Department of Energy & Climate Change

Smart Metering Implementation Programme

Consultation on the Process to Finalise the Great Britain Companion Specification

February 2014

This document is also available from our website at www.gov.uk/decc.

General information

Purpose of this document:

This document constitutes a consultation on the process to finalise the Great Britain Companion Specification.

Issued: 5 February 2014

Consultation closing date: 5 March 2014

Enquiries and responses to:

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Territorial extent:

This consultation applies to the gas and electricity markets in Great Britain. Responsibility for energy markets in Northern Ireland lies with the Northern Ireland Executive's Department of Enterprise, Trade and Investment.

Additional copies:

You may make copies of this document without seeking permission. An electronic version can be found www.gov.uk/government/consultations/smart-metering-implementation-programme-the-process-to-finalise-the-great-britain-companion-specification.

Other versions of the document in Braille, large print or audio-cassette are available on request. This includes a Welsh version. Please contact us under the above details to request alternative versions.

Confidentiality and data protection:

DECC intends to summarise all responses and place this summary on our website at www.decc.gov.uk/en/content/cms/consultations/. This summary will include a list of names or organisations that responded but not people's names, addresses or other contact details. In addition DECC intends to publish the individual responses on its website and you should therefore let us know if you are not content for the response or any part of it to be published. We will not publish people's personal names, addresses or other contact details. If you indicate that you do not want your response published we will not publish it automatically but it could still be subject to information requests as detailed below.

Further, information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

If you do not want your individual response to be published on the website, or to otherwise be treated as confidential please say so clearly in writing when you send

your response to the consultation. For the purposes of considering access to information requests it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

Quality assurance:

This consultation has been carried out in accordance with the Government's Code of Practice on consultation, which can be found here:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60937/Consultation-Principles.pdf

If you have any complaints about the consultation process (as opposed to comments about the issues which are the subject of the consultation) please address them to:

DECC Consultation Co-ordinator
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London SW1A 2AW
Email: consultation.coordinator@decc.gsi.gov.uk

Table of Contents

1 Introduction

1 This document sets out the manner in which the Government intends to complete the development of the 2.4 GHz Great Britain Companion Specification (GBCS) to support the supplier-led Smart Meter roll-out by 2020. The GBCS will describe the detailed requirements for communications between Devices in consumers' premises, and between Devices and the Data and Communications Company (DCC).

2 The Government is seeking views on:

- The proposed process for completing the GBCS; and
- A policy proposal to remove locally-initiated Consumer Access Device (CAD) pairing from the first version of the GBCS.

3 In Chapter 2, we set out our proposals for completing the GBCS. The GBCS will be based on internationally recognised communications protocols, ZigBee SEP and DLMS COSEM, and will detail local implementation requirements where necessary. The proposed process will provide parties who will use or be affected by the GBCS with the opportunity to be involved in its development.

4 Remotely-initiated CAD pairing solutions (where the consumer provides information to a third party to pair their CAD) will be supported by the DCC and Devices at Initial Live Operations. This will ensure that consumers will have early access to a CAD pairing service and so will be able to begin to realise the benefits of CADs. Domestic consumers will also be offered In Home Displays (IHDs), which will be available when the smart meter is installed in the consumer's premises.

5 The Government is working towards the development of locally-initiated CAD pairing (for the reasons identified in the SMETS 2 Part 2 Government Response[1]). However, as set out in Chapter 3, the ZigBee Alliance has indicated that it is unlikely that the work needed to include this functionality in ZigBee SEP will be completed in the timescales that support Initial Live Operations in Autumn 2015. The Government therefore proposes that locally-initiated CAD pairing is implemented at a later date.

6 The Government will also be consulting on further proposals to ensure the availability of a consumer friendly route for data access in the coming months.

[1] www.gov.uk/government/consultations/smart-metering-equipment-technical-specifications-second-version.

