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What stage is this document in the process?

- ▶ 01 Modification Proposal
- 02 Initial Modification Report
- 03 Draft Modification Report
- 04 Final Modification Report

Stage 01: Modification Proposal

SECMP0037: Pairing Local PPMIDs

This Modification seeks to remove the 60 minute limit requirement that CH currently have to allow Hand Held Terminals (HHT) to join the HAN after power on. This is so as to give Suppliers the option of providing PPMIDs to their Consumers, that can join a HAN without requiring a reliable WAN connection or engineer intervention.



The Proposer recommends that this Modification Proposal should be *(delete as appropriate)*:

- Path 2



Potential Impact on:
DCC Users, DCC

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MODIFICATION PROPOSAL FORM V1.0

1. Proposer's Contact Details

Details of Proposer

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2. Modification Proposal Details

Mod Submission Date:	
Title of Mod Proposal:	Pairing Local PPMIDs
Description in Detail of the Proposed Modification:	<p>This Modification is part of a pair of Modifications to replace for SECMP0031 to better support customers when faced with intermittent or no WAN situations.</p> <p>The Modification proposes is to remove the 60 minute limit requirement that CH currently have to allow devices to join the HAN after power on.</p> <p>This Modification is a more refined version of expanding the functionality of UTRNs which moves away from the concept of expanding UTRN functionality but achieves a similar outcome by providing some DCC Users with a mechanism of delivering critical commands to a meter where WAN is unreliable. Specifically it is to allow a PPMID to join the HAN in such circumstances</p> <p><u>Local pairing of PPMIDs</u></p>

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Context

SMETS1 Meters have been deployed in their millions over several years. They use the GB mobile telephone networks for their Wide Area Network (WAN) connections. SMETS2 Meters are not yet deployed in significant numbers but those in two out of three CSP regions will also use the GB mobile telephone networks for WAN connections. Thus, WAN performance in SMETS1 deployments gives the best current indication of the likely SMETS2 WAN performance in two of the three CSP regions. Utilita have found over 9% of our SMETS1 meters continue to have poor WAN coverage following install. This means that the meter has WAN intermittently and the WAN connection, to material numbers of Premises, is not of sufficient quality to deliver configuration Commands in a sufficiently timely manner. Modification [DN: insert ref] has been raised to allow GBCS Commands to be delivered locally via PPMID. However, that requires that a PPMID with the relevant communication capabilities has been connected to the Consumer's HAN.

The purpose of this modification is to allow for such connection of PPMIDs where the WAN connection is not of sufficient quality to connect them remotely. Utilita's current pairing process appears to be similar to the SMETS2 process, whereby the HAN would be opened, via a command over the WAN during the shipping time of the IHD/PPMID. Failure rates for this "open HAN" command to the Comms Hub mirrors WAN success rates, about 2-3% failure.

Background

BEIS has previously consulted upon, and decided that it will not currently proceed with, a solution option to pair CADs locally. That option would have involved changes to the firmware on ESME and CH, along with the Consumer entering numerical values on the ESME keypad.

For the reasons laid out by BEIS in its consideration of that solution option, it is not considered here in relation to PPMIDs either. Rather, the proposed solution is based on extending the local pairing mechanism already provided for in the Technical Specifications. Specifically, it relies only on removing a single time limit requirement from the CH.

Proposed solution options

The DCC has already implemented a technical solution to the problem of joining a Device to the HAN other than via the WAN. It has the following component parts:

