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MP128B ‘Incorrect Gas Network Operator Certificates

Annex A

Business requirements – version 0.3

About this document

This document contains the business requirements that support the solution for the original Modification Proposal MP128. It sets out the requirements along with any assumptions and considerations. The DCC will use this information to provide an assessment of the requirements that help shape the complete solution.

Business requirements

This section contains the functional business requirements. Based on these requirements a full solution will be developed.

Business Requirements	
Ref.	Requirement
1	Suppliers will no longer be required to install Devices with Gas Network Operator (GNO) Certificates in the GNO slot of Smart Metering Equipment Technical Specifications (SMETS)2 Gas Proxy Functions (GPFs) and they must ensure that within 7 days of commissioning the GPF, the GNO slot contains an Access Control Broker (ACB) Certificate if no unrevoked GNO Certificate is available in the Smart Metering Key Infrastructure (SMKI) Repository.
2	A Responsible Supplier shall place the GNO Certificate in a commissioned SMETS2 GPF only if the GNO is a DCC User and has unrevoked Certificates available in the SMKI Repository.
3	The DCC shall update its Post Commissioning reporting to reflect that Suppliers are able to leave the ACB Certificate in the GNO slot of a GPF.
4	Where a GNO that is a DCC User intends to cease to be a DCC User, it must ensure that its Organisation Certificates on the Devices are replaced with an ACB Certificate prior to ceasing to be a DCC User.
5	A GNO shall submit a Certificate Revocation Request and shall not subscribe to any further Organisation Certificates prior to ceasing to be a DCC User.

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Business Requirements	
Ref.	Requirement
6	It shall be optional, not mandatory (as it is currently) for Gas Networks to become Subscribers for Organisation Certificates, and they shall not become Subscribers if they do not intend to be DCC Users

Considerations and assumptions

This section contains the considerations and assumptions for each business requirement.

1.1 General

This solution will be applied to SMETS2 GPFs only.

The SEC does not require GNOs to become DCC Users. Several GNOs who do not wish to be DCC Users have experienced difficulty and disproportionate costs in obtaining SMKI Organisation Certificates and see no benefit to their organisations or wider smart metering by being compelled to make their SMKI Organisation Certificate available in the SMKI Repository.

Once a Network Operator Certificate is placed on a Device, it can only be changed by the Network Operator for the given Certificate and only if the Network Operator systems are capable of doing so. This is particularly relevant where National Grid transferred ownership to Cadent Gas. Now Cadent Gas are the GNO for those Devices but National Grid still has its Certificate held in those Devices. This means that Cadent Gas has no access/communications with those Devices as it is not the registered GNO on the Certificate.

GPFs are manufactured with ACB Certificates already loaded in the GNO slot of the Device. If an ACB Certificate is in the GNO slot in the GPF, then it will be possible in the future to enable that to be replaced with a GNO Certificate, should a GNO wish to become a DCC User and to communicate with the Device.

The following requirements will not resolve those Devices already experiencing the issue highlighted in the scenario above. However, the SMKI PMA has agreed to carry out a Recovery Event as defined in SEC Section L 'Smart Metering Key Infrastructure and DCC Key Infrastructure' which will resolve the Devices in the Cadent Gas area. This does not require a modification.

After the development of these Business Requirements, modification MP128 was split into [MP128A 'Gas Network Operators SMKI Requirements'](#) and [MP128B 'Incorrect Gas Network Operator Certificates'](#). The purpose of splitting the modification is to implement the text-only changes sooner under MP128B, which is designed to meet Requirements 1, 2 and 6. The remaining business requirements (Requirements 3, 4 and 5), which will entail changes to DCC Systems and reporting, are intended to be implemented through MP128A.

1.2 Requirement 1: Suppliers will no longer be required to install Devices with GNO Certificates in the GNO slot of SMETS2 GPFs and they must ensure that within 7 days of commissioning the GPF, the GNO slot contains an ACB Certificate if no unrevoked GNO Certificate is available in the SMKI Repository.

With it being optional for GNOs to become DCC Users, Suppliers shall leave the ACB Certificate in the GNO slot of the GPF if there is no available GNO Certificate in the SMKI Repository.