2 GBCS Development

7 The Government announced in the SMETS 2 response that it would develop the GBCS, which would be based on ZigBee SEP and DLMS COSEM. The GBCS will describe communications between:

- Devices on the Home Area Network (HAN), which will be a subset of the requirements defined in ZigBee SEP 1.2;
- The Gas Smart Meter and the DCC, which will be based on ZigBee SEP message structures contained within a GB security wrapper[2]; and
- The Electricity Smart Meter and the DCC, which will be based on DLMS COSEM.

8 The ZigBee Alliance is extending ZigBee SEP to include requirements proposed by its members, including the GB smart meter requirements. The Government will then reference the mandatory requirements of ZigBee SEP 1.2 for the GB HAN within the GBCS.

9 The Government is drafting the detailed requirements for end-to-end communications. While these requirements will be based on ZigBee SEP and DLMS COSEM, the GBCS will define a local and necessarily detailed implementation of the protocols, which is needed to meet the GB requirements and to achieve interoperability between Devices and the DCC.

10 The Government has taken steps to ensure it has the appropriate technical resource available to support the development and assurance of the GBCS and has established a joint industry project team[3] to manage the development of the GBCS. We would welcome the further involvement of ZigBee SEP and DLMS COSEM experts to support this work.

11 The Government will invite comments on draft versions of the GBCS at key junctures in its development. An initial version has been provided to the DCC, the GBCS working group (a group chaired by DECC with a membership principally made up of Device manufacturers) and other industry bodies. We will make this version available to other parties on request. The Government has specifically asked, and will continue to ask, reviewers to consider whether the specifications are complete, clearly defined and can be expected to deliver interoperability between HAN connected Devices, and between Devices and the DCC[4].

12 The Government would welcome any initial proving of the GBCS[5] that the DCC, energy suppliers and Device manufacturers undertake as part of their review. We will assist this process as appropriate.

[2] This will contain the security information needed to meet GB security requirements and will be based on the DLMS access layer protocol. This represents a change to the pure ZigBee SEP solution proposed in the SMETS 2 Government Response Part 1. This change followed a ballot of ZigBee Alliance members, which concluded that it was not possible to extend the ZigBee SEP communications protocol to meet the Government's security requirements for end-to-end messages.
[3] Including representation from the DCC, BEAMA and the ZigBee Alliance.
[4] We intend to continue to develop and review the GBCS during the period of consultation we have now entered. The Government accepts that a different process may need to be adopted following receipt of consultation responses.
[5] This proving exercise could for example involve participants simulating (i.e. performing the interface role of) the DCC and Devices and generating messages and responses based on the GBCS Use Cases.

13 The Government will also complete a formal consultation on a base-lined version of the GBCS as outlined in the plan. Furthermore, the DCC will undertake testing of their systems, including with in-home equipment, during Systems Integration Testing.

Consultation Questions	
Q1	Do you agree with the proposed process for developing the GBCS? If not, please provide a rationale for your views.

3 Locally-initiated CAD Pairing

14 The ZigBee Alliance is developing ZigBee SEP1.2, which will be used as the GB HAN protocol. A substantive release of ZigBee SEP is planned for the end of April 2014, but the Government has been advised that the detailed requirements to support locally-initiated CAD pairing may not be available by this delivery date. While these requirements are technically possible they are novel and we would be the first in the world to develop this approach in addition to the remote pairing route. We therefore propose to exclude this functionality from SMETS 2, CHTS and the initial version of the GBCS.

15 The ZigBee Alliance is continuing to work towards the development of locally-initiated CAD pairing. The Government welcomes this commitment, which will enable locally-initiated CAD pairing to be adopted into the GBCS, CHTS and SMETS at a later date.

16 Remotely-initiated pairing of CADs will be supported by ZigBee SEP 1.2 and by the DCC at Initial Live Operations. Therefore, DCC Users will be able to offer consumers a remotely-initiated CAD pairing service and energy suppliers are required, by the Operational Licence Conditions[6], to take all reasonable steps to pair CADs to the HAN when requested to do so by a consumer. This will ensure that consumers will be able to pair their CADs and so receive detailed consumption data locally from Initial Live Operations. The Government will undertake further consultation in the coming months on arrangements to support the use of CADs and more generally to ensure that consumer friendly routes for data access are available.