1. CH are required to allow Devices to join the HAN using a GBCS specified mechanism which relies upon the ZigBee 'inter PAN' mechanism. Currently such joining is only allowed for 60 minutes from power on of the CH. Any Device joining in this way is currently treated as a Hand-Held Terminal (HHT) by the CH and can only stay on the HAN for the lesser of 18 hours / the next CH power on.
2. Once an HHT has joined, it can deliver any GBCS Command to any Device on the HAN. Therefore, it can deliver (1) a CCS01 Command to the CHF to add a PPMID to the CHF Device Log and then (2) 'Join' Commands to join the PPMID with the ESME / GPF / GSME, as required by the Supplier. Assuming the PPMID is powered on and the process works over the HAN, this would allow a PPMID to be fully functioning without any Command being transmitted over the WAN.
3. Such CCS01 and 'Join' GBCS Commands for HHT delivery are requested by the Supplier when they submit the corresponding non-critical Service Request / Signed Pre-Command to the DCC¹. For non-critical Service Requests, these are DUIS Command Variants 2 and 3; for Signed Pre-Commands, they are Command Variants 6 and 7.
4. The Supplier transmits such GBCS Commands (which are numbers) to the (HHT). This transmission can take place in any way the DCC User chooses (e.g. wifi, pre-loading in a supplier facility).

Thus, there is an existing mechanism to add a PPMID to an SMHAN without relying on any WAN connection. However, it is currently too constrained to be usable except where the Supplier sends out an engineer. Specifically, the 60 minute limit from power on requires an engineer (CH power cycling being required).

This proposed change would be to remove the requirement on CH to apply the 60 minute limit. This should be a straightforward change to CH, since it is only that they would no longer apply that limit.

¹ Like all Messages, a GBCS Command is simply a binary number. Strictly what is returned is an encoded version of that number, which is safe to send in XML documents.

A PPMID, which is capable of also functioning as an HHT initially, could then be pre-loaded with the required instructions in a supplier facility and then delivered to the Consumer premises. The Consumer powering such a Device on would then allow the Device to join initially as an HHT and then as a PPMID. This would require that such a Device has the use of two IEEE addresses and associated ZigBee credentials. It is proposed that this change be incorporated in to the next TSG version which requires other changes in CH functionality and which is to be deployed across all CH, so as to minimise costs.

Wider requirements for CH changes are that they are applied to both new CH and, by way of firmware upgrade to all installed CH. Thus, given this change would be bundled with wider CH changes, it would be applied to all existing and future CH.

There would be no obligation on any Supplier to either use this mechanism or to procure PPMIDs capable of doing so. Security consideration will be needed for this change. The reasoning behind the 60 minute limit was to limit the period over which malformed messages could be submitted via inter PAN. However, CH have already implemented mechanisms to only accept GBCS compliant instructions. Any assessment of changed risk would be in that light.

3. Path Type and Urgency Recommendation

Proposer's recommendations on Path Type (delete as appropriate)

Path 2

Statement for recommended Path Type:

This Modification is not material to the SEC but may have very minor security implications. So taking a cautious approach, it is recommended to progress as a Path 2 Modification

Statement of whether Proposal is intended to be Fast-Track Modification (only Panel may raise this type of modification):

No

Is the Proposal Urgent? (delete as appropriate)

No

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Statement of whether Proposal should be treated as an Urgent Proposal:

No

4. Modification Impact Assessment

4.1 SEC Objectives

Facilitation of SEC Objectives	Tick
General SEC Objectives (C1.1)	
(a) the first General SEC Objective is to facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain;	<input checked="" type="checkbox"/>
(b) the second General SEC Objective is to enable the DCC to comply at all times with the General Objectives of the DCC (as defined in the DCC Licence), and to efficiently discharge the other obligations imposed upon it by the DCC Licence;	<input type="checkbox"/>
(c) the third General SEC Objective is to 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;	<input checked="" type="checkbox"/>
(d) the fourth General SEC Objective is to facilitate effective competition between persons engaged in, or in Commercial Activities connected with, the Supply of Energy;	<input type="checkbox"/>
(e) the fifth General SEC Objective is to facilitate such innovation in the design and operation of Energy Networks (as defined in the DCC Licence) as will best contribute to the delivery of a secure and sustainable Supply of Energy;	<input checked="" type="checkbox"/>
(f) the sixth General SEC Objective is to ensure the protection of Data and the security of Data and Systems in the operation of this Code;	<input type="checkbox"/>
(g) the seventh General SEC Objective is to facilitate the efficient and transparent administration and implementation of this Code.	<input type="checkbox"/>
(h) the eighth General SEC Objective is to facilitate the establishment and operation of the Alt HAN Arrangements.	
Transition Objective (X1.2)	

