



Department
of Energy &
Climate Change

Smart Metering Implementation Programme

Government Response to Consultation on aspects of the implementation of Home Area Network solutions (868MHz legal drafting) and on the operation and remit of the Technical Sub-Committee

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Executive summary

Programme introduction

The Government is committed to ensuring that every home and small business in the country is offered a smart meter by 2020, delivered as cost effectively as possible. Smart meters are the next generation of gas and electricity meters which will offer a range of intelligent functions and provide consumers with more accurate information, bringing an end to estimated billing. The roll-out of smart meters is an important national modernisation programme that will bring major benefits to businesses and the nation as a whole. Smart meters will provide consumers with near-real time information on their energy consumption, so that consumers can control and manage their energy use, save money and reduce emissions.

A standard smart metering installation will generally include smart gas and electricity meters, an In Home Display (IHD) in domestic premises, and a communications hub. These devices will communicate with each other via a Home Area Network (HAN), as defined by the Smart Metering Equipment Technical Specifications (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 IHD, but will also allow them to link a range of other smart devices, such as Consumer Access Devices (CADs), to the HAN.

The 2.4GHz ZigBee Smart Energy Profile HAN standard, which is specified in the second version of the SMETS (SMETS2) and the Communications Hub Technical Specifications (CHTS), is expected to be suitable for the communications links between all smart metering equipment in approximately 70% of GB premises, without the need for range extending equipment.

Given this, the Government previously concluded¹ that an additional wireless HAN solution (868MHz) should be specified for use in premises where the 2.4GHz HAN solution would not work. Decisions on the implementation of the 868MHz HAN solution are detailed within the 868MHz specific Government Response to the Consultation on 'Home Area Network (HAN) Solutions: Implementation of 868MHz and Alternative HAN solutions'² (the 'Government Response'). We expect that the 868MHz HAN solution will be suitable for use in approx. 96.5% of GB premises. The Alternative HAN solution will serve the remaining premises.

¹ Government Response to the Consultation on the second version of the Smart Metering Equipment Technical Specifications. Part 1. (Jan 2013)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/209841/smart_meters_equipment_technical_spec_2_consultation_response_part_1.pdf

² Home Area Network (HAN) Solutions: Implementation of 868MHz and Alternative HAN solutions (Dec 2015)
<https://www.gov.uk/government/consultations/consultation-on-home-area-network-solutions>

Purpose of this document

This document outlines the Government's conclusions on two of the three aspects consulted on in the 'Consultation on aspects of the implementation of Home Area Network solutions (868MHz legal drafting and approach to pairing devices locally) and on the operation and remit of the Technical Sub- Committee' ('the Consultation'), published in December 2015³. Decisions concluded on in this document relate to:

- Regulatory drafting to implement the Government's conclusions on the 868MHz HAN solution (Section 1)
- Changes to the scope of the Smart Energy Code (SEC) Panel's Technical Sub-Committee (the 'TSC') (Section 2)

The Consultation also contained proposals for the implementation of local CAD pairing (questions 3 to 9). Conclusions on this aspect of the consultation will be published at a later date.

Summary of conclusions

The Government received 13 consultation responses from a range of organisations including energy suppliers, device manufacturers and the DCC (the full list of respondents is provided in Annex A).

The Government has concluded that it will amend the gas and electricity supply Standard Licence Conditions (the 'Licence Conditions') to require suppliers to utilise the 2.4GHz solution to connect the IHD to the communications hub, in preference to the 868MHz solution, where it is technically practicable to do so. This will help ensure that the limited 868MHz bandwidth is protected.

We will also amend Section F1 of the SEC:

- To require the TSC to review (where directed to do so by the Panel) the effectiveness of the HAN Requirements and report on the findings of that review.
- To change the scope of the TSC such that it will be required to provide input on business architecture issues. The TSC will be renamed the Technical Architecture and Business Architecture Sub-Committee (TABASC) to reflect its expanded role.

Next steps

Following the publication of this document, we plan to lay the final legal text in Parliament and will follow the procedure under Sections 88 and 89 of the Energy Act 2008. Subject to no objection being raised in Parliament during the 40 day Parliamentary period, and subsequent signature by a Minister, we expect the legal text that is laid to come into legal force in Summer 2016.

In parallel, we are progressing changes to the technical specifications (CHTS, SMETS and GBCS) to define the requirements for 868MHz devices (including the dual band Communications Hub) through the transitional governance structures.

