



Stage 02: Draft Modification Report

SECMP0019:

ALCS/HCALCS Description Labels

What stage is this document in the process?

01	Initial Assessment
02	Refinement Process
03	Modification Report
04	Decision

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Summary

This Modification Proposal recommends the introduction of a consistent naming conventions that Suppliers should use when defining any of the Auxiliary Load Control Switches (ALCS) or HAN Connected Auxiliary Load Control Switches (HCALCS).

Working Group View



- The Working Group (WG) unanimously believes that SECMP0019 should be approved.

Impacts



- Large and Small Suppliers
- There are no impacts on DCC Central Systems and/or Party interfacing systems

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About this Document

This document is a Draft Modification Report (DMR). This document provides detailed information on the issue, solution, impacts, costs and Working Group (WG) discussions and conclusion on SECMP0019.

This document has three attachments:

- Attachment A contains the draft legal text changes to support this modification;
- Attachment B contains the schematic diagrams outlining the processes of updating ALCS/HCALCS labels; and
- Attachment C contains the Working Group Consultation (WGC) Form.

The Smart Energy Code (SEC) Panel will consider this report at its meeting in June 2018 to ensure that due process has been followed and determine whether to issue the modification for Modification Report Consultation (MRC).

1. Summary

What is the issue?

Currently Suppliers can determine their own naming convention for ALCS or HCALCS. In a Change of Supplier (CoS) event, the non-standardised naming may result in incoming Suppliers applying incorrect settings for each switch.

What is the Proposed Solution?

SECMP0019 suggests introducing a standardised naming convention for all possible ALCS and HCALCS. The labels list will be on the SEC Website, and will include the process to maintain the labels. This process would be optional for Suppliers to adopt.

Impacts – Proposed Solution

Party

Large Supplier Parties	X	Small Supplier Parties	X
Electricity Network Parties		Gas Network Parties	
Other SEC Parties			

System

DCC Systems		Party interfacing systems	
Smart Metering Systems		Communication Hubs	
Other systems			

Implementation Costs

The total estimated implementation cost to deliver SECMP0019 is approximately £1,200 and are limited to SECAS's time and effort.

Implementation Date

The Working Group recommends an implementation date of:

- **1st November 2018**, if a decision to approve is made by **18th October 2018**.

Working Group's views

The Working Group (WG) believes unanimously that SECMP0019 does better facilitate the SEC Objectives. The WG therefore believes that this Modification Proposal should be approved.

2. What is the issue?

Background

Currently, most electrical load switches operate through timers and separate ring circuits. These are mostly associated with Economy 7 or 10 tariffs, where timers will switch off appliances at set periods of reduced electricity costs. The Smart Metering Implementation Programme (SMIP) will continue to offer this functionality thanks to Electrical Smart Metering Equipment (ESME), which will be able to control load switching for different electrical appliances through integrated ALCS and connected HCALCS.

As variable tariffs become more common, so too will the use of ALCS, allowing Energy Consumers to optimise their electricity consumption by setting appliances to draw electricity at beneficial periods of the day. For example, an ESME could control a water storage heater to draw electricity only in periods of lower tariffs.

The Proposer believes introducing an agreed way forward will assist Suppliers to efficiently support their customers.

What is the issue?

Currently, Import Suppliers (as DCC Users) can set naming conventions for ALCS and HCALCS as they see fit (for example a “water storage heater” or a “boiler” could refer to the same functionality). In the event of a Change of Supplier (CoS), the gaining Supplier would use the Service Request (SR) 7.7 (Read Auxiliary Load Switch Data) to understand the ESME’s current ALCS & HCALCS setup. As the outgoing Supplier may have a different naming convention for different ALCS, the gaining Supplier may apply the wrong settings to an ALCS connected device through SR6.14 (Update Device Configuration (Auxiliary Load Control Description)).