Consultation Questions	
Q2	Do you agree with the proposal to remove locally-initiated CAD pairing functionality from the SMETS 2, CHTS and the GBCS at this time? If not, please provide a rationale for your views.
Q3	When do you believe it would be appropriate to reinstate locally-initiated CAD pairing functionality? Please provide a rationale for your views.

[6] The Operational Licence Conditions are part of the energy supply licences which require energy suppliers to provide certain smart service to consumers with smart meters.

4 Timetable

17 Annex 1 shows the key milestones associated with the development of the GBCS. The completion of the document is heavily dependent upon the development of ZigBee SEP 1.2 specifications by the ZigBee Alliance. The Government will continue to work closely with the ZigBee Alliance in the development of the GBCS in order to alleviate any risks, and more generally with other interested stakeholders.

18 The Government set out in Part 2 of the SMETS 2 Government Response its intention to notify the GBCS as part of the second iteration of SMETS 2 in Q2 2014. However, it was acknowledged that this activity was dependent on the completion of proposed changes to ZigBee SEP and DLMS COSEM.

19 The GBCS will need to be notified under the Technical Standards and Regulations Directive before it can be brought into force. There are advantages in notifying earlier rather than later; for example, it may allow us to complete the notification process earlier and so allow us to bring the GBCS into force at an earlier date. We therefore propose to notify the GBCS over the summer, but recognise this means that revisions made as a result of consultation or Systems Integration Testing may require a further notification.

Glossary

Communications Hub

A device which complies with the requirements of CHTS.

Communications Hub Technical Specifications (CHTS)

A document which sets out the minimum physical, functional, interface and data requirements that will apply to a Communications Hub.

Consumer Access Device (CAD)

A device which will be securely connected via the HAN interface and will receive consumption and tariff information which it will use to assist consumers manage their energy use. A CAD may be one of a number of devices - such as an enhanced energy display, a smart appliance or a home automation controller.

Data and Communications Company (DCC)

The holder of the smart meter communication licence, Smart DCC Ltd.

DCC User

A SEC Party who has completed the User Entry Processes and is therefore able to use DCC Services.

Device

One of the following: (a) an Electricity Smart Meter; (b) a Gas Smart Meter; (c) a Communications Hub Function; (d) a Gas Proxy Function; (e) a Pre-Payment Interface; (f) an HAN Controlled Auxiliary Load Control Switch; or (g) any Type 2 Device (e.g. IHD).

DLMS COSEM (Device Language Message Specification Companion Specification for Energy Metering)

The suite of standards developed and maintained by the DLMS User Association that describes a common communications language for exchanges with energy meters.

DLMS User Association

The body that develops and maintains DLMS COSEM.

Electricity Smart Meter

A Device meeting the requirements placed on Electricity Smart Metering Equipment in the SMETS.

Gas Smart Meter

A Device meeting the requirements placed on Gas Smart Metering Equipment in the SMETS.

GB Companion Specification (GBCS)

A document setting out amongst other things, the detailed arrangements for communications between Devices on the HAN and between the DCC and Devices.

Home Area Network (HAN)

The means by which communication between Devices takes place within a premises.

Initial Live Operations

The expectation that the DCC will have built and tested its systems for SMETS2 equipment and be operationally ready; all of the Large suppliers will be ready to use the DCC's Services, start installing SMETS2 meters and offer basic services to both credit and pre-payment customers; the DNOs will be ready to support Smart Meter installation; and the Electricity DNOs ready to use the DCC Service to improve network management. Currently, this is planned to be September 2015.

Smart Energy Code (SEC)

The Code designated by the Secretary of State pursuant to Condition 22 of the DCC licence and setting out, amongst other things, the contractual arrangements by which DCC provides services to users as part of its Authorised Business.

Smart Metering Equipment Technical Specifications (SMETS)

A document that sets out the minimum physical, functional, interface and data requirements that will apply to smart metering equipment.

Systems Integration Testing

The period of DCC testing where Devices and DCC's service providers systems are tested together.