This will require amendments to SEC Appendix AC 'Inventory, Enrolment and Decommissioning Procedures' (IEDP).

This will be a non-DCC System impacting requirement.

1.3 Requirement 2: A Responsible Supplier shall place the GNO Certificate in a commissioned SMETS2 GPF only if the GNO is a DCC User and has unrevoked Certificates available in the SMKI Repository.

A GNO may choose to become a full DCC User and therefore hold Organisation Certificates. Only a Supplier Party can load the GNO Certificates onto the Device and therefore, if the unrevoked GNO Certificate is available in the SMKI Repository the Supplier must place it on the Device.

This will require amendments to SEC Appendix AC 'Inventory, Enrolment and Decommissioning Procedures' (IEDP).

This will be a non-DCC System impacting requirement.

1.4 Requirement 3: The DCC shall update its Post Commissioning reporting to reflect that Suppliers are able to leave the ACB Certificate in the GNO slot of a GPF.

In accordance with IEDP (5.3), the Responsible Supplier must place the SMKI Certificates for the given Network Operator in the SMETS2 Device within seven days from being commissioned. If the Supplier were to leave the ACB Certificate in the GNO slot of the Device, this would count as a failure against the obligation.

If business requirement 1 is implemented, this obligation must be amended to allow Responsible Suppliers to leave the ACB Certificate in the GNO slot of the Device. The DCC would consequently need to update its reporting on Post Commissioning Obligations to reflect this.

1.5 Requirement 4: Where a GNO that is a DCC User intends to cease to be a DCC User, it must ensure that its Organisation Certificates on the Devices are replaced with an ACB Certificate prior to ceasing to be a DCC User.

This requirement will ensure that where a change in organisation of a GNO occurs, the incoming organisation will be able manage the GNO security credentials on its Devices, if that organisation is a DCC User and chooses to do so.

This will prevent the scenario in which a GNO has placed Organisation Certificates in the SMKI Repository but then transfers ownership to another GNO without removing its Organisation

Certificates, which would leave a large number of Devices with the incorrect GNO Certificate on the Device with no means of changing them through normal business operations.

This will be a DCC System impacting requirement.

1.6 Requirement 5: A GNO shall submit a Certificate Revocation Request and shall not subscribe to any further Organisation Certificates prior to ceasing to be a DCC User.

This requirement shall ensure that GNO Organisation Certificates are only held on GPFs where the GNO is a DCC User. This requirement will need to be reflected in SEC Appendix B 'Organisation Certificate Policy', section 4.9.1 (A) 'Circumstances for Revocation'. This would require an additional third sub-bullet (iii) to ensure a Subscriber requests to revoke its Certificates if it no longer intends to be a DCC User. It will also require an addition to SEC Section L11 'Subscriber Obligations'.

1.7 Requirement 6: It shall be optional, not mandatory (as it is currently) for Gas Networks to become Subscribers for Organisation Certificates, and they shall not become Subscribers if they do not intend to be DCC Users.

SEC Section B 'Accession' (2.10) requires all Network Parties to become SMKI Subscribers for those Organisation Certificates which pertain to it. They must do this as soon as reasonably practicable after their accession to the SEC.

At the time this modification was raised, the Proposer believed this was a very expensive process for Gas Network Parties that do not have the infrastructure to create and maintain the SMKI Keys and to complete SREPT. They also consider this obligation provides no benefit to Gas Network Parties since they do not receive Alerts. Consequently, the Proposer feels that Gas Network Parties currently have no benefit in becoming DCC Users. Gas Network Parties that wish to become SMKI Subscribers must be DCC Users because otherwise they will be unable to replace their Organisation Certificates at the end of life or if there is a SMKI Recovery Event since it requires a Critical Command to replace security credentials which can only be sent by DCC Users.

This will require amendments to SEC Section B 'Accession'.

This will be a non-DCC System impacting requirement.

Glossary

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

Glossary	
Acronym	Full term
ACB	Access Control Broker
DCC	Data Communications Company
GNO	Gas Network Operator

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Glossary	
Acronym	Full term
GPF	Gas Proxy Function
SMETS	Smart Metering Equipment Technical Specifications
SMKI	Smart Metering Key Infrastructure
SREPT	SMKI Repository Entry Performance Testing