³ The consultation and legal drafting is available at: <https://www.gov.uk/government/consultations/consultation-on-implementing-home-area-network-han-solutions-and-changes-to-technical-sub-committee-tsc>

1. Legal Drafting Associated with the 868MHz HAN Solution Conclusions

Introduction

- 1.1. In the Consultation, we proposed the regulatory drafting to implement the following positions, which were contained in the Government Response:
 - Energy suppliers will be required, by amended Licence Conditions, to utilise the 2.4GHz HAN solution to link the communications hub to the IHD⁴, in preference to the 868MHz solution, where technically practicable.
 - The SEC will be amended to require the SEC Panel's Technical Sub-Committee to periodically review the effectiveness of the HAN provisions (including their assessment against the SEC objectives).
- 1.2. There were ten responses to the two consultation questions covering the two topics.

Changes to the Supply Standard Licence Conditions

Consultation Question 1: 868MHz on the mandated IHD

Do you agree with the legal drafting of the proposed amendment to the electricity and gas supply standard Licence Conditions? Please provide a rationale for your views.

Summary of Issue

- 1.3. In the Government Response it was concluded that as the 868MHz bandwidth is limited steps should be taken to protect the bandwidth and ensure that it is used only when really necessary. Given this, we proposed legal drafting in the Consultation to require suppliers to utilise the 2.4GHz solution to connect the IHD to the communications hub, in preference to the 868MHz solution, where it was technically practicable to do so.

Government Consideration of Issue

- 1.4. There was broad support from across all sectors for the proposed draft amendments to the Licence Conditions. Respondents agreed that the 868MHz bandwidth was limited and therefore using 2.4GHz communications, where technically practical, would ensure the best use of the radio spectrum and so would help manage consumers' smart metering experience.
- 1.5. One respondent felt that this requirement would mean that the supplier would have to utilise a single band 2.4GHz communications hub if the link between the IHD and communications hub could be achieved using the 2.4GHz frequency. The proposed drafting does not require this, it requires suppliers to install a 2.4GHz capable IHD where

⁴ IHD refers to an In-Home Display that is provided by an Energy Supplier to fulfil Condition 40 and/or Condition 34 of the electricity and gas supply Standard Licence Conditions.

technically practicable and then to take reasonable steps to connect the IHD to the communications hub (which could be single or dual band) using the 2.4GHz frequency.

- 1.6. One respondent noted that the operational licence drafting could be clearer and so we have amended this part of the licence drafting. The revised drafting to the electricity supply Standard Licence Conditions can be found in section 49.12. This amendment has been moved from paragraph 49.4 of the drafting at consultation. The revised drafting to the gas supply Standard Licence Conditions can be found in section 43.12. This amendment has been moved from paragraph 43.4 of the drafting at consultation.
- 1.7. One respondent noted that differing customer needs may mean that it may be right for a customer to have their IHD placed out of the range of the 2.4GHz signal. As noted in the consultation document, when considering where to position the IHD, suppliers will need to take into account the requirements of the Smart Metering Installation Code of Practice (SMICOP).

Summary of Government Conclusion

We will amend the gas and electricity standard supply Licence Conditions. These amendments will require suppliers to provide a 2.4GHz capable IHD solution where it is technically practicable to utilise the 2.4GHz solution and to take reasonable steps to connect the IHD to the communications hub at 2.4GHz.

Changes to the Smart Energy Code

Consultation Question 2: Monitoring and oversight of HAN solutions

Do you agree with the legal drafting of the proposed amendment to the SEC? Please provide a rationale for your views.

Summary of Issue

- 1.8. In the Government Response, it was also concluded that it would be important to periodically consider if the HAN arrangements in the regulatory framework are achieving the SEC objectives. Given this, we proposed draft amendments to the SEC identifying that this role should ultimately rest with the TSC.
- 1.9. These amendments would require the TSC to keep the effectiveness of the HAN arrangements under review and report on the outcome of their review to the SEC Panel and Ofgem.

Government Consideration of Issue

- 1.10. There was broad support from across all sectors for the proposed draft amendments to the SEC, namely because there is always a risk of coexistence problems (interference caused by the presence of multiple radio transceivers in close proximity). Respondents agreed that the TSC seems the most appropriate forum to lead this.
- 1.11. One respondent questioned whether the TSC's role in this area would extend to Alternative HAN arrangements. We have included an additional clause (F1.5) to clarify that the TSC should not consider the Alt HAN Arrangements (as defined in the SEC and

licence conditions) but may have regard to any impact of the provision of Alt HAN Services on the End-to-End Technical Architecture and/or the Business Architecture.

- 1.12. One respondent recommended that in section F1.6, which requires the Panel to make reports produced pursuant to Section F1.4 available to the Parties, subject to any redactions, that it should be ensured that any redactions made are fully justified. This concern is already addressed in the drafting, which stipulates that only redactions that are considered necessary should be made.

Summary of Government Conclusion

We will amend the SEC to require the TSC to keep the effectiveness of the HAN arrangements under review and report on the outcome of the review to the SEC Panel and Ofgem.