Incorrectly configured ALCS connected devices may be inadvertently disconnected due to misinterpretation of the labels by the new Supplier, inconveniencing Energy Consumers and Suppliers, as well as possibly cause harm to the connected devices. For example, if an ALCS disconnects a charging electric vehicle at the time of a tariff switch, it may cause damage to the vehicle battery. Another example would be that a water storage heater could be incorrectly set to disconnect at the switch from low to high tariffs. High tariffs usually apply during daytime, leaving Energy Consumers with no heating during the day.

These issues are likely to arise during a CoS or Change of Tenancy (CoT), where the new Supplier would have to assess the definitions of the used naming conventions based on the read response from SR7.7. If confusion does arise, Suppliers would require human intervention to determine the tariff implications and time settings required.

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3. Proposed Solution

Solution

SECMP0019 proposes to introduce a standardised naming convention for ALCS and HCALCS. This list will be published on the SEC Website, and Suppliers would not be mandated to apply these labels to their ALCS and HCALCS.

Suppliers could request that labels be added to or removed from this list by submitting a request to SECAS. SECAS would validate this request, before asking the TABASC to approve the change. SECAS will notify the industry of any changes to the list. Please see the process diagrams in Attachment B that show how this process will work for the addition or removal of a label from this list.

The Proposer and the Working Group have drafted an initial list of the ALCS/HCALCS labels list. This list would be published on the SEC Website.

ALCS/HCALCS Labels List	
Label	Definition
Water heating	Any hot water storage system
Space heating	Any electric heating system used to provide space heating e.g storage radiators, underfloor heating
Electric Vehicle	This switch is utilised to control the charging point for an electric vehicle
Not Installed	It is assumed that all meters have up to five internal switches. If the meter has less than five switches then, on initial installation, the inventory should be informed of the number of available switches. For example, if a meter has 2 switches, switches 3 to 5 should be labelled as 'Not Installed'.

Table1: ALCS/HCALCS labels list

Draft legal text

SECMP0019 will require changes to the following SEC Sections:

1. Amendment of SEC Section A - Definitions and Interpretation.

Changes to this section will be the addition of the term “ALCS/HCALCS Labels List” as a defined term.

2. Amendment of SEC Section F – Smart Metering System Requirements.

Changes to this section will introduce the governance mechanism for adding new ALCS/ HCALCS labels.

More detailed information and the proposed legal text is held in Attachment A – Draft legal text

4. Impacts

The following section sets out the impacts associated with the implementation of SECMP0019.

SEC Party impacts

Large Supplier Parties	X	Small Supplier Parties	X
Electricity Network Parties		Gas Network Parties	
Other SEC Parties			

SECMP0019 would introduce the ability for Suppliers to use the ALCS & HCALCS naming convention provided in the ALCS/HCALCS Labels List.

Central System impacts

DCC Systems		Party interfacing systems	
Smart Metering Systems		Communication Hubs	
Other systems			

SECMP0019 will have no DCC impact.

Testing

As SECMP0019 is a governance only modification, no central systems are being modified and therefore testing is not required.

SEC and Subsidiary Document impacts

SECMP0019 proposes changes to:

- SEC Section A - Definitions and Interpretation; and
- SEC Section F – Smart Metering System Requirements.
-

Impacts on other industry codes

No other code impacts are anticipated.

Greenhouse Gas Emission impacts

No Greenhouse Gas Emission are anticipated.

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5. Costs

Estimated Implementation costs

The total estimated implementation cost to delivery SECMP0019 is approximately £1,200. This is composed of SEC time and effort to implement this modification.

SEC costs

The estimated SEC implementation cost is detailed in the table below:

SECAS implementation costs		
Implementation Activity	Effort (man days)	Cost
Application of approved changes to the SEC. Publication of new version of the SEC on the SEC Website and issuing this to SEC Parties. Review and updated any impacted SEC guidance materials.	Two	£1,200 ¹

DCC costs

SECMP0019 will not have any DCC costs.

¹ SEC man day effort based on a blended rate of £600 per day.

6. Implementation

Recommended implementation date

The Working Group recommends an implementation date of:

- 1st November 2018, if a decision to approve is made by 18th October 2018.

