This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.

MP122A

‘Operational Metrics’

Modification Report

Version 1.0

14 September 2020

Corporate member of Plain English Campaign
Committed to clearer communication
592

About this document

This document is a draft Modification Report. It currently sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions.

Contents

This document also has six annexes:

- **Annex A** contains the business requirements for the solution.
- **Annex B** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.
- **Annex C** contains the Data Communications Company (DCC) Performance Indicators Document.
- **Annex D** contains the full DCC Impact Assessment response for the changes to the DCC's internal changes.
- **Annex E** contains the full DCC Preliminary Assessment response for the changes related to its Service Providers (these costs will be assigned to MP122B).
- **Annex F** contains the full responses received to the Refinement Consultation.

Contact

If you have any questions on this modification, please contact:

Joe Hehir

020 7770 6874; Joe.hehir@gemserv.com

1. Summary

This proposal has been raised by Gemma Slaney from Western Power Distribution.

Issues with transparency of reporting and relevance of the measures contained within the DCC Performance Measurement Report (PMR) have arisen. In its monthly review of the PMR, the Operations Group has found it increasingly difficult to report to the SEC Panel on the issues within the report.

As a result of the issues encountered by the Operations Group, the Operational Metrics Review (OMR) was undertaken to better understand the PMR measures, consider amendments and recommendations of new performance indicators.

Through workshops and User surveys, it is clear that Users want to see reporting that reflects the business processes that the DCC supports, for example, Installation and Commissioning, Billing, and Prepayment top up.

The Proposed Solution is for the DCC to facilitate the necessary changes to the DCC System to report on the wide range of metrics described in the business requirements and as recommended by the OMR. These metrics will provide more accuracy in reporting against User business processes and DCC service availability, give greater visibility of Incident Categories 3, 4 and 5, and increase the timeliness of the PMR. Overall, this will increase the transparency of the PMR, give Parties a more accurate view of the DCC's service performance and give the DCC a more accurate view of Party performance. Consequential changes relating to the Service Providers are being progressed separately under MP122B 'Operational Metrics – Part 2'.

This modification's impacts will be limited to the DCC. The changes relating to the DCC's Technical Operating Centre (TOC) and internal processes are expected to cost £210,000 to implement with an additional £845,000 a year for ongoing application support. The targeted implementation date is 25 February 2021 (February 2021 SEC Release).

2. Issue

Definitions

Measure

A "Measure" is something that the DCC is responsible for providing a level of service for, and against which targets for DCC performance can be set.

Indicator

An "Indicator" is something the DCC is not accountable for but provides a Key Performance Indicator (KPI) that may be of value or use to the industry; it cannot have a target attributed to it.

The Performance Measurement Report

SEC Section H13.4 requires the DCC to produce a report setting out the Service Levels achieved in respect of each Performance Measure. The Performance Measure Service Levels are set out in SEC Sections D11.3, H13.1 and L8.6. The report also provides details of the Service Provider Performance Measures specified in the Reported List of Service Provider Performance Measures document[1].

The report that the DCC produces in accordance with SEC Section H13.4 is known as the PMR and is presented to the Operations Group on a monthly basis.

