should be provided and available to suppliers as this will help ensure that consumers receive smart metering equipment that works as expected.

Given the existence of 2.4GHz and the proposal for dual-band communications hubs we also agree that there seems little need to require an 868MHz comms hub as well - particularly as informal conversations with suppliers have indicated that suppliers are likely to opt for dual-band comms hubs in most instances anyway in order to increase the likelihood of being able to set up a working HAN.

Question 2: Do you agree that the import electricity meter should always be capable of operating using the 2.4GHz HAN solution? Please provide evidence to support your response.

Yes, the case for this is made clearly in the consultation document.

Question 3: Do you agree that energy suppliers should be required to take all reasonable steps to utilise the 2.4GHz solution on IHDs where possible but that they should be permitted to use 868MHz where this is operationally necessary? Please provide evidence to support your response

Yes, 868MHz has a valuable role to play as the back-up frequency where 2.4GHz does not work but should not be used by default.

Questions 4: Do you agree that the 868MHz solution provided on dual band communications hubs should be capable of supporting four high bandwidth links? Please provide evidence to support your response.

The critical issue will be that scenarios where a consumer is unable to connect a new device without disconnecting another useful device are avoid whenever possible. A scenario where a consumer cannot use both an IHD and a CAD may represent a significant reduction in usability and benefit for consumers.

From the information provided in the consultation document it seems that, unlike 2.4GHz, 868MHz is limited and that four links is the highest tenable without risking performance. If this is the case then four links seems to be a reasonable capability to require as this would allow for, for example, an IHD, a PPMID a Home Energy Management System (HEM) and a separate CAD.

We are of the understanding that it will be technically possible to create a CAD which could act as a further hub to connect, for example, smart appliances which may help mitigate the potential impacts of this limitation in the future. As identified in the consultation document 2.4GHz allows more connections and also seems likely to more widely adopted.

Question 5: Do you agree that we should not allocate these high bandwidth links to particular devices, for example CADs? Please provide evidence to support your response.

Given the range of different services currently foreseen and the potential for many more future services the nature of which can only be speculated at this stage it makes sense for high bandwidth links to be flexible in their potential use as much as is possible. The potential for a CAD 'hub' to connect more devices may also mitigate concerns about the number of connections and therefore the need to allocate links to particular devices. There may also be a practical issue in that the distinction between CADs, IHDs, HEMs and other equipment may increasingly blur - a set allocation may cause more confusion where devices are not easily categorised.

Question 6: Please provide evidence on the relative merits of pursuing the following 868MHz deployment options: (a) a low power only approach; (b) a mandate for high power capable dual band communications hubs only (leaving other devices to supplier choice); and (c) a mandate for high power on all devices. Please provide evidence to support your response – we are particularly interested in receiving information relating to the costs (equipment and operational) and benefits of the high power solution relative to the low power solution and to the likely impact of the high power solution on the limited bandwidth available at 868MHz.

We are not placed to provide evidence in response to this question but the key principle of ensuring the expected service is delivered in the most cost-effective manner should guide any decisions made.

Question 7: Do you agree that energy suppliers, the SEC Panel and the TSC should (from DCC Live) monitor which HAN solutions are being provided in consumer premises and how they are performing, and recommend changes to the technical specifications or associated implementation rules in order to optimise their performance such that consumer interests are protected? Are any changes to the SEC needed to provide for this? Please provide evidence to support your response.

The performance of HAN solutions (and all other technological solutions integral to smart metering) should be monitored with the aim of identifying and addressing issues or faults, optimising performance and better ensuring that the HAN is meeting consumer needs.

Inevitably there will be some costs associated with such a process, particularly where changes or fixes must be implemented. Where costs are incurred it will not be acceptable for them to be passed on to consumers, particularly if costs are the result of faulty or ill-conceived original designs. As noted in the initial comments section of this response costs for the smart metering rollout are ultimately paid by consumers in most cases, one way to help address this will be the avoidance of allowing industry costs to be 'smeared' across industry wherever possible. Cost smearing of this sort increases the economic incentives for industry to simply raise

their prices to cover their costs rather than take any financial impact on themselves.

Question 8: Are there any other steps that should be taken to protect the 868MHz bandwidth? Please provide evidence to support your response.

Our understanding is that many services and tools in use by consumers may legitimately be using the same bandwidth, increasing the risk of interference either with smart metering equipment or with the technology already in place. This technology may include services like assisted hearing or home security systems which consumers are likely to value. As such, care should be taken that consumer experience of either service is not hindered.

Question 9: Do you agree that there is currently no single technology solution available that is technologically and economically suitable as the Alternative HAN solution in all of the installation scenarios that comprise the 5% HAN coverage gap and that the focus should therefore be on ensuring interoperability between a range of solutions and the wider smart metering system? Please provide evidence to support your response.

Citizens Advice is not in a position to comment on the availability of specific technical solutions but agree that complete interoperability and interchangeability will be vital elements of any smart metering system. Obviously any solution will also have to meet consumer needs both in terms of delivering benefits and services and cost-effectiveness.

Question 10: Do you agree that the most efficient way to deliver Alternative HAN solutions is an approach which provides a collective solution? Please provide evidence to support your response.

