



Department
of Energy &
Climate Change

Government Response on Home Area Network (HAN) Solutions: Implementation of Alternative HAN Solutions

Government Response to the Consultation on Home Area Network (HAN Solutions): Implementation of 868MHz and Alternative HAN solutions

URN: 15D/524

17 December 2015



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Contents

Contents.....	4
1. Executive Summary and Introduction	5
Purpose of this document	5
Summary of Conclusions	6
Next Steps	7
2. Consultation Response on Home Area Network Solutions: Alternative HAN	8
Introduction.....	8
Response to consultation questions.....	8
Annex A: Consultation Responses	16
Annex B: Summary of Responses to Question 11	18

1. Executive Summary and Introduction

- 1.1 The rollout of smart meters by energy suppliers will play an important part in Britain's transition to a low-carbon economy, as well as helping us meet some of the long-term challenges we face in ensuring an affordable, secure and sustainable energy supply.
- 1.2 Smart meters are the next generation of gas and electricity meters. They will offer a range of intelligent functions and provide consumers with more accurate information, bringing an end to estimated billing. Consumers will have near real-time information on their energy consumption to help them control and manage their energy use, save money and reduce emissions.
- 1.3 Energy suppliers are required to take all reasonable steps to install smart meters in GB domestic and smaller non-domestic premises by the end of 2020. A standard smart metering installation will in most instances include gas and electricity smart meters, an In-Home Display (IHD) (for domestic premises) and a communications hub.
- 1.4 These devices will communicate with each other via a Home Area Network (HAN), as defined by the Smart Metering Equipment Technical Specification (SMETS). Suppliers are required to make consumption and tariff information available to the consumer via the HAN. This will allow consumers to see energy information on their In-Home Display, but will also allow them to link a range of other smart Consumer Access Devices (CADs) to the HAN.
- 1.5 The 2.4GHz ZigBee and 868MHz HAN standards are expected to be suitable for the communications links between all smart metering equipment in approximately 96.5% of GB premises¹ without the need for range extending equipment.
- 1.6 Alternative HAN (Alt HAN) is the generic name given to the solution(s) needed to provide a HAN in those premises that are unlikely to be served by either the 2.4GHz or 868MHz solutions.

Purpose of this document

- 1.7 The Government Consultation on Home Area Network (HAN) Solutions: Implementation of 868 MHz and Alternative HAN solutions² was published on 24 March 2015. The consultation sought views on the 868MHz HAN solution and the Alternative HAN solution. The response to this consultation is being published in two parts:
 - The document 'Government Response on Home Area Network Solutions: Implementation of 868MHz' (which is being published alongside this

¹ Further information on this is available in <https://www.gov.uk/government/consultations/consultation-on-implementing-home-area-network-han-solutions-and-changes-to-technical-sub-committee>

² <https://www.gov.uk/government/consultations/consultation-on-home-area-network-solutions>

document) sets out the Government's consideration of the decisions related to the 868MHz HAN solution - this includes consultation questions 1 to 8.

- This document sets out the Government's conclusions on the decisions specifically related to the Alternative HAN solution - covering consultation questions 9 to 14.

1.8 Alongside this, the Government has published:

- a consultation document³ on the proposed detailed design of the Alternative HAN arrangements, including legal drafting for DCC and supplier licence conditions and SEC provisions.
- a consultation document⁴ on aspects of the implementation of HAN solutions (868MHz legal drafting and approach to pairing devices locally) and on the operation and remit of the Technical Sub-Committee.

Summary of Conclusions

1.9 The Government received 44 consultation responses from a range of sectors including from large and small energy suppliers, device manufacturers, meter asset providers (MAPs) and the DCC (the full list of respondents is provided in Annex A).

1.10 Responses to the consultation supported our assumption that there was no single Alternative HAN solution available. We have therefore concluded that there is a need for multiple Alternative HAN solutions to be developed and that a process will be required to decide which one should be installed in a particular premise.

1.11 During the consultation period the Government continued to engage with stakeholders, primarily through the DECC chaired HAN Strategy Sub-Group to the Technical and Business Design Group (TBDG). We also had detailed discussions with energy suppliers and with the SEC Panel. We would like to thank participants for this support.

