

SEC Modification Proposal, SECMP0247, DCC CR5399

Future Dating of Service Requests for SMETS1 Devices, Reduced Scope

Preliminary Impact Assessment (PIA)

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1 Executive Summary

The Change Board are asked to approve the following:

- Cost to complete the Full Impact Assessment of **£104,230**.
- The timescales to complete the Full Impact Assessment of 40 Working Days.
 - ROM costs for SECMP0247, up to the end of Pre-Integration Testing (PIT) of £1.25million to £2.1million.
- The Data Service Provider (DSP), SMETS1 Service Providers (S1SPs), and SMETS1 WAN Providers are impacted by this Modification.

Problem Statement

In times of peak traffic, such as price change events, there are a large number of Service Requests (SR) sent through DCC systems in a very short period of time. This short-term peak in capacity usage has caused incidents for Smart Metering Equipment Technical Specifications (SMETS)1 Service Providers (S1SP) during previous events, although work is on-going to mitigate this. Due to the short-term nature of the increased load, additional capacity that might be provisioned to support this peak would be unnecessary at other times. This would result in an increased cost to industry with there being little benefit realised.

Whilst there is existing functionality within DCC systems to control the rate at which these requests are released, there is no obligation for Suppliers to send Future Dated Requests and Supplier behaviour seen by the DCC is to send the requests as on-demand requests.

The DCC has investigated Device capability with Manufacturers and have ascertained that all SMETS1 Devices can receive at least some DCC User Interface Specification (DUIS) Service Requests as Future Dated Service Requests and hold them at the Device to be executed at the specified time and date. However, there is also a clause within the Smart Energy Code (SEC) that states that Future Dated Requests for SMETS1 Devices are required to be held by the DCC and released accordingly to meet their specified date. This means that even if a DCC User sends a Service Request in advance of the execution date, these requests are held at the Data Service Provider (DSP) and released once the execution date and time of the request is due.

This Preliminary Impact Assessment is based on the revised list of requirements provided by SECAS which limit the scope of the change to only those Service Reference Variants relevant to a price change event, i.e. 1.1.1 and 1.2.1.

Modification Benefits

The solution will allow SRs to be sent to SMETS1 Devices for processing at the required time in the future, as is currently possible with SMETS2 devices. This will significantly reduce system load at times of peak network traffic such as Price Control Events, may avoid the need to update SMETS1 Service Provider infrastructure, and reduce the likelihood of scheduled Service Requests are not in place by the end of the Price Control Event days. In addition, energy consumers will see updated consumption costs at the point in time they become relevant rather than when the price update can be delivered, which will be delayed due to system capacity constraints. This latter point being particularly relevant to pre-payment installations.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
08/04/2024	0.1	Initial version, for DCC internal review
26/04/2024	0.2	Reviewed
29/04/2024	0.3	Further Service Provider Costs and Information added
21/06/2024	0.4	Further updates following calls with Service Providers
30/05/2024	0.5	Corrections following SECAS review
17/07/2024	1.1	Updated for reduced SECMP247 scope, new CR5399
18/07/2024	1.2	Addition of note about infrastructure costs

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	DP247 Modification Report v0.2	SECAS	20/03/2024
2.	MP247 Business Requirements v0.3	SECAS	24/06/2024

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is Rosie Davies from the Data Communications Company (DCC).

This second Preliminary Impact Assessment (PIA) was accepted by DCC on 28th June, 2024.

3 Context and Requirements

In this section, the context of the Modification, assumptions, and the requirements are stated.

The requirements have been provided by SECAS, the Proposer and the Working Group.

3.1 Current Arrangements

Service Requests sent by DCC Users are either 'on-demand', 'future-dated' or 'scheduled'. The DCC User Interface Services Schedule (UISS) identifies these Service Requests as:

- 'future-dated' - User specifies the relevant time and date for execution (also known as "Future-Dated Services");
- 'scheduled' User sends specifies the initial time and date for execution as well as the frequency at which execution is to recur ("Scheduled Services"); or
- 'on-demand' – User specifies the SR to be executed immediately.