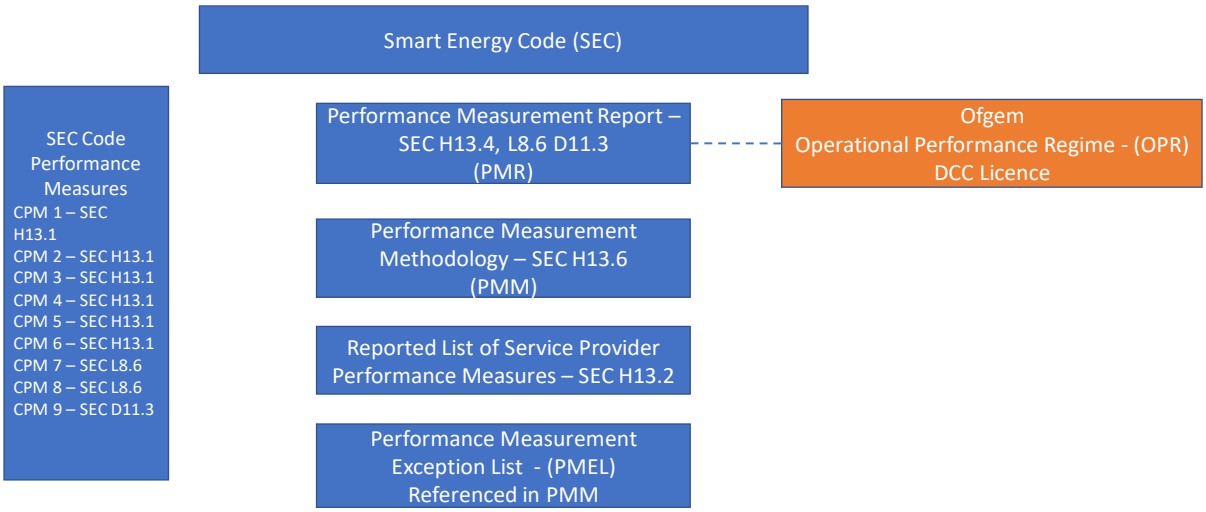
The Operational Metrics Review

In October 2019, work commenced on the Operations Group's Operational Metrics Review project to identify improvements in the metrics used to measure the DCC service. The need for the review was identified following issues raised by the Operations Group in relation to the monthly PMR produced by the DCC.

The purpose of the Operational Metrics Review was to identify improvements in the set of operational metrics defined in the SEC for the measurement of the delivery of DCC Services. The improvements reflect User requirements and priorities. The review was resourced and managed by the Smart Energy Code Administrator and Secretariat (SECAS) and was conducted between October 2019 and March 2020.

Ofgem has been engaged throughout the review and is currently reviewing its Operational Performance Regime (OPR) structure. The aim of the Ofgem review is to ensure incentives placed on the DCC are adequate and effective, and therefore the outcomes of this project will help to ensure that the most appropriate subset of SEC defined measures feed into the OPR.

The diagram below provides a pictorial view of the performance reporting documents provided and maintained by the DCC in accordance with the SEC and utilised by Ofgem as part of its annual OPR review.



[1] This is a DCC Controlled document and is available via the DCC's SharePoint.

Review outcomes

The project undertook a review of the Performance Measurement Methodology (PMM). The review was not a forensic examination of the calculations. The project, instead, tried to understand if the PMR metrics and supporting methodology remain appropriate and made recommendations for potential amendments and changes.

The table below sets out details of the review and observations on the issues against the Code Performance Measures (CPMs). Without action the issues highlighted within the table below will continue to be experienced by Users.

Summary of review outcomes			
Performance Measure ID	**Description within the SEC**	**Summary of Measurement Methodology**	**Observation of issues**
CPM1: Section H 'DCC Services' 13.1	Percentage of On-Demand Service Responses delivered within the applicable Target Response Time.	Calculation of aggregate performance across a number of On Demand Services and Service Provider contract Service Levels. Uses Round Trip Test Home Area Network (HAN) Interface Commands.	Does not measure actual performance, rather a set of averages across a range of Service Provider Service Measures.
CPM2: Section H13.1	Percentage of Future-Dated Service Responses delivered within the applicable Target Response Time.	Calculation of aggregate performance across a number of future dated service requests across Service Provider contract Service Levels. Uses varying Round Trip Time Test HAN Interface Commands.	Does not measure actual performance. A set of averages are used to determine performance, across a range of Service Provider Measures.
CPM3: Section H13.1	Percentage of Alerts delivered within the applicable Target Response Time.	Calculation of aggregate performance of percentage of Data