1.12 Based on the responses to the consultation and the additional evidence gathered throughout the consultation period, the Government has concluded that:

- **Collective action is needed to secure efficient Alternative HAN solutions** - where energy suppliers are able to collaborate on the development and installation of Alternative HAN equipment.
- **Suppliers should be required to work together on Alternative HAN** - regulatory intervention is needed to drive forward Alternative HAN development. This also acknowledges suppliers' competition law concerns.
- **A mandate on suppliers to use the collectively defined Alternative HAN solution should not be required** - the Government believes there will be sufficient incentives to utilise the collectively defined approach without a mandate, but this will be subject to further consultation.

³ <https://www.gov.uk/government/consultations/consultation-on-alternative-home-area-network-han-solutions>

⁴ <https://www.gov.uk/government/consultations/consultation-on-implementing-home-area-network-han-solutions-and-changes-to-technical-sub-committee>

- 1.13 We also received a number of responses on the detailed design of the Alternative HAN arrangements. These were considered as we developed the Alternative HAN delivery model proposals, which will now be subject to further consultation (as described below).

Next Steps

- 1.14 The Government has now published a consultation document⁵ on the proposed detailed design of the Alternative HAN arrangements, including legal drafting for DCC and supplier licence conditions and SEC provisions. Stakeholders are asked to consider this consultation and respond with any comments by 25 February 2016.
- 1.15 In parallel, we are working with energy suppliers to determine how best to facilitate continued supplier activity in this area ahead of establishing formal governance arrangements (under regulation). We will work closely with Energy UK and energy suppliers as we develop our thinking in this area and keep stakeholders informed of our progress through the TBDG and the Programme's other Transitional governance groups.

⁵ <https://www.gov.uk/government/consultations/consultation-on-alternative-home-area-network-han-solutions>

2. Consultation Response on Home Area Network Solutions: Alternative HAN

Introduction

- 2.1 In March 2015, the Government published a consultation on Alternative HAN solutions which included the following proposals:
- A collective solution is required for Alternative HAN. This collective solution could cover joint working in the following areas: technology selection; procurement of solutions; installation and maintenance of solutions; service management and charging.
 - Energy suppliers should have a requirement to work together under an appropriate governance structure on Alternative HAN and be obliged to utilise the Alternative HAN solution.
 - Further work would be required to determine the optimal delivery model and its appropriate governance.
- 2.2 This section provides a summary of the responses to each consultation question and sets out the Governments response.

Response to consultation questions

Need for Multiple Alternative HAN Solutions

Consultation 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.

Background

- 2.3 Based on evidence from technology providers, the assumption was that there was no single technology solution available that was technologically and economically suitable as the Alternative HAN solution in all of the installation scenarios that comprise the 3.5% HAN coverage gap.

Summary of responses

- 2.4 A large majority of respondents agreed that there is currently no single solution to Alternative HAN. A number of respondents highlighted the importance of ensuring interoperability with SMETS compliant devices. One respondent noted that it was too early to make a technology choice, as the market will develop further over time.
- 2.5 Some respondents provided some general comments around the solution, including:
- The preferred solution may differ depending on the number of dwellings it is serving.
 - There may be benefit in limiting the number of solutions available, for example to minimise complexity.
 - A suggestion that Alternative HAN equipment should only use 2.4GHz.

Government response

- 2.6 The consultation responses supported our assumption that there is no single solution to Alternative HAN solutions. We have therefore concluded that there is a need for multiple Alternative HAN solutions to be developed and that a process will be required to decide which one should be installed at particular types of premises.
- 2.7 We currently do not intend to put constraints on the solution - for example by limiting the number of solutions that could be adopted or restricting it to 2.4GHz only. We intend to leave these decisions with energy suppliers to consider as part of their contracting activity - suppliers will be best placed to consider what the more effective solutions are and whether there need to be any constraints associated with those solutions.

Summary of Government Conclusion

Multiple Alternative HAN solutions will need to be developed and a process for choosing which solution to install in each Alternative HAN premises will be needed. We do not intend to put constraints on the solution - for example by limiting the number of solutions that could be adopted or restricting it to 2.4GHz only.

Selection of the Alternative HAN Solutions

Consultation 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.

Background

- 2.8 The consultation set out a number of options for ensuring successful delivery of Alternative HAN including:
- No new specifications - each supplier individually selects, installs and maintains their own solutions.
 - Common specifications added to the regulatory framework - energy suppliers would then individually decide which equipment to procure and install.
 - Collective solutions - an appointed body would deliver collective solutions which all suppliers could use. This could include services such as surveying of buildings, technology selection and installation and maintenance of equipment.
- 2.9 Government recommended making regulatory provision for a collective approach under which energy suppliers would be required to cooperate to determine which Alternative HAN technologies to employ and to install and operate them through a shared service arrangement.