However, SEC Appendix AD 1.4.4 states:

Future Dating of Service Requests for SMETS1 Devices

Where, as identified in clause 3.1 (Service Request Matrix), a SMETS1 Service Request has a Future Dated Response Pattern of 'Device', the DCC, and not the Device, shall undertake the required processing to implement the future dating, in line with the requirements of the Service Request Processing Document.

SEC Appendix AD categorises Future-Dated Services further:

- Future Dated Response Pattern (Device) - The DCC immediately sends the Command associated with the received SR to the Device. The Command is then stored on the Device and to be executed at the specified date/time in the future by the Device.
- Future Dated Response Pattern (DSP) - The DCC holds the SR and sends the Command to the specified Device at the specified date/time in the future.

This means that all Future Dated Requests for SMETS1 Devices are effectively a Future Dated Response Pattern on the DSP.

The following diagram from DCC User Gateway Interface Design Specification (DUGIDS) Section 2.3 shows the interactions between DCC Users and Devices of the variations of Service Request.

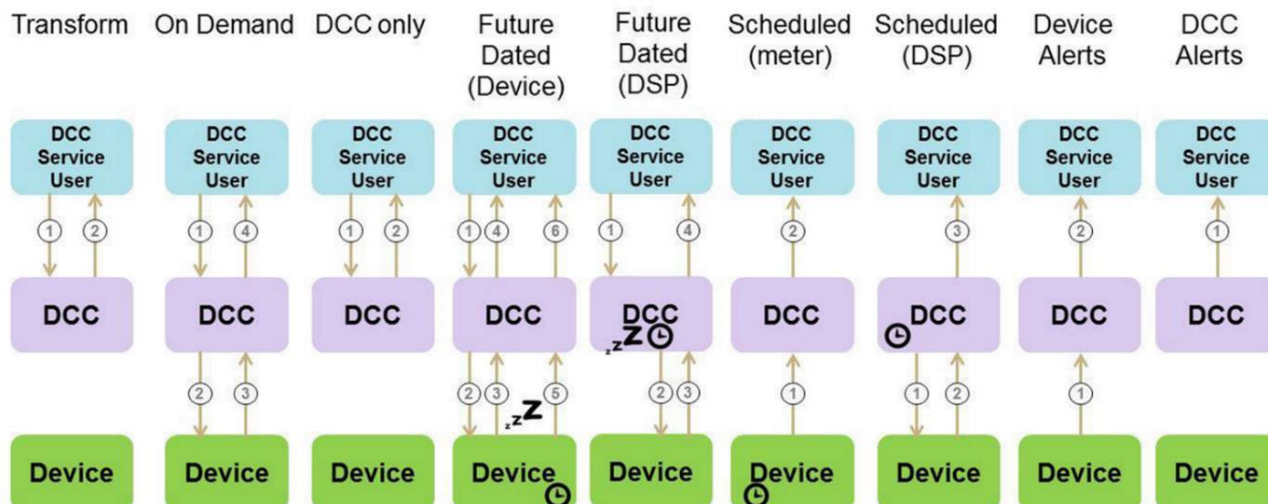


Figure 1: Interactions between DCC Users and Devices of the variations of Service Request

There is existing functionality within DCC systems to control the rate at which the SMETS1 requests are released to Devices, however when the volumes are very high, it takes a considerable time to run through all the SRs for that day. Current User behaviour seen by the DCC, is to send both SMETS1 and SMETS2 requests as on-demand requests, which could potentially be due to a User's mixed Device portfolio.

3.2 What is the Issue?

The DCC has investigated Device capability with Manufacturers and advised that all SMETS1 Devices currently have some capacity to support Future Dated Service Requests. If Devices can receive Future Dated Service requests, it would be sensible that the SEC wording would not hinder this capability.

