

SEC Modification Proposal

- DCC Preliminary Assessment (PA) - **Final**
- Mod Proposal Ref: SECMP 0019
- Mod Proposal Title: ALCS Description Labels
- Mod Path: Path 2 - Authority determination

Version:

1.0

Date:

31 March 2017

Author:

DCC

Classification:

DCC PUBLIC

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1 Introduction

1.1 Document Purpose

The purpose of this DCC Preliminary Assessment (PA) is to provide the relevant Working Group with the information requested in accordance with SEC Section D6.9 and D6.10.

1.2 Previous information provided by DCC

This DCC Preliminary Assessment was requested of DCC on 06/01/2017.

1.3 DCC Contact Details

Please raise any queries regarding this DCC Impact Assessment using the contact details provided below.

Name	DCC - SEC Modification queries
Contact email	mods@smartdcc.co.uk

1.4 Modification description

This modification seeks to introduce a naming convention in the SEC in regards to ALCS and HCALCS. The rationale is that during CoS events, because of the different nomenclature, incoming suppliers may be unfamiliar with the current names and apply incorrect settings for each ALCS.

When adding a switch description to the ESME, the only constraint is to limit the length of the description such that it is under 127 characters long. Each supplier could have its own nomenclature for naming ALCS and HCALCS.

Incorrectly configured ALCS connected devices may disconnect and cause inconvenience to Energy Consumers and suppliers, as well as possibly cause harm to these devices. For example, if an ALCS disconnected 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.

SECMP0019 suggests introducing a standardised nomenclature for ALCS and HCALCS such that the description of what is connected to the switch becomes transparent.

These names would also need to be defined to avoid any confusion and possible repeats of the same ALCS. The Proposer suggests that this list would be held in the SEC or in an Annex to the SEC. Below is a suggested list for naming all current and anticipated ALCS items by the proposer:

- Water / Wet Heating
- Boost (Boost can refer to ANY load)
- Top of Tank / Top Element
- Unrestricted Heating
- Bottom of Tank / Bottom Element)
- Overnight Heating
- Electric Boiler Heating
- Resistive Space Heating / Space Heating
- Heat Pump
- Combined Heat and Power
- Electric Vehicle
- Solar / Photo Voltaic Load

1.5 Requirements

The requirements for this modification have been developed by the Working Group during the Refinement phase. The impact on DCC has been assessed against the Business Requirements and the corresponding draft legal text set out in the Solution Design Document.

Based on the discussions at the Working Group and the Business Requirements as set out in the Solution Design Document, DCC consider the requirements for SECMP 0019 to be **STABLE**. Where the requirements or SEC obligations set out in the Solution Design Document above change, DCC will be required to carry out further impact assessment.

2 Impact on DCC's Systems, Processes and People

This section describes the impact of SECMP 0019 on DCC's Services and Interfaces that impact Users and/or Parties.

2.1 Summary

This modification will impact the DSP Systems as follows

- When the DCC Data Systems receives SRV 6.14.1, the message shall be processed only if the value held by the "SwitchDescription" field matches an entry on the predefined list of ALCS/HCALCS description values stored in the within the system. If the value of the "SwitchDescription" that is not on the ALCS/HCALCS description list, the SRV shall be rejected.
- DCC Data Systems shall provide a mechanism to make the changes to the ALCS description list.

The proposal suggests that the possible values for the ALCS description label are maintained in a list/table in the system which is referenced by the schema.

A second option would be for users to avoid any changes by agreeing and maintaining a list of accepted descriptions outside of the DCC Systems. This is the option recommended by the DCC.

As requirements stand there should be no further impact to DCC systems or processes.

2.2 Impacts on DCC Services and Interfaces

The following table describes the detailed impacts of SECMP 0019 on DCC's Systems and processes.