Summary of responses

- 2.10 All respondents supported the need for a collective approach on Alternative HAN. A few respondents suggested that a collective solution was only required in multiple dwelling units.
- 2.11 A range of advantages were highlighted, including:
- Increasing efficiency and reducing costs: through economies of scale in procurement, avoiding duplication of efforts and reducing risks of asset stranding. Although one respondent noted the importance of creating the right commercial incentives to procure the most economic and practical technology.
 - Improving the customer experience: by creating a more consistent approach with less disruption for landlords. One respondent stated their preference for a community approach to rollout, with meters being fitted at the same time as the Alt HAN technology.
 - Driving technology development and ensuring interoperability with wider smart metering system.
- 2.12 Some respondents wanted to clarify that responsibility for Alternative HAN should remain with suppliers, although energy suppliers were keen that Government acknowledged and took steps to address the competition risks they had identified.

Government response

- 2.13 The consultation responses supported our recommendation that the most effective delivery model for Alternative HAN is a collective approach. Respondents to the consultation listed a wide range of advantages in favour of this model.
- 2.14 The Government has therefore concluded that it should take steps to facilitate this collective approach. The Alternative HAN consultation document published alongside this response sets out in more detail our proposals on how to deliver a collective approach. This includes placing licence conditions on energy suppliers to work together to deliver Alternative HAN services.

- 2.15 A key element of our preferred delivery model is ensuring responsibility for delivering Alternative HAN remains firmly with energy suppliers. It includes creating a governance structure through which energy suppliers can make decisions and setting up a contracting vehicle where suppliers make up the Board and are the shareholders.
- 2.16 The collective approach also helps to provide some certainty on the scale of the market to technology providers and so should maximise the chances of securing competitively priced Alternative HAN solutions.
- 2.17 We do not agree that we should require meters to be fitted at the same time as the Alternative HAN equipment. The scope of the Alternative HAN arrangements will be limited to the provision of the additional equipment, above the standard 2.4GHz or 868MHz SMETS and CHTS devices, needed to establish the HAN in that premises. The rollout licence conditions establish that it is for each energy supplier to determine how and when (before the end of 2020) they provide smart meters to their customers.

Summary of Government Conclusion

Collective action is needed to secure efficient Alternative HAN solutions.

We will require that energy suppliers work together to deliver Alternative HAN equipment and services.

Alternative HAN Delivery Model

Consultation 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 (in the consultation). Which other approaches should we consider and what are the relative merits of these alternative approaches? Please provide evidence to support your response.

Background

- 2.18 In the consultation, we set out at a high level what the approach to delivery of a collective approach could look like and invited views on the most suitable approach. Annex B provides a summary of the consultation proposals relating to the guiding principles, activities, contracting route and charging model for the collective Alternative HAN approach.

Summary of responses

- 2.19 Respondents generally agreed with the outline delivery approach presented in the consultation.
- 2.20 Energy suppliers were keen to emphasise that the early availability of a solution should be prioritised and that the arrangements around commissioning activity and releasing buildings should be as efficient as possible.
- 2.21 A number of respondents suggested that landlord and consumer inconvenience should be minimised and so suggested single points of contact and coordinated installations.
- 2.22 There was no clear consensus on the most appropriate charging approach with some respondents favouring socialised costs (simpler and less likely to create disincentives to serve Alternative HAN customers) and others favouring a more targeted approach (creates incentives to only use where necessary and follows the user pays principle).

Government response

- 2.23 The Government has continued to work on the delivery model during the consultation period and engaged with a wide range of parties before developing more detailed options in this area. Further information on the proposed approach can be found in the Alternative HAN consultation published alongside this document.

Summary of Government Conclusion

The Government has outlined further proposals and is undertaking further consultation on the detailed Alternative HAN delivery model.

Requirements on energy suppliers relating to the Alternative HAN Solution

Consultation 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.

Background

- 2.24 In the consultation, we proposed to introduce a requirement on energy suppliers to work together under a suitable governance structure to help develop and deliver an appropriate collective service for the timely and efficient provision of Alternative HAN solutions. This was to drive forward Alternative HAN development, and also acknowledged suppliers' competition law concerns.