The DCC is currently in the process of migrating SMETS1 Devices onto their network. Once this migration is complete, it is expected there will be approximately 13-15 million SMETS1 Devices that could possibly use Future Dated Service Requests which will go direct to the Devices. Without the proposed change, these Service Requests will continue to be held with the DSP and handled as an On-Demand Service Request when the date on the Service Request is reached. This will continue to contribute to large spikes in DCC traffic.

3.3 Impact of the Issue

The current arrangements mean that Other Users are limited in their ability to offer innovative services to Energy Consumers.

There are certain periods where the DCC receives a very large amount of traffic. In a scenario where there is a price change event for example, there are a large number of SRs sent through DCC systems in a very short period of time as Suppliers seek to update pricing and/or tariff information on Devices on the same date. This short-term peak in capacity usage has caused incidents for S1SPs during previous events (though work is on-going to mitigate this). Due to the short-term nature of the increased load, capacity that was provisioned to support it would be unnecessary at other times. This would result in an increased cost to industry with there being little benefit realised.

Historically, price change events occurred at infrequent intervals, but Ofgem has moved to four monthly price change events per year. While the price control event is relatively short-term, DCC has suspended specific daily reads as a mitigation.

The DCC Services, as per its licence, are managed under the Price Control arrangements, which are overseen by Ofgem and measured by the Ofgem Operational Performance Regime (OPR). If the DCC fails to meet System performance, Ofgem may determine a reduction in the baseline margin that the DCC may retain for the Regulatory Year.

Impact on consumers

There is impact on all consumers, if there is a delay in receiving the relevant tariff change SRs on time and therefore are not being charged accurately.

3.4 Business Requirements

The business requirements are as follows.

Ref	Requirement	Source	MOSCOW
1	DCC Users must be able to send Device Future Dated Service Request (SR) to any Smart Metering Equipment Technical Specifications (SMETS)1 Device.	DCC	Must
2	DCC User systems will not require changes to support Device Future Dated SRs.	DCC	Must
3	DCC User processes to remain consistent for all different SMETS1 Device Models.	DCC	Must
4	Reporting to monitor Future Dated SRs sent to and stored on SMETS1 Devices	DCC	Must

This solution will be applied to SMETS1 Devices. Further detail for each requirement follows.

Requirement 1 will enable a DCC User to be able to send Future Dated SRs to any SMETS1 Device which can store a Future Dated SR within the Device. The SRs in scope are as follows with SRVs not in scope for this PIA shown thus (1-6):

SRV	SRV Name	Device Type
1.1.1	Update Import Tariff (Primary Element)	ESME / GSME
1.2.1	Update Price (Primary Element)	ESME / GSME
1.6	Update Payment Mode	ESME / GSME
2.4	Update Prepay Configuration	ESME / GSME
6.4.	Update Device Configuration (Load Limiting General Settings)	ESME
11.3	Activate Firmware	ESME / GSME

Table 1: SRs in Scope

Requirement 2 is to ensure that behaviour should remain as is current practice for Future Dated SMETS1 SRs, including any Alerts and response messages. The DCC User would not need to be aware if the Future Dated SR was sent to the Device or held at the DSP where a Device doesn't support it. This should follow existing SMETS1 approach.

Requirement 3 is to ensure that the proposed change has no impact on DCC User processes when sending any Future Dated Service Requests, and that behaviour should remain as is current practice for Future Dated SMETS1 SRs, including any Alerts and response messages. The DCC User would not need to be aware if the Future Dated SR was sent to the Device or held at the DSP where a Device doesn't support it. This should follow the existing SMETS1 approach.

Requirement 4 requires the DCC to develop a reporting mechanism which will allow SEC Parties and the DCC to monitor the number of Future Dated SRs sent to SMETS1 Devices. This should include instances where the SMETS1 Device successfully received the Future Dated SRs and capture where the SMETS1 Device cannot store the SR.

There should be consideration of any wider industry reporting which may need to incorporate this SMETS1 Future Dated SRs data.

It should be noted that DCC generated a series of detailed business requirements, which were shared with the Service Providers as part of the PIA developed. These are included in Appendix B at the end of this document and where referenced below are shown in the format [DSP247-...].