2. Changes to the Scope of the SEC Panel's Technical Sub-Committee

Introduction

- 2.1. This section sets out the Government's conclusion on the legal drafting associated with changes to the scope of the SEC Panel's Technical Sub-Committee (TSC). Section F1 of the SEC requires the SEC Panel to establish a TSC. The duties of the TSC require it to undertake various functions in relation to the End-to-End technical architecture of the smart metering system. The TSC is already established and operating. In the consultation, we proposed amending the scope of this sub-committee to include requirements in relation to the business architecture. There were eight responses to the question asked.

Changes to the Smart Energy Code

Consultation Question 10: Changes to the Scope of the SEC Panel Technical Sub-Committee

Do you agree with the proposed change to the remit of the Technical Sub-Committee (TSC) and the proposed amendments to the SEC set out at Annex B, such that the TSC will become the 'Technical and Business Architecture Sub-Committee' and encompass oversight of business architecture?

Summary of Issue

- 2.2. In developing the technical, commercial and regulatory provisions for smart metering we considered how Users would interact with the system and the 'business architecture'.
- 2.3. The Programme created a Target Operating Model and a Business Process Model to reflect its understanding of how a range of business processes would operate. These then informed the requirements for operation of and interaction with the DCC as set out in the SEC. However, there has been no requirement for the Target Operating Model and the Business Process Model to be maintained and there are no specific requirements within the SEC to ensure that business process requirements are reviewed or impacts on them taken into account in decision making processes, for example where modifications to the SEC are considered by the Panel.
- 2.4. In order to ensure that smart metering benefits are achieved, and to maintain the confidence of Users in the system, we proposed extending the remit of the TSC to include broader oversight of the business architecture. The focus of business architecture in this context would be the processes, regulations and other arrangements that enable SEC parties to use DCC services and other functionality described across the Technical Specifications; that is the interactions between parties rather than the

internal operations of parties, to achieve a range of business process such as change of supplier, update firmware, etc.

Government Consideration of Issue

- 2.5. There was broad support for the proposal to change the scope of the TSC such that it becomes the Technical Architecture and Business Architecture Sub-Committee (TABASC), which is required to provide input on business architecture issues and produce and maintain a Business Architecture Document.
- 2.6. There were a number of comments about ensuring the TABASC has access to appropriate expertise to carry out both its technical architecture and business architecture roles and that the additional duties proposed should not dilute the technical aspects of the sub-committee's remit. We agree appropriate resources need to be available for each area of the sub-committee's remit. We note that the TSC is already actively addressing this and considering appropriate structures and ways of working (for example, establishing expert groups and a technical and business expert community) to ensure it is able to fulfil its obligations.
- 2.7. Some respondents commented that the Programme should handover to TABASC a complete and up-to-date set of business architecture documentation to provide the basis for its work in this area. As set out in the consultation we are already working with the TSC to ensure appropriate business architecture material is provided as an input to its business architecture work. The output of the Programme's work will provide an overview of the expected scope and dimensions of the Business Architecture Document that the TSC can use as the basis for the development of the Business Architecture Document itself. We will also provide access to the Target Operating Model and Business Process Model referenced in paragraph 2.3, but note that these have not been maintained since their original use.

Summary of Government Conclusion

Section F1 of the SEC will be amended in line with the drafting provided in the consultation. This will change the scope of the TSC such that it becomes the Technical Architecture and Business Architecture Sub-Committee (TABASC), which will be required to provide input on business architecture issues, including in summary:

- Developing and maintaining a Business Architecture Document.
- Providing the Panel, Change Board and Working Groups with Business Architecture advice in respect of Modifications Proposals and Disputes.
- At the request of the Panel, reviewing and making recommendations to the Panel on the effectiveness of the Business Architecture.
- Providing the Panel with support and advice in respect of any other matter which is concerned with the Business Architecture.

Changes to other sections of the SEC where reference is made to the TSC will also be changed to the new name.

Annex A

The Consultation invited all interested parties to comment on the proposals by 25 March 2016. In total, 13 written responses were received – all electronically. Respondents, broken down by sector, were as follows:

| Sector | Number of responses |
|-------------------------------|---------------------|
| Code Administration | 1 |
| Communications and Technology | 4 |
| Consumer Group | 1 |
| Energy Supplier | 7 |
| Total | 13 |

The following organisations responded to the consultation:

| | |
|----------------------------------|-----------------------|
| BEAMA and EUA Joint Response | British Gas |
| Citizens Advice | DCC |
| EDF Energy | EDMI |
| Energy UK | E.ON Energy Solutions |
| Technical Sub-Committee | Npower |
| ScottishPower Energy Retail Ltd. | The Labrador |
| Utilita Energy | |

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