Citizens Advice agrees that a collective solution is likely to be optimal, particularly given the importance of interoperability and interchangeability. Such an approach should also increase efficiency and streamline costs through economies of scale in procurement as well as ensuring a more consistent experience for consumers. This consistency will, in turn, make advice provision and wider messaging more straightforward and clear.

Question 11: Please provide comments on the possible (a) guiding principles, (b) activities, (c) contracting route and (d) charging model for the collective Alternative HAN solution described in Annex 4. Which other approaches should we consider and what are the relative merits of these alternative approaches? Please provide evidence to support your response

Guiding Principles:

The guiding principles outlined in Annex 4 of the consultation document are broadly suitable, we would however suggest the following amendments:

“Achieve 100% coverage” - This should clearly be the goal of alternative HAN solutions but in the event that properties are found where only prohibitively expensive technology will afford such coverage and costs would far outweigh benefits there should be scope for delaying until a suitable solution becomes available.

“Utilise open standards where possible” - This phrasing should be strengthened as open standards are likely to play a key role in ensuring future interoperability and interchangeability as well as in keeping costs down by not paying extra for proprietary solutions. It should be noted that while these solutions may be settled upon by current energy suppliers new entrants will also have to work with them in the future and must not be ‘locked out’. Open standards should be the default throughout and a strong case would need to be made for not using them at any stage.

The guiding principles would also benefit from the addition of some text regarding the maintenance of consumer privacy. As noted in the introductory comments to this consultation response the HAN will contain much of the most detailed, and therefore most personal, consumer data concerning energy use and its security will be vital. This will especially be the case where MDU solutions entail a “single pipe” between meters and homes through which data for dwellings will be transmitted. A system is only as strong as its weakest point and this should be borne in mind when designing alternative HAN proposals.

Activities:

The appendix text in section 7.2 implies that Government is seeking to decide upon alternative HAN solutions before generating a database of building types and characteristics where one would be needed. Such an approach seems counterintuitive - effectively seeking to generate a solution before the problem to be solved has been fully understood. In all aspects of the smart metering rollout the needs of consumers should be the starting point of any work, government should seek to understand the issues and provide a solution to them rather than developing a solution and then trying to make it work in a range of consumer

properties. The approach implied in the appendix is likely to generate sub-optimal outcomes for consumers by not beginning with their needs.

Surveys of building types to establish where an alternative HAN will be needed and what obstacles it will have to surmount should be undertaken as soon as is practicable and this data should inform the collective Alternative HAN solution.

The data generated by this exercise must be shared between all installers to help ensure a consistent and optimised rollout for all consumers in need of alternative HAN solutions.

Contracting Route:

More important than who undertakes procurement will be that it is done in a cost effective manner that does not negatively impact the consumer experience (particularly the realisation of benefits) nor increase costs that are passed on to consumers. This said it seems that the case for the SEC Company to take on such a role is stronger than for the DCC to do so. The DCC has already suffered significant delays and, as the consultation document notes, the DCC's focus should remain on the WAN not HAN solution.

Charging Model:

As previously stated there is always a risk that where suppliers are allowed to socialise costs between them they will then lack an incentive not to pass costs on to consumers, such an approach can also reduce the incentive to procure the most cost-effective solution, as suppliers will know that they can simply pass this cost on without any impact to their competitiveness.

This said if costs are entirely reflective, suppliers may be incentivised to not take on customers in need of an alternative HAN solution or to procure or use solutions that are cheaper but do not meet consumer needs.

Given that both approaches have the potential to generate perverse incentives detrimental to consumer benefits, costs and the smart meter rollout as a whole we would encourage DECC to remain mindful of the balance that will need to be struck. In other areas of the smart programme - such as the lengthy discussions seeking to establish how costs should fall for non-standard meter installs - formulae have been suggested designed to balance similar issues - effectively allowing for some cost-reflectivity but seeking to incentivise industry behaviour that is optimal for consumers and the business case for smart metering. Such an approach should be examined here as well.

Question 12: Do you agree that energy suppliers should be subject to an obligation to work together to deliver a timely and efficient collective solution for Alternative HAN? Please provide evidence to support your response.

We are of the view that the alternative HAN solution must be consistent, interoperable, interchangeable and delivered in the most cost-effective manner possible, supplier cooperation seems to be the best way of achieving these goals. A government mandate is likely to be helpful in achieving this.

Question 13: Do you agree that energy suppliers should be required only to use Alternative HAN solutions that are supplied through the shared service approach? Please provide evidence to support your response.

If undertaken properly it should be the case that the shared-service approach to generating alternative HAN solutions should generate the most effective and cost-effective solution thanks to the economies of scale generated by all suppliers using it - as previously established multiple solutions will risk significant inefficiencies and a detriment to consumer experience. As such we would agree that suppliers should be required to use the solutions procured through such a model, this said we would expect some manner of strong price control system to be put in place alongside this requirement to ensure that it can't result in all suppliers being obligated to use an inferior or more expensive solution than necessary.

Question 14: We would welcome views on any regulatory provisions that should be introduced to provide for the efficient delivery of an appropriate collective Alternative HAN solution? Please provide evidence to support your response.

We do not have any views on specific regulatory provisions at this time.