4 Description of Solution

The modification impacts the DSP, S1SPs, and the Dual Control Organisation (DCO).

4.1 Impacts on DSP

Based on the supplied business requirements, the following changes are identified for the DSP.

1. add configurable lists of Manufacturer, device type (ESME/GSME etc), SRV which are supported as SMETS1 Device Future Dated;
2. where a future dated request which is in the configurable list is received, this will be passed to the S1SP or DCO, the DSP will wait for a response until after the execution datetime;
3. where a future dated request cancellation (i.e. a future dated request with an execution datetime of 31/12/3000) is received for a request that has already been passed to the S1SP, then a copy of the cancellation request will be passed to the S1SP/DCO; DSP will not expect a response; and
4. there is no need for DSP to tell the S1SP to cancel future dated requests when
 - another future dated request with the same SRV is sent to the device from the same Service User; or
 - there is a Change of Supplier (SRV 6.23).

Note that the Service User experience should be unchanged.

4.1.1 Request Management

When storing a Future Dated (FD) request for later execution, where the device is SMETS1, its S1SP supports future dated requests and the SRV is 1.1.1 or 1.2.1, the request will be released for sending to the S1SP (and DCO) immediately. [DSP_MP247_002, DSP_MP247_003]

Note that the response timeout for a future dated request is based on its execution datetime, so is not affected by sending the request before that time. [DSP_MP247_004, DSP_MP247_005, DSP_MP247_006]

When processing a SMETS1 Future Dated request cancellation, where the request has already been sent to the S1SP, a copy of the cancellation request will be forwarded to the S1SP (and DCO) (comparable to with the handling of SRVs 5.1, 5.3 & 8.3). [DSP_MP247_003].

4.1.2 Data Management

Amend cancellation processing for SMETS1 Future Dated requests to delete both from the “on hold” store (DSP Future Dated) and from the “awaiting response” store (Device Future Dated) and to respond to indicate from which store the request was deleted (so that RM knows whether to forward a cancellation to the S1SP and DCO). [DSP_MP247_002].

4.1.3 Additional Notes

The proposed implementation means that the Service User receives the same response for Device Future Dated as it does for DSP Future Dated. However, the Service Audit Trail will reflect the actual processing.

On device suspension or decommission, where pending Future Dated requests have already been sent to the device, these will not be cancelled by the DSP system and so there will be no DCC Alert reporting a deletion.

4.2 Impacts on SMETS1 Service Providers (S1SP)

S1SP systems will need to be modified such that the Execution Date Time given in the DUIS Service Request is passed to a SMETS1 ESME or SMETS1 GSME as an Activation Date Time for the associated command(s). As a cancellation is a Future Dated command with a particular date that means the Device will never activate the command, there is expected to be no specific impact for request cancellation.

S1SPs will need the capability to differentiate a Future Dated DSP SRV from a Future Dated Device SRV. Data required to perform this differentiation will be persisted and new validations will be required to check a Service Request depending on the device type and SRV.

4.2.1 Impacts on SMETS1 Instant Energy (SIE)

This section gives the impacts that are specific to SIE's solution over and above those that impact all S1SPs and are given in 4.2.

As no indication that a command has executed is sent from meters to SIE systems, SIE will have to assume that a command has successfully executed *if* a meter has accepted the future dated command. To maintain the same apparent behaviour, rather than sending a success response immediately SIE must hold the response until the Execution Date Time and then return it to the DSP. In the case where a meter has not accepted the future dated command, a failure response will be returned to the DSP immediately, allowing a service user to take corrective action. The storage of success responses until the Execute Date Time in SIE systems will require some additional storage capacity to be provisioned.

Whilst sending a service request of the same Service Reference Variant to a Device will result in any stored future dated command being over-written, SIE have noted that in addition sending a SR1.6 to a Device will also cancel any stored 1.1.1 or 1.2.1 service request. This is due to an overlap between the Device data written by these Service Reference Variants and DCC is proposing to document this in the SMETS1 Supporting Requirements (SEC Appendix AM) and not seek a technical mitigation.