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<p>X1.2 The objective to be achieved pursuant to Section X: Transition is the efficient, economical, co-ordinated, timely, and secure process of transition to the Completion of Implementation.</p>	<input type="checkbox"/>
<p>Charging Objectives (C1.3) (in respect of the Charging Methodology)</p>	
<p>C1.4 The First Relevant Policy Objective:</p> <ul style="list-style-type: none"> (a) applies in relation to Smart Metering Systems installed (or to be installed) at Domestic Premises; and (b) requires the Charging Methodology to ensure that Charges (other than Charges for Elective Communication Services) in respect of such Smart Metering Systems do not distinguish (whether directly or indirectly) between Energy Consumers at Domestic Premises in different parts of Great Britain. 	<input type="checkbox"/>

<p>C1.5 The Second Relevant Policy Objective applies in relation to SMETS1 Meters. The Second Relevant Policy Objective is that, subject to compliance with the First Relevant Policy Objective, the Charging Methodology must (other than in respect of Elective Communication Services) (in each of the following cases, as far as is reasonably practicable in all of the circumstances of the case, having regard to the costs of implementing the Charging Methodology):</p> <ul style="list-style-type: none"> (a) result in Charges that are the same for SMETS1 Meters as they are for Smart Metering Systems, save that no Charges for Communications Hub Services will apply to SMETS1 Meters; (b) notwithstanding (a) above (where the Costs of Communications for a SMETS1 Meter exceeds the Costs of Communications for a Smart Metering System, and where an Original Supplier for the Energy Supplier Contract relating to that SMETS1 Meter is (and has at all times since the adoption of the Energy Supplier Contract been) a supplier of electricity and/or gas to the premises at which that SMETS1 Meter is installed), result in Charges that ensure that the excess Costs of Communications are recovered from the Original Supplier from time to time (in addition to the Charges referred to in (a) above), (c) and, for the purposes of this Section C1.5, the terms “SMETS1 Meters”, “Costs of Communications”, “Original Supplier” and “Energy Supplier Contract” shall have the meaning given to those terms in the DCC Licence. 	<input type="checkbox"/>
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C1.6 The Third Relevant Policy Objective is that, subject to the Compliance with the First and Second Relevant Policy Objectives, the Charging Methodology must result in Charges that:

- a) facilitate effective competition in the Supply of Energy (or its use) under the Electricity Act and the Gas Act;
- b) do not restrict, distort, or prevent competition in Commercial Activities that are connected with the Supply of Energy under the Electricity Act and the Gas Act;
- c) do not deter the full and timely installation by Energy Suppliers of Smart Metering Systems at Energy Consumers' premises in accordance with their obligations under the Energy Supply Licence; and
- d) (d) do not unduly discriminate in their application and are reflective of the costs incurred by the DCC, as far as is reasonably practicable in all of the circumstances of the case, having regard to the costs of implementing the Charging Methodology.



Statement of how the proposed variation would better facilitate the achievement of the SEC Objectives:

This Modification is a facilitation Mod designed to enable pairing PPMIDs to the HAN without onsite support, ultimately saving money when replacing or pairing devices to the HAN in the future.

This Mod supports SECMP0031 by providing suppliers with an affective mechanism of getting PPMIDs onto a customer's HAN.

4.2 Impacts

Statement of impact on Greenhouse Gas Emission:

No

Statement of impact on which parts of the SEC would need amending (e.g. proposed legal drafting):

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GBCS: 10.5, specifically the 4 informative references and 2 normative references to the 60 minute limits would be removed

Although not part of the SEC, the CPA Security Characteristics for a Communications Hub would need amendment (specifically DEV.1.1.M949 and VER. 1.1.M949) to remove the check for the 60 minute limit being enforced.

