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SECMP0056

‘IHD / PPMID ZigBee Attributes Available on the HAN’

Modification Report

Version 1.0

14 September 2020



About this document

This document is a Modification Report. It currently sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions.

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This document also has four annexes:

- **Annex A** contains the business requirements for the solution.
- **Annex B** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.
- **Annex C** contains the full Data Communications Company (DCC) Impact Assessment response.
- **Annex D** contains the full responses received to the Refinement Consultation.

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1. Summary

This proposal has been raised by Emslie Law from OVO Energy.

Currently under the SEC, Smart Metering Equipment Technical Specifications (SMETS) 2 In-Home Displays (IHDs) and Prepayment Interface Devices (PPMIDs) are not notified of a Change of Tenancy (CoT) event. This could allow a new tenant to access the previous tenant's personal information and place the Supplier in breach of the General Data Protection Regulation (GDPR).

In SMETS1 the ZigBee attributes available to connected Devices on the Home Area Network (HAN) allow Devices to be notified of a CoT and so these do not display data prior to these events. The solution proposes to make Zigbee attributes for CoT parameters available in SMETS2 to HAN Devices such as IHDs and PPMIDs and also mandate IHDs and PPMIDs to query the Electricity Smart Metering Equipment (ESME) and Gas Proxy Function (GPF) for CoT information.

Suppliers, the DCC and Other SEC Parties will be impacted by this modification. The DCC Impact Assessment states that the changes required for this modification will cost approximately £2,9m and if approved this modification is targeted for the November 2021 SEC Release. This is an Authority Determined Modification.

2. Issue

What are the current arrangements?

Under SMETS1, CoT is a Zigbee attribute that is available to IHDs and PPMIDs on the HAN. Via corresponding Service Requests, the GPF and ESME are notified of a CoT. As a result, they do not display data prior to this event. However, the Zigbee attributes covering CoT were not included in the SMETS2 specification.

What is the issue?

As a result of the capability included in SMETS1 not being available in SMETS2, connected Devices using the SMETS2 specifications can display data prior to a CoT. This would allow a new occupier to view the previous occupier's personal data, including consumption data (available at a half-hourly level) and personal messages about tariffs or debt sent from the Supplier to the previous tenant. This is a clear breach of GDPR.

What is the impact this is having?

If this issue is not addressed, connected Devices adhering to SMETS2 specifications will continue to display personal data to unintended Consumers. This will mean that electricity and gas Suppliers will not be providing an adequate level of data protection and privacy for their Consumers.

3. Solution

Proposed Solution

The solution proposes to make Zigbee attributes for CoT parameters available to SMETS2 HAN Devices such as IHDs and PPMIDs. Furthermore, the solution will mandate IHDs and PPMIDs to query the ESME and GPF for CoT information.

The business requirements for this solution can be found in Annex A.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
✓	Large Suppliers	✓	Small Suppliers
	Electricity Network Operators		Gas Network Operators
✓	Other SEC Parties	✓	DCC

Supplier Parties

This modification will enable the functionality in SMETS2 for the ESME, GPF and other Devices to remove the historical information upon notification of a CoT so it is no longer available for Devices to display. There will be no additional work for Suppliers, but as this modification will involve a change to the Great Britain Companion Specification (GBCS) there will also be an associated technical specification uplift.

Other SEC Parties

Device Manufacturers will need to ensure their Devices are able to request the information regarding a CoT from the EMSE and GPF. As previously stated, this modification will involve a change to GBCS as well as an associated firmware upgrade.

DCC System

No specific infrastructure requirements or changes have been identified although minor changes are required to the Communications Hubs and the DCC have noted in the Preliminary Assessment that there may be an increase in Service Request volumes as a result of this change.

The full impacts on DCC Systems and DCC's proposed testing approach can be found in the DCC Impact Assessment response in Annex C.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Schedule 8 'Great Britain Companion Specification' (GBCS)
- Schedule 9 'Smart Metering Equipment Technical Specifications' (SMETS)
- Schedule 10 'Communications Hub Technical Specifications' (CHTS)
- Schedule 11 'Technical Specification Applicability Tables' (TSAT)

The changes to the SEC required to deliver the proposed solution can be found in Annex B.

Technical specification versions

This modification will be implemented in the latest versions of the Technical Specifications issued at the relevant SEC Release. This is likely to be minor versions (0.n) of each specification.