Ref	Impact on DCC	User or Party Impact
001	Validation of ALCS/HCALCS description When the DCC Data Systems receives SRV 6.14.1, the message shall be processed only if the value held by the "SwitchDescription" field matches an entry on the predefined list of ALCS/HCALCS description values stored in the within the system. If the value of the "SwitchDescription" that is not on the ALCS/HCALCS description list, the SRV shall be rejected.	DSP Systems need validate ALCS description.
002	Update list of valid ALCS description labels Introduce a SSI screen that enables DCC to manage the list of valid labels (switch descriptions).	Self Service Interface

3 Impact on Security

This section describes the impact DCC considers SECMP 0019 will have on Security of DCC's Total System.

DCC has carried out a security risk assessment for SECMP 0019 and determined that **there are no material security risks** associated with the implementation of DCC's proposed solution.

4 Testing Considerations

This section describes the testing phases required to support the implementation of SECMP 0019.

4.1 Summary

- DCC will be required to carry out Pre-Integration Testing and System Integration Testing for SECMP 0019
- DCC anticipates that Users will require User Integration Testing to support their implementation of SECMP 0019. DCC asks that the Working Group considers and compiles the User testing requirements with DCC support, to ensure an optimal approach is taken for User Integration Testing for the relevant release.

4.2 Pre-integration Testing

Pre-Integration Testing comprises the tests that each Service Provider performs on its respective System changes, prior to the integration of all Service Provider Systems. DCC has factored the cost of Pre-Integration Testing (including DCC assurance) into this Impact Assessment.

Suggested PIT scope would include:

- Production, review and agreement of a design to enable development;
- Low level design production, development, unit test and any rework to achieve PIT complete status;
- Data generation and loading into the Test environment;
- Execution of System Tests through sufficient iterations to enable PIT complete;
- Design, implementation and execution of FAT scripts in accordance with assurance procedures used for Release 1.2; and
- Achieving PIT complete status and subsequent reporting.

4.3 Systems Integration Testing

Systems Integration Testing (SIT) is the testing of DCC's Total System, which brings together the component parts of DCC's System (e.g. DSP and CSP Systems) to allow testing of the end-to-end solution by DCC. The SIT activity is done for every DCC System release and incorporates the test and integration of multiple changes.

Additional SIT is recommended by DCC for a modification of this type. It should however be noted that the scope of SIT is likely to be more focused on regression testing to

confirm that the changes applied as part of this modification have not had an impact on the wider DCC Total Systems.

Suggested SIT scope would at a high level typically include:

- System Test script and data design;
- Data generation and loading into a co-ordinated System Test environment;
- Execution of System Tests through sufficient iterations to enable SIT complete.

4.4 User Integration Testing

User Integration Testing enables Users to run specific tests to support their implementation of a change.

DCC expects that User Integration Testing will be required in order to support User implementation of this modification.

Individual changes are collected into a DCC release. In order to achieve more efficient User Integration Testing for all parties, the DCC will coordinate specific testing requirements for all changes that comprise a release and issue a testing release approach document.

5 Implementation Timescales and Releases

5.1 Change Lead Times

From the date of approval, (in accordance with Section D9 of the SEC), in order to implement the changes proposed DCC requires a lead time of **12 months**.

This includes twelve months as stated in the DCC Release Management Policy plus an additional one month to allow for integrated release planning. Integrated release planning can only begin once all Authority Determinations have been received for all modifications proposed to be included within each Release.

5.2 Earliest Possible Release

In order to include these modifications in the June 2018 release, we would need an Authority decision by 1 June 2017.

5.3 Consideration against Other Changes

None identified.

6 DCC Costs and Charges

6.1 Cost impact

6.1.1 Implementation costs

The table below details the cost of delivering the changes and Services required to implement this Modification Proposal.