4.2.2 Impacts on Secure

This section gives the impacts that are specific to Secure's solution over and above those that impact all S1SPs and are given in 4.2.

If a Service Reference 2.1 Service Request is sent to a Device that has a Future Dated Service Reference 1.1.1 awaiting activation the Change Debt (recovery cap) will be written to the Device, however the rest of the parameters in the Service Request will be rejected.

4.3 Impacts on the Dual Control Organisation

4.3.1 Request Manager

Given the varying processing times between on-demand SRVs and future dated ones, DCO must re-implement the expiration time calculation. This adjustment will enable the configuration of distinct values for the same SRVs.

4.3.2 Command Manager

The Modification will require revised and established detection configurations for all SRVs that will be future dated across all S1SPs. Depending on the modifications, it may be necessary to create new handlers for detecting and correlating future-dated commands received on DCO. Additionally, DCO must augment integration tests to encompass the new future-dated scenarios and validate the newly created or modified detection configurations.

4.4 Impacts on SMETS2 CSPs and SMETS1 WAN Providers

No impacts identified.

5 Impact on DCC Systems, Processes and People

This section describes the impact of SECMP0247 solution on DCC Services and Interfaces that impact Users and/or Parties.

5.1 Service User Impact

DCC understands that Energy Suppliers' business processes on a Change of Supplier will include the setting of the gaining Energy Supplier's tariff on a Device via a 1.1.1 service request. Due to this the DCC is not proposing to cancel any future dated commands on Devices during a Change of Supplier as the on-demand requests sent by the gaining supplier will cancel any future dated commands stored on a Device.

Whilst a Service User will see Service Requests being accepted and Service Responses being returned as they currently are DCC systems will process them differently internally and this will be visible in the Service Audit Trail. Any Service User systems that consume the Service Audit trail will need to be updated to handle the revised reporting of DCC internal processing.

Service Users should also be aware that SMETS1 Devices only have storage for the current values and next values (the latter being applied at the Activation Date Time) and where one Service Reference Variant overwrites portions of the data in another (for example an Update Price 1.2.1 overwriting a portion of an Update Tariff 1.1.1) the values from the last Service Request sent will be used, once the associated Activation Date Time is reached. It is understood that this is the same behaviour as is present in SMETS2+ Devices and therefore meets the definition of Equivalent Steps.

5.2 Security Impact

There are no interface changes, and the security posture is not impacted in the DSP. The implementation will be security assured during the implementation phase. This includes reviewing designs, test artefacts and providing consultancy to the implementation and test teams.

A more detailed security impact will be carried out as part of the Full Impact Assessment.

5.3 Technical Specifications

There will be changes in DUIS and corresponding changes in DUGIDS for the changes in DUIS, but no changes required to DUIS schema.

5.4 Integration Impact

An appropriate level of Systems Integration and User Integration Testing (SIT and UIT) will be carried out prior to progressing the release of this change to the Production environment, but this is not included in the PIA. Notes are provided in section 6.2. A more detailed integration impact will be carried out as part of the Full Impact Assessment.

5.5 Infrastructure Impact

There will be no change to the DSP infrastructure design as a result of this Modification. It should be noted that the aggregated impact of many such changes to the DSP solution will result in a reduction of the available processing headroom assumed as part of the original Agreement. As such, it may be necessary for DSP to raise a Business as Usual (BAU) CR for the provision/ of additional infrastructure to ensure the DCC Total System does not

experience performance problems that are the direct result of the accumulation of such changes.

The change does not impact the DSP resilience or Disaster Recovery implementation.

DCC anticipates that there will be other infrastructure costs associated with this change in the **production** environment only.

5.6 Service Impact

It is not thought that the change in behaviour of the DCC system from this SECMP0247 will have a material ongoing service impact. A small allowance would be expected to be included for knowledge transfer to the Operations team to ensure that any issues identified can be supported.

A detailed service impact will be completed as part of the Full Impact Assessment.