Consumers

The Proposed Solution of this modification will result in a higher level of data protection for Consumers. A Consumer's data will no longer be available on an IHD or PPMID once a CoT has occurred.

Other industry Codes

There are no anticipated impacts on other industry Codes.

Greenhouse gas emissions

There are no anticipated impacts on greenhouse gas emissions.

5. Costs

DCC costs

The DCC implementation cost to implement this modification is £2,949,147. The breakdown of these costs are as follows:

Breakdown of DCC implementation costs	
Activity	Cost
Design, Build and Pre-Integration Testing (PIT)	£1,757,960
Systems Integration Testing (SIT)	£993,995
User Integration Testing (UIT)	£105,160
Implement to Live	£78,932

More information can be found in the DCC Impact Assessment response in Annex C.

SECAS costs

The estimated Smart Energy Code Administrator and Secretariat (SECAS) implementation costs to implement this modification is two days of effort, amounting to approximately £1,200. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

SEC Party costs

The majority of Refinement Consultation respondents believe that SEC Parties will incur costs due to testing and development although no estimate costs were provided. A respondent also flagged that costs will be incurred due to ZigBee certificate recertification.

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **4 November 2021** (November 2021 SEC Release) if a decision to approve is received on or before 4 December 2020; or
- **3 November 2022** (November 2022 SEC Release) if a decision to approve is received after 4 December 2020 but on or before 3 December 2021.

As the changes impact a Technical Specification, they should be implemented in a SEC Release that includes an uplift to the Technical Specifications to prevent more than one change to the Technical Specifications in a calendar year. The Proposed Solution requires a lead time of 11 months and so the earliest such release this modification can be implemented in is the November 2021 SEC Release. If, following a decision and allowing enough lead time, an earlier Release made updates to the Technical Specifications, the Panel may request that this modification be moved that Release.

7. Assessment of the proposal

Observations on the issue

The Proposer was initially concerned about GDPR issues around CoT, Change of Supplier (CoS), and threshold data. This has been discussed with SEC Parties to determine which items could be considered 'personal data' under GDPR.

SEC Parties had agreed that under SMETS1 the ability of the ESME and GPF to restrict data sent to IHDs after a CoT event was present but in SMETS2 this was missing, which presents a risk to

Suppliers compliance with GDPR. The Working Group also noted that TS0893 (an issue raised at the Technical Specifications Issue Resolution Sub-group (TSIRS)) resulted in an interim measure issued by BEIS to allow the best possible alignment with the requirements of GDPR until the final solution of this modification is implemented.

Solution development

The Proposed Solution has been discussed with SEC Parties. It has discussed whether the solution should be for the EMSE and GPF to 'publish' the CoT information or to 'push' the information to the other Devices. The majority of the Working Group believed that the 'publish' method proposed was the best way to implement the changes needed and further expressed that they would rather not have two methods.

It has agreed that changes to the Communications Hub software are required in order for the GPF to support this method, which will require the DCC to make changes.

The ZigBee attributes (bits #9 and #10 of the Proposed TenancyChangeControl Attribute) were discussed and the solution put forward is that the information on bit #9 (currently 'clear data – customer') could be expanded to include Supplier messages data. The use of bit #10 has been discussed but it has been agreed to use only bit #9.

What could be the impact if this change isn't made?

SECMPO056 was taken to the Working Group to discuss the business case and the cost of implementation for the Proposed Solution.

The Working Group considered the benefit of the modification would be high as a breach of the GDPR would be seen as the responsibility of the Supplier and would incur a fine of up to €20m or 4% of a company's annual turnover.

The Working Group suggested that, as well as DCC central system costs, there would also be costs to implement the modification in Supplier systems. This was confirmed in the responses received during the Refinement Consultation. The majority of costs SEC Parties will incur relate to testing, development and ZigBee re-certification.

Details surrounding what constitutes a breach of GDPR were also discussed by the Working Group. A breakdown of each scenario can be found below.

Change of Tenancy

The Working Group agreed that consumption data, which could be considered to be 'personal data', is currently available in SMETS2 to the IHD and PPMID after a CoT event has taken place. This could lead to the risk that a new tenant may be able to view a previous tenant's consumption history.

The group agreed that the ESME and GPF Servers needed to be able to publish the CoT and the IHD Client must be able to receive the CoT. In addition, the IHD client must be able to request CoT information and the ESME or GPF Server must be able to provide the information.