Statement of impact on likely changes to other Energy Codes:

None

Statement of impact on likely Party Categories:

Large Supplier Parties	<input type="checkbox"/>	Small Supplier Parties	<input type="checkbox"/>
Electricity Network Parties	<input type="checkbox"/>	Gas Network Parties	<input type="checkbox"/>
Other SEC Parties	<input checked="" type="checkbox"/>		

Statement of impact on Consumers:

None, however, suppliers will have the functionality available to be able to provide a better service to customers with SMETS2 meters.

Statement of impact on Central Systems:

DCC Systems	<input type="checkbox"/>	User Systems	<input type="checkbox"/>
Smart Metering Systems and/or Communications Hubs	<input checked="" type="checkbox"/>	Other (i.e. on Smart Metering Key Infrastructure, or security)	<input type="checkbox"/>

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The Change to the Communications Hubs as to remove the 60 minute limit.

Suppliers wishing use this mechanism would need to procure PPMIDs with the extra, optional functionality.

No other Device Types would be affected.

5. Testing

Proposed Testing Requirements

Please state whether the Modification Proposal's implementation will require the DCC to undertake testing of the DCC Total System and/or provide testing services.

We understand it can prove difficult to identify testing requirements at this stage. SECAS are able to provide support if you so require.

6. Proposed Timetable

Proposed Timetable for Modification Proposal:

It is proposed that this change be incorporated in to the next TSG version which requires other changes in CH functionality and which is to be deployed across all CH, so as to minimise costs.

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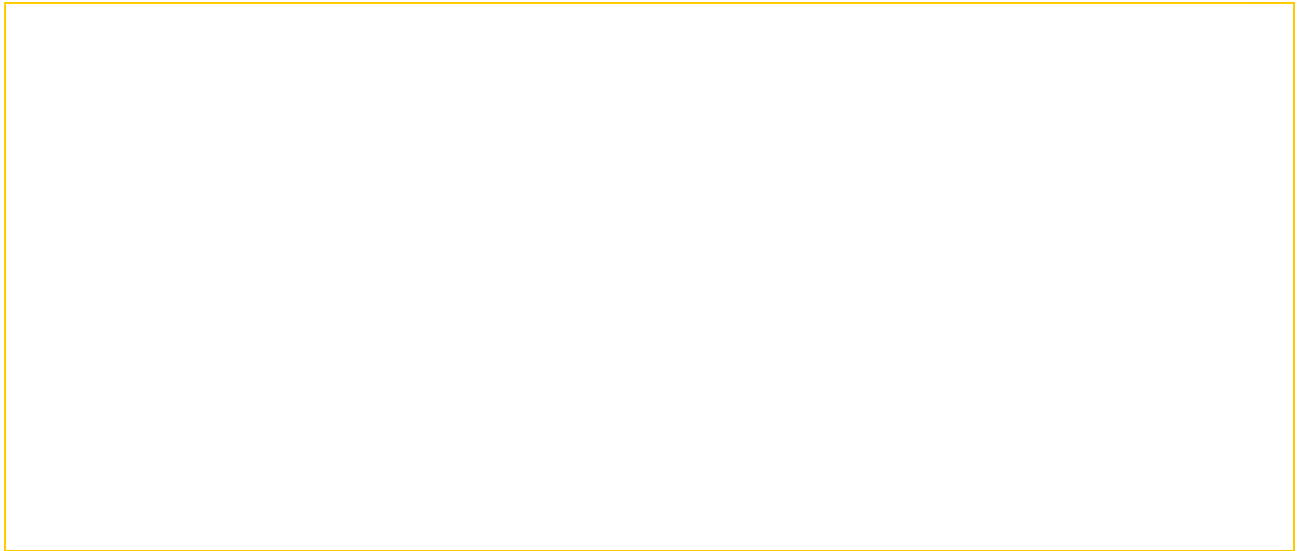
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7. Additional Information

Additional information:

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APPENDIX 1: Glossary of Terms

The table below illustrates useful definitions of the terms used in this form. If you require any further information please contact the [SECAS Helpdesk](#).