The November 2018 SEC Release is the earliest SEC Release that this modification can be targeted for. SECAS will require a 10 Working Day lead time on the decision in order to prepare and implement the changes to the SEC and the SEC Website for this modification. No other participants are expected to be impacted by the implementation of this modification.

7. Working Group Discussions

Terms of Reference

The WG has considered and answered the questions put forward in the SECMP0019 Terms of Reference (ToR). A summary of their discussions and conclusions are detailed below.

Do we have an exhaustive list of names and definitions for all possible ALCS?

The Working Group reviewed an initial list of labels, and SECAS circulated this list to all Suppliers requesting feedback. The WG has since refined this list to include:

- water heating;
- space heating;
- electric vehicles; and
- not installed.

The Working Group believes this list covers all general scenarios and is a good list for implementation, but notes that further labels can be added in the future. The Working Group Consultation asks respondents whether they believe anything is missing, to ensure this initial list is complete.

Do all Suppliers and Other Users agree to the set of names and definitions for all ALCS?

The WG has agreed this list, and is seeking wider Industry feedback via the WG consultation.

Where is the best place to keep this data so that it is as flexible as possible while being mandatory?

The WG has determined that the list should be published on the SECAS website. This avoids the timescales with raising a modification each time a change is required, which would be the case should this list be included in the SEC.

How do we future proof SECMP0019? While the list may contain names for all existing devices, this may change as new ALCS are added to the market. The Working Group will need to develop a means of updating this list. If this document is added as an Annex to the SEC, a new Modification Proposal will be required to update it.

Attachment C lays out the proposed process for updating this list (be it an addition of a new label or the removal of an old one). The Panel (via TABASC) will oversee this process, with SECAS performing the review of any proposal prior to presentation. Furthermore, SECAS will be required to inform Industry of any changes to the list. Finally, SECAS will also inform new SEC Parties of this list as part of the successful accession email.

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Will the names of the ALCS/HCALCS remain within Industry or will they also be presented to the consumer?

This modification does not require this; however, the WG agreed to limit the number of characters for each label to 22 so that these labels would be readable on the HAN (and therefore on customer facing devices) if Suppliers wanted to display them on any devices.

Could Suppliers give some use cases of how these ALCS will be expected to operate? As these devices do not exist at present, could Suppliers familiarise the Working Group with these devices?

Suppliers have noted that the development of these switches is still in its early days. However, this process will be similar to Economy 7 or 10 tariffs.

What will be the process for correcting (backfilling) already populated fields?

By the time of implementation, it is expected that very low numbers of switches will be installed. The use of the list itself will be optional, but the WG and the Proposer expect that Suppliers will seek to update their naming conventions to align with the ALCS/HCALCS labels list as and when they can.

SECAS will publish this list as a guidance on the SEC Website to give Suppliers an early sight of the list. This should allow Suppliers to be familiar with the agreed labels before they are used in SR6.14.

Other discussions

Refining the contents of the suggested list of ALCS/HCALCS

The Proposer included a suggested list of Auxiliary Load Control Switch (ALCS) Descriptions. In preparation for the first WG meeting, SECAS circulated this list to all Suppliers requesting any input. SECAS noted that Suppliers were generally satisfied with the initial list.

The WG proposed that a new label should be added to account for cases where the ALCS was not in use and if a switch had not been installed. The Proposer agreed to this amendment, and the 'not installed' label was added to the list to cover these

ZigBee as a source of nomenclature

The WG agreed to align the ALCS/HCALCS labels list with the ZigBee list when possible.

Labels to be displayed over Home Area Network (HAN)

SECAS highlighted that while the labels can be up to 127 characters in length, only 22 characters can be displayed over the HAN. The WG and the Proposer noted that there is a benefit to displaying the ALCS/HCALCS labels over the HAN, and therefore to have the labels be up to 22 characters.