5.7 Data Science and Analytics Team

The DCC Data Science and Analytics (DS&A) team will provide the reporting required for this modification. Details will be established as part of the FIA.

6 Implementation Timescales and Approach

This Modification is expected to be implemented in a future SEC Release. Design, Build, and PIT is expected to take approximately six (6) months to complete after the CAN is signed.

Details of the implementation will be finalised in the FIA.

6.1 Implementation Approach

Implementation of this change is assumed to follow a hybrid of agile and waterfall methodology. The release lifecycle duration will be confirmed as part of the FIA.

6.2 Testing and Acceptance

It is assumed that the change will be implemented and tested as part of a major release and will include release-based regression testing as detailed following. At a high-level, it is expected there will be significant regression testing required for the S1SPs, with no impact on the SMETS2 CSPs.

6.2.1 DSP Pre-Integration Testing Impact

For Pre-Integration Testing (PIT), the DSP team support the system test phase through correction of defects and observations. For this Modification, the following specific activities will be carried out;

- add reference data to indicate which S1SPs support device future dated requests;
- modify the storing of future dated messages to allow the immediate delivery of future dated messages to SMETS1 devices that support this type of future dating; and
- add functionality to notify the SMETS1 Service Provider of the deletion of future dated messages.

For system and performance testing, automated testing will be used where possible. For performance testing in particular, there will be the possibility of a surge of SMETS1 device notifications arriving into the DSP (all confirming that they have executed the Future Dated command). This variation in behaviour between Future Dated (Device) and Future Dated (DSP) requests is due to the fact that for the latter the rate at which the requests are submitted to the S1SPs is kept within the limits the S1SP can support. For Future Dated (Device) requests any rate limiting is entirely dependent on the execution times set by DCC Users. This warrants targeted performance assurance and therefore provision for such testing has been included.

6.2.2 DSP System Integration Testing

It is assumed that this Modification will be released as part of a SEC System Release and that the System Integration Testing (SIT) testing will be executed in the SIT-B environment. In line with current practice. The SIT scope will comprise:

- testing the Change across the three S1SPs and each DMC;
- executing the full list of Future Dated (Device) Service Requests as configured by each SMETS1 Service Provider;
- verifying that the Future Dated (Device) Service Requests can be sent and processed successfully when the SMETS1 ESME or SMETS1 GSME is in Credit or Prepayment mode;

- carrying out Change of Supplier (CoS), Change of Mode (CoM) and Change of Tenancy (CoT) business scenarios; and
- executing an SRV 6.23 Change of Supplier to a device where Future Dated (Device) Service Requests have already been sent.

To carry out the scope of testing, five SMETS1 device sets will be required:

- for Initial Operating Cohort (IOC), three device sets comprising:
 - an Elster Comms Hub, with an ESME, GSME and PPMID;
 - an Aclara Comms Hub, with an ESME, GSME and PPMID; and
 - an Itron Comms Hub, with an ESME, GSME and PPMID
- for Middle Operating Cohort (MOC), one device set comprising:
 - a Secure Comms Hub, with an ESME, GSME and PPMID
- For Final Operating Capability (FOC), one device set comprising:
 - a Trilliant Comms Hub, with an ESME, GSME and PPMID

It is estimated for this Modification, approximately four hundred tests will be executed within the proposed SIT-B scope to verify the new behaviour.

Note that SIT costs are not included in the PIA costs and effort calculations.

6.2.3 DSP User Integration Testing

The User Integration Testing (UIT) scope will comprise testing across three SMETS1 sets covering the IOC, MOC, and FOC cohorts:

- a small number of future dated requests will be sent to the GPF, GSME and ESME of all three sets to ensure they are processed as per the CR5353 changes;
- a Change of Supply SR6.23 will be run to each device that has future dated requests stored; and
- Change of Supply SR6.23s will also be executed as on-demand and will act as regression testing to ensure existing end-to-end functionality is unaffected.

Explicit testing of E21 behaviour is out of scope for UIT testing as it is assumed this functionality will have been fully tested in previous test phases and further testing in UIT does not provide any benefit or value. However, this alert may be encountered naturally during test execution.