Term	Definition
DCC Systems	<p>Means the Systems used by the DCC and/or the DCC Service Providers in relation to the Services and/or this Code (Section A1, SEC Stage 3.0).</p> <p>The Proposer may wish to consider anticipated impacts on the DCC Licensee's enterprise systems (e.g. billing) or the Data Service Provider or Communications Service Providers.</p>
Fast-Track Modifications	<p>Means Modification Proposals (Path 4 Modifications) to correct typographical or other minor errors or inconsistencies to the Code (Section D2.8, SEC Stage 3.0).</p>
General SEC Objectives	<p>Has the meaning given to that expression in Section C1 (SEC Objectives) (Section C1, SEC Stage 3.0).</p> <p>The SEC Objectives are those objectives that the SEC has been designed to achieve.</p>
Greenhouse Gas Emission	<p>Means emissions of Greenhouse Gases, as defined in section 92 of the Climate Change Act 2008 (Section A1, SEC Stage 3.0).</p>
Other Systems	<p>Other systems identified in the section Statement of Impact on Central Systems.</p> <p>The Proposer may wish to consider Prepayment vendors, Electricity Central Online Enquire Service (ECOES), Single Centralised Online Gas Enquiry Service (SCOGES), BSC Settlement Systems, etc.</p>
Path Type	<p>Means the Modification Path to be followed in respect of a Modification Proposal. The type of Path will depend upon the nature of the variation proposed in the Modification Proposal (D2.1, SEC Stage 3.0). The four Modification Paths under the SEC are:</p> <ol style="list-style-type: none"> Path 1 Modifications: Authority-led (Section D2.4/D2.5, SEC Stage 3.0) Path 2 Modifications: Authority Determination (Section D2.6, SEC Stage 3.0) Path 3 Modifications: Self-Governance (Section D2.7, SEC Stage 3.0) Path 4 Modifications: Fast-Track Modifications (Section D2.8, SEC Stage 3.0)

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Party Category	<p>Means one of the following categories:</p> <ul style="list-style-type: none"> the Large Supplier Parties collectively; the Small Supplier Parties collectively; the Electricity Network Parties collectively; the Gas Network Parties collectively; or the Other Sec Parties collectively. <p>(Section A1, SEC Stage 3.0).</p>
Smart Metering Systems	<p>Means a system installed at premises for the purposes of the Supply of Energy to the premises that, on the date it is installed, as a minimum;</p> <ol style="list-style-type: none"> 1. consists of the apparatus identified in; 2. has the functional capability specified by; and 3. complies with the other requirements of, <p>the Smart Metering Equipment Technical Specification that is applicable at the date (Section A1, SEC Stage 3.0).</p> <p>In summary, this includes:</p> <ol style="list-style-type: none"> 4. Gas Smart Metering Equipment; 5. Electricity Smart Metering Equipment; 6. In Home Display; 7. Prepayment Interface Device; and 8. HAN Connected Auxiliary Load Control Switch.
Urgent Proposal	<p>Means a Modification Proposal deemed an Urgent Proposal where the Authority directs the Panel to treat the Modification Proposal as an urgent Proposal (whether following a referral by the Panel pursuant to Section D4.5, or at the Authority's own initiation) (Section D4.5/D4.6, SEC Stage 3.0).</p>
User Systems	<p>Means, in respect of each User (DCC User), the Systems of that User (including, where relevant, those of its Supplier Nominated Agent) used in relation to the Services and/or Smart Metering Systems (Section A1, SEC Stage 3.0).</p> <p>The Proposer may wish to consider Suppliers; Network Operators; Registration Data Providers; Other DCC Users (e.g. Authorised Third Parties / Switching Sites); Supplier Nominated Agents.</p>

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