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Non DCC impacting

SECMP0019 originally proposed changes to the DCC User Interface Specification (DUIS) to introduce validation of the “Switch Description” in SRV 6.14.1 (Update Device Configuration (Auxiliary Load Control Description)). The DCC estimated that this change to their central systems would cost circa £432,000 - £622,000. Following this cost, the Proposer chose to pursue a non DCC Central Systems impacting modification. This solution would see a list published on the SEC Website, with an accompanying process for adding or removing labels from the list. It was noted that it would not be mandatory for Suppliers to use these names, but members believed that there was still benefit in having this and that Suppliers would follow this list if it was available.

Considerations from the Technical Architecture and Business Architecture Sub-Committee (TABASC)

SECAS presented the ALCS/HCALCS Labels List to the TABASC at its meeting in October 2017. The TABASC reviewed the list of labels and suggested the “Boost” label to be removed from the proposed list because Boost can be used for either water and space heating, which are both already separate labels on the list. It was considered that “Ground Source Heat Pump” should be added to the list. The Working Group agreed to remove ‘Boost’ from the list, but did not add ‘Ground Source Heat Pump’.

The TABASC reviewed and further refined the process of updating ALCS/HCALCS labels seeking for SECAS to make thorough checks to ensure that there are no repetitions in the process. It was clarified that the TABASC’s role in the processes is to approve or reject changes to the list, not to do the final checks; these will be performed by SECAS before the proposal is presented to the TABASC.

8. Working Group's Conclusions

The WG's **unanimous** view is that SECMP0019 better facilitates General SEC Objective(s) a), c) and d) and should be **approved**.

Benefits and drawbacks of SECMP0019

The Proposer and the WG have identified the following benefits and drawbacks related to SECMP0019:

Benefits

The Proposer and the WG agree that standardising the naming convention for ALCS/HCALCS will benefit the data quality within the UK's Energy Industry.

The Working Group agreed that, while this solution will not be mandatory, it will provide a tool to assist Suppliers in naming ALCS and HCALCS. Members believed this would help the new Supplier to better understand what is allocated to each switch when they receive a customer through a CoS. This will help to mitigate the risk that the new Supplier inadvertently switches off an ALCS because they did not know what was attached to it.

Drawbacks

No drawbacks were noted by the WG.

Views against the General SEC Objectives²

Objective (a)³

SECMP0019 will increase standardisation and result in efficiency gains by avoiding unnecessary costs relating to energy Suppliers' system development and customer service issues, because of different ALCS naming conventions and a lack of standardisation.

Objective (c)⁴

SECMP0019 will improve the Energy Consumer experience by having a clear and consistent way of identifying the ALCS across Suppliers and mitigate confusion.

² The SEC Objectives are available on the SEC Website at the following link: [SEC Objectives](#)

³ Facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain

⁴ Facilitate Energy Consumers' management of their use of electricity and gas through the provision to them of appropriate information by means of Smart Metering Systems

Objective (d)⁵

SECMP0019 will support the CoS process by alleviating the risk of certain switches being, inadvertently, left 'off'. This is especially critical when the connected appliance may be critical (for example a "water heater"). Anything that assists in making the CoS process easier and less complex must be investigated and costed accordingly, to the overall programme.

For the avoidance of doubt, the WG believes that SECMP0019 is neutral against the remaining Objectives.

⁵ Facilitate effective competition between persons engaged in, or in Commercial Activities connected with, the Supply of Energy

Appendix 1: Glossary

The table below provides definitions of the terms used in this document.

Definition	Term
ALCS	Auxiliary Load Control Switch
CoS	Change of Supplier
CoT	Change of Tenancy
DCC	Data and Communications Company
HCALCS	HAN Controlled Auxiliary Load Control Switch
ESME	Electrical Smart Metering Equipment
SMIP	Smart Metering Implementation Programme
ESME	Electrical Smart Metering Equipment
WG	Working Group
DMR	Draft Modification Report
SEC	Smart Energy Code
MRC	Modification Report Consultation
DCC	Data Communications Company
SR	Service Request
CoT	Change of Tenancy
ToR	Terms of Reference
HAN	Home Area Network
DUIS	DCC User Interface Specification
TABASC	Technical Architecture and Business Architecture Sub-Committee