Summary of responses

2.25 A large majority of respondents supported the need for an obligation to work together on Alternative HAN. Stakeholders noted that this would help address competition law concerns, ensure all suppliers were engaged and reinforce supplier responsibility for the HAN.

Government response

2.26 The Government has concluded that there is a need for licence conditions on suppliers to work together on Alternative HAN. The content of these licence conditions depends on the Alternative HAN delivery model - discussed further in the Alternative HAN consultation.

2.27 As part of the preferred delivery model outlined in the Alternative HAN consultation published alongside this response, licence obligations on suppliers include:

- Requirement on energy suppliers to work together on Alternative HAN Arrangements
- Restricting the scope of the Alternative HAN Services i.e. so only to cover services required in order to provide an Alternative HAN

2.28 The Government acknowledges suppliers' competition law concerns and whilst suppliers will need to come to their own view on the implications of a collective approach, we anticipate that the collaborative Alternative HAN arrangements will lead to overall efficiency gains, including cost savings, economies of scale and supporting innovation in Alternative HAN solutions, and that consumers should receive a fair share of the resulting benefits through lower bills.

Summary of Government Conclusion

Suppliers should be required to work together on Alternative HAN - regulatory intervention is needed to drive forward Alternative HAN development.

Mandate on the use of the collectively procured service

Consultation 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.

Background

2.29 We asked stakeholders whether suppliers should be required to only use the Alternative HAN solutions supplied through the shared service. We proposed to require all suppliers to use the solutions provided through the shared service in order to increase efficiency, reduce the risk of stranded assets and provide increased certainty to technology providers on the scale of the procurement.

Summary of responses

2.30 The majority of respondents agreed that suppliers should be required to use the shared solution. They noted that there are cost efficiencies in using the shared solution and that it would also improve the customer experience. Some respondents were concerned that allowing other solutions would increase complexity and make fault finding and maintenance more difficult.

2.31 One respondent noted that market forces should discourage suppliers from developing their own solutions so a requirement is not needed.

Government response

2.32 Since the consultation was published in March 2015, the Government has been developing the detailed proposals for the delivery model for Alternative HAN - set out in the consultation published alongside this document. In developing the design of the collective approach, there are a number of incentives on suppliers to use the collective approach, such as:

- Requirements on suppliers to participate in governance processes - all suppliers will have a say in which technologies are selected.
- Suppliers developing their own alternative solutions would need to bear the additional costs of the alternative provision, notwithstanding that a shared solution had also been procured.
- Suppliers would be dis-incentivised from installing their own equipment if on change of supplier there is a risk it could become a stranded asset.
- Suppliers may also be dis-incentivised by having to go through the process of gaining separate approvals from landlords etc.

2.33 Given these incentives, we no longer believe that a mandate is necessary to achieve the efficiency gains associated with a collective approach.

2.34 In addition, whilst there are a number of financial incentives to use the collective solutions, preventing use of other alternatives would be tantamount to introducing a licence obligation on suppliers to use the solutions procured through the collective approach.

2.35 Alternative HAN arrangements where it is needed. We believe that there are a number of undesirable consequences of taking this next step including that it may preclude other genuinely more cost effective solutions.

2.36 Given the above, and in accordance with the better regulation principles that it is undesirable to introduce unnecessary obligations, we do not think that it is necessary to mandate suppliers to use the solution. Therefore, we do not intend to

introduce such a mandate. This proposal is subject to further consultation in the document published alongside this response document.

Summary of Government Conclusion

A mandate on suppliers to use the collectively defined Alternative HAN approach should not be required - the Government believes there will be sufficient incentives to utilise the collectively defined approach without a mandate.

This proposal is subject to further consultation in the document published alongside this response document.

Additional comments

Consultation 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.

Background

2.37 We invited other general comments on any other regulatory provisions that would be required to deliver Alternative HAN.

Summary of responses

2.38 Respondents provided a wide range of comments. These included:

- The importance of developing a clear timeline for Alternative HAN solutions
- A preference to place obligations in SEC as opposed to just licences
- A request to understand further the process of releasing Multiple Dwelling Unit (MDU) buildings as ready for installation
- The need for appropriate provisions to ensure Alternative HAN is economically efficient
- The need to liaise with other Government departments, for example on building regulations for new build premises
- A suggestion to utilise UK developed technologies

Government response

2.39 These comments have been considered as part of development of the regulatory model - see the Alternative HAN consultation for further information.