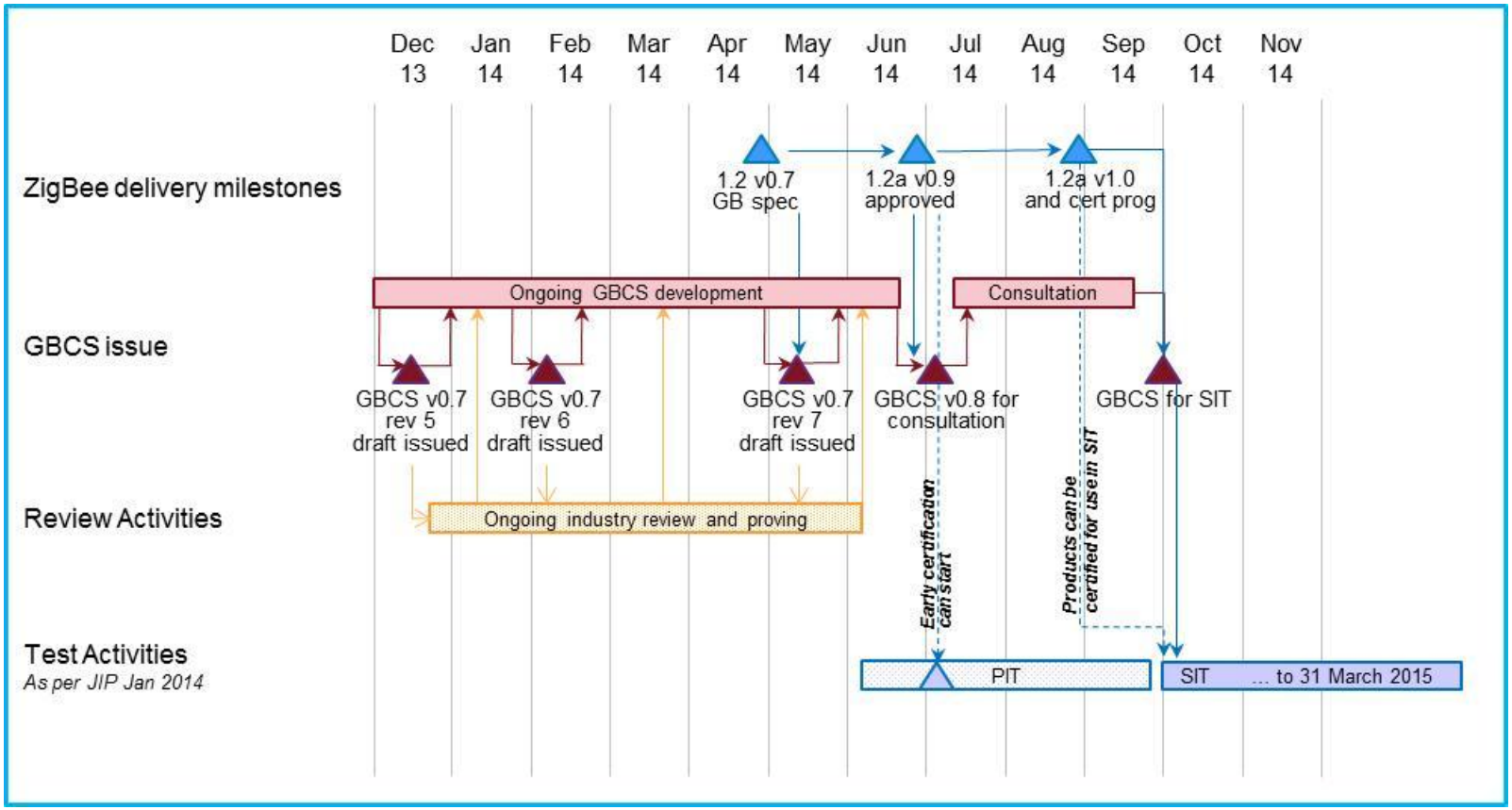
ZigBee Alliance

The body that develops and maintains ZigBee SEP.

ZigBee SEP (Smart Energy Profile)

A specification for a suite of high level communication protocols used for energy applications on local networks.

Annex 1: GBCS Development Milestones



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