The group discussed the speed of the IHD clearing old data. It agreed that the Supplier would need to send appropriate service requests to set up the parameters (tariffs, pricing, payment mode, user message etc) for a new customer prior to sending the CoT notification. Alternatively, the Supplier

should ensure that the applicable time in the CoT is selected such that tariffs, pricing, payment mode and user message are updated prior to the CoT being applied.

Change of Supplier

The Working Group discussed what information was passed from the ESME or GPF to the IHD or PPMID and who could view this information in a CoS scenario. It concluded that as a CoS scenario is most likely to be the same tenant simply changing energy supplier (i.e. no simultaneous CoT), there is no need to restrict access to previous information stored on the ESME or GPF.

The Working Group further discussed possible future proposals that could potentially allow Consumers to change Supplier every half hour; implementing an IHD information wipe every half hour would mean no consumption data would be available on the HAN for the customer to view.

Dual Supplier situations

Working Group members discussed the dual Supplier scenario where one Supplier might be informed of a CoT and send a CoT Service Request and the other Supplier is either not informed or does not send this until sometime later (if at all). The group agreed that where one CoT is received, both sets of consumption data should be removed (gas and electricity). Where two CoTs are received on different days the data on the IHD and PPMID should be removed on both occasions. This might lead to the information being removed twice, but the group agreed that this was the most reliable method to prevent the IHD retrieving and re-populating the historical data.

Supplier Messages

The Working Group considered the messages sent by Suppliers to PPMIDs and whether these messages are stored or deleted on a CoT. The group agreed that consumption data and Supplier messages which could be personal to the Consumer should be cleared.

Threshold Values

The Working Group considered whether threshold information was considered personal information and would allow identification of a consumer. This would likely depend on if the Supplier was setting the thresholds or the Consumer. The group agreed that data such as thresholds and Supplier name and telephone number could not be considered personal data and does not need to be cleared.

Views against the General SEC Objectives

Proposer's views

The Proposer feels that this modification will better facilitate SEC Objective (f)¹. The Proposer believes the Proposed Solution will ensure that customer data is protected and remain compliant with GDPR requirements for data security.

¹ Ensure the protection of data and the security of data and systems in the operation of the SEC.

Industry views

The majority of respondents to the Refinement Consultation believe this modification better facilitates SEC Objective (f). This is due to the Proposed Solution preventing personal data from being viewed by a new tenant, and thus not breaching GDPR requirements.

Two respondents felt that the modification better facilitates SEC Objective (a)² as Smart Metering Operation will be maintained and only information relevant to the current tenant will be available.

One respondent felt that this modification better facilitates SEC Objective (c)³. This is because the proposal provides the new tenant with the appropriate information for them to manage their electricity and gas consumption

Appendix 1: Progression timetable

SECAS will issue the Modification Report Consultation on 14 September 2020. Once the consultation has closed SECAS will take the modification to the Change Board for vote before the Authority make its decision.

Timetable	
Event/Action	Date
Modification raised	5 Jul 2018
Modification discussed at Working Group	6 Aug 2018
Modification discussed at Working Group	17 Sep 2018
Preliminary Assessment requested	Feb 2019
Preliminary Assessment returned	23 Apr 2019
Modification discussed at Working Group	1 May 2019
Impact Assessment costs approved by Change Board	22 May 2019
Refinement Consultation	30 May – 20 Jun 2019
Impact Assessment requested	25 Jun 2019
Impact Assessment returned	20 Aug 2020
Modification Report approved by Panel	11 Sep 2020
Modification Report Consultation	14 Sep – 2 Oct 2020
Change Board Vote	21 Oct 2020
Authority decision (anticipated date)	25 Nov 2020

² Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain.

³ Facilitate energy consumers' management of their use of electricity and gas through the provision of appropriate information via smart metering systems.

Appendix 2: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
CADs	Consumer Access Devices
CHTS	Communications Hub Technical Specifications
CoT	Change of Tenancy
CoS	Change of Supplier
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
GBCS	Great Britain Companion Specification
GDPR	General Data Protection Regulation
GPF	Gas Proxy Function
HAN	Home Area Network
IHD	In-Home Display
PPMID	Prepayment Meter Interface Device
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specifications
TSAT	Technical Specification Applicability Tables