Annex A: Consultation Responses

The consultation 'Home Area Network (HAN) Solutions: Implementation of 868MHz and Alternative HAN solutions' launched on 24 March 2015 and closed on 19 May 2015.

The questions in the consultation were grouped into two categories:

- 868MHz HAN Solution (Questions 1 to 8)
- Alternative HAN Solution (Questions 9 to 14)

The response to this consultation has been published in two parts. This document is one part of the consultation response and sets out our response to questions 9 to 14, which relate specifically to the Alternative HAN Solution. A further document - Home Area Network (HAN) Solutions: Implementation of 868MHz - sets out the Government's response to questions 1 to 8, which relate specifically to the 868MHz HAN solution.

The consultation was available on the Department of Energy and Climate Change (DECC) website and a paper version of the consultation document was made available on request. Respondents were invited to submit their comments to a consultation email address (smartmetering@decc.gsi.gov.uk).

The consultation invited all interested parties to comment on the proposals by 19 May 2015. In total, 44 written responses were received – mostly electronically. Respondents, broken down by sector, were as follows:

Sector	Number of responses
Code Administration	1
Communications and Technology	21
Consumer Group	2
Energy Network	2
Energy Supplier (Large)	8
Energy Supplier (Small)	2
MAPs/MOPs/MAMs	2
Other Government	2
Other	4
Total	44

The following organisations responded to the consultation:

AMDEA - the Association of Manufacturers of Domestic Appliances	Association of Meter Operators
BEAMA	British Gas
Chameleon Technology (UK) Ltd	Citizens Advice
DCC	E.ON Energy Solutions
EDF Energy	Electricity North West
Energy and Utilities Alliance (EUA)	Energy UK
Enzen Global	EURO-LINK Business Ltd
Future Energy Group	Gemserv Limited
Good Energy	Green Energy Options
Greenvity Communications	IMServ
Landis+Gyr Ltd	Lowri Beck Services / Community of Meter Asset Providers (CMAP)
National Grid	National Housing Federation
NEA	Ofgem
Ordnance Survey	Ovo Energy
Panasonic Automotive & Industrial Systems	Prime Alliance
ROHM Semiconductor GmbH	RWE npower
Scottish Power	Secure Meters (UK) Ltd
Siemens plc	Siemens Smart Grid
Silver Spring Networks	Smart Energy GB
Smart Energy Networks	SSE
Telegesis UK Limited	Texas Instruments
Utility Warehouse	Xsilon Ltd

Annex B: Summary of Responses to Question 11

Consultation Proposal	Summary of Consultation Responses
<p>Guiding Principles included: allowing energy suppliers to meet their rollout obligations; ensuring a consistent and positive consumer experience; being flexible and scalable; being economically efficient and not unnecessarily distorting competition in the market.</p>	<p>A number of respondents noted that achieving 100% coverage should not be at any cost.</p> <p>One respondent felt that suppliers should be allowed to install their own solutions to an agreed specification to avoid delay.</p> <p>Some respondents felt that avoiding landlord inconvenience should be a principle.</p>
<p>Activities included: surveying and database management; management of Alternative HAN equipment provisions and supply, installation and maintenance of solutions.</p>	<p>A couple of respondents flagged that there should also be a collective approach to meter installations in some MDUs where there is limited space in meter rooms and cabinets.</p> <p>Some responses highlighted the importance of getting the surveys done quickly and that the process for releasing buildings needs to be efficient.</p>
<p>Contracting Route: contracting authority to undertake the procurement and contract with service providers. We highlighted that this could be a new or existing entity such as SECCo or the DCC and set an initial preference for using an existing body.</p>	<p>Several responses flagged the importance of identifying a contracting route as soon possible. Some stakeholders supported the use of SEC Panel/ SECCo in this role.</p>
<p>Charging Model: we noted the importance of ensuring the correct incentives are in place to ensure that costs are kept under control and that Alternative HAN solutions are only provided where they are required.</p>	<p>A number of respondents agreed that costs should be socialised, highlighting concerns with a cost reflective approach, such as creating a disincentive to take on Alternative HAN customers.</p> <p>Some responses noted that there should be incentives in place to ensure Alternative HAN solutions are only used when they are required.</p>

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