Implementation costs							
Implement ation Phase:	Design	Build	Pre- Integration Testing	System Integration Testing	User Testing	Impleme ntation to Live	Total
SECMP 0019	Between £432,000 and 622,000			TBD in full IA	TBD in full IA	TBD in full IA	£432,000 - £622,000
Implementation costs – supplementary information							
Implementati on cost assumptions	A. Costs are exclusive of VAT and any applicable finance charges						
	B. Majority of the costs above represent labour costs.						
	C. Costs provided for Design, Build and Pre-Integration Testing are quotes provided by the Service Providers and assuming there is no scope change can be considered the final costs. DCC have reviewed and challenged the costs from the Service Providers to ensure this reflects best price to date.						
Explanation of Implementati on Phases	DCC’s implementation costs are provided by implementation phases. The following describes the purpose of each phase:						
	• Design: The production of detailed System and Service design to deliver all new requirements.						
	• Build: The development of the designed Systems and Services to create a solution (e.g. code, systems, or products) that can be tested and implemented.						
	• Pre-integration Testing: Each Service Provider tests its own solution to agreed standards in isolation of other Service Providers. This is assured by DCC.						
	• System Integration Testing: All Service Providers’ PIT-complete solutions are brought together and tested as an integrated solution, ensuring all Service Provider solutions align and operate as an end to end solution.						
	• User Integration Testing: Users are provided with an opportunity to run a range of pre-specified tests in relation to the relevant change.						

- *Implementation to Live Costs: The solution is implemented into production environments and ready for use by Users as part of a live service. This service is subject to implementation costs.*

The fixed price cost for a Full Impact Assessment is **£10,000**.

6.1.2 On-going operational costs

The table below details the additional cost associated with the on-going operation of the new Systems or Services introduced through this Modification Proposal.

6.2 Impact on Charges

The following section describes the potential impact on Charges levied by DCC in accordance with the SEC.

DCC notes that SECMP 0019 does not propose any changes to the charging arrangements set out in SEC Section K. DCC has made the assumption that, in the absence of an agreed alternative arrangement by the Working Group, the costs associated with the implementation of SECMP 0019 will be allocated to DCC's fixed cost based and passed through to Parties via Fixed Charges.

Subject to the commercial arrangements put in place to support the relevant Release, DCC expects the increase in Charges associated with the implementation of SECMP 0019 to commence in the month following the modification's implementation.

7 RAID

The detail below provides a summary of the risks, assumptions, issues, dependencies and clarifications observed during the production of a DCC Impact Assessment. DCC requests that the Working Group consider this section and consider any material matters that have been identified during this Impact Assessment phase. Any changes may impact the proposed solution, implementation costs and/or implementation timescales.

7.1 Risks

Ref	Risk Description	Probability	Impact
None Identified			

7.2 Assumptions

DCC would like to confirm the validity of assumptions listed below with the Working Group. These assumptions have been used in the creation of this DCC Impact Assessment. Any changes to the assumptions may require DCC to undertake further assessment, prior to the contracting and implementation of this change. Any changes may impact the proposed solution, implementation costs and/or implementation timescales.

Ref	Description	Assumption Accepted
A-001	Design assumption: mechanism to provide list of acceptable labels – The available requirements do not specify the mechanism using which the list of valid ALCS labels are made available to DCC Data Systems. This PIA assumes that the distribution is not by way of signed files and the updates to the list of labels are managed by using a dedicated SSML screen. It is assumed that the authenticated users logged onto the corresponding SSML screen are authorised to make changes to the list of valid ALCS labels, with a second authoriser to approve the change.	TBC
A-002	Design assumption: Users in charge of status of ALCS and correct labels – The Service Users are expected to set the correct labels based on the context and use of an ALCS and the system cannot validate if there are duplicate label assignments as DCC Data Systems do not hold the device state information.	TBC

7.3 Issues

Ref	Issue Description	Severity	Priority
None Identified	n/a	n/a	n/a

7.4 Dependencies

Ref	Dependency	Dependency Accepted
None identified	n/a	n/a

7.5 Clarifications Required

Ref	Clarification	Status
C-001 HAN constraint on length of labels	As per section 3.2.3 of the Meeting 4 Final Minutes (held on 30th August 2016), the working group suggests to consider a 22 character limit on the length of the labels as there is a constraint on the HAN. This is not a firm requirement yet and needs further discussions. If confirmed, the corresponding SSMI screen shall enforce this limit.	Open

Ref	Clarification	Status
C-002 Presentation requirements	Any specific requirements about presenting and updating the list of allowed labels via the SSI should be finalised before progressing with a a FIA.	Open