Note that UIT costs are not included in the PIA costs and effort calculations.

7 Costs and Charges

The scope of supply under this PIA includes design, development (build), system testing, and performance testing within the PIT environments.

The Rough Order of Magnitude cost (ROM) shown below describes indicative costs to implement the functional and non-functional requirements as assumed above. The price is not an offer open to acceptance. It should be noted that the change has not been subject to the same level of analysis that would be performed as part of a Full Impact Assessment and as such there may be elements missing from the solution or the solution may be subject to a material change. As a result, the final offer price may result in a variation.

7.1 Design, Build and Testing Cost Impact

The table below details the cost of delivering the changes and Services required by all impacted Service Providers to implement this Modification. For a PIA, only the Design, Build and PIT indicative costs are supplied.

£	Design, Build and PIT
SECMP0247	£1.25m to £2.1m

Based on the existing requirements, the total fixed price cost for a Full Impact Assessment by all impacted (SMETS2+ and SMETS1) Service Providers, and the DS&A team is **£104,230** and would be expected to be completed in 40 Working Days.

8 Risk, Assumptions, Issues, and Dependencies

In the following sections, Risks, Assumptions, Issues, and Dependencies have been identified.

8.1 Risks and Issues

None at this time.

8.2 Assumptions

Ref.	Assumption
MP247-AS1	On suspension or decommission, the DSP system cancels any DSP Future Dated request that has not yet been sent to the device . Where a SMETS1 future dated request has been sent to the S1SP as device future dated, this request will, therefore, not be cancelled on suspension. i.e. the DSP system will continue to expect a response to device future dated requests.
MP247-AS2	The SRVs that can be configured as SMETS1 device future dated all correspond to Critical SMETS2 commands.
MP247-AS3	The list of SMETS1 device future dated requests will be static.
MP247-AS4	Each SRV will either be DSP or Device Future Dated.
MP247-AS5	Future Dated Service Requests as a result of CoS will not be cancelled by the S1SP, supplier's orchestration will compensate for this (i.e. sending a tariff update as part of CoS)
MP247-AS6	The Future Dated commands will be handled by the ESME and/or GSME and not the CHF.
MP247-AS7	The total volume of SRVs will not increase as a result of this change, but the distribution will.
MP247-AS8	Only one Future Dated SRV per target device and SRV is active at any point in time.

8.3 Dependencies

Ref.	Dependency
MP247-D1	Confirmation of the list of SRVs that should be supported.

8.4 Architecture Decisions

None at this time.

Appendix A: Glossary

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

Acronym	Definition
BaU, BAU	Business As Usual
CAN	Contract Amendment Note
CH	Comms Hub, Communications Hub
CHF	Communications Hub Function
CR	DCC Change Request
CSP	Communications Services Provider
DCC	Data Communications Company
DCO	Data Control Organisation
DS&A	Data Science and Analytics
DSP	Data Service Provider
DUGIDS	DCC User Gateway Interface Design Specification
DUIS	DCC User Interface Specification
ESME	Electricity Smart Metering Equipment
FIA	Full Impact Assessment
FOC	Final Operating Cohort
HAN	Home Area Network
GPF	Gas Proxy Function
GSME	Gas Smart Metering Equipment
IOC	Initial Operating Cohort
MOC	Middle Operating Cohort
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
RAID	Risks, Assumptions, Issues, and Dependencies
ROM	Rough Order of Magnitude (cost)
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIE	SMETS1 Instant Energy, sometimes CGI IE
SIT	Systems Integration Testing
SLA	Service Level Agreement
SMETS	Smart Metering Equipment Technical Specification
SMI	Smart Metering Inventory
SR	Service Request
SRV	Service Reference Variant
S1SP	SMETS1 Service Provider
UISS	DCC User Interface Services Schedule
UIT	User Integration Testing
WAN	Wide Area Network

Appendix B; Detailed Business Requirements



Detailed
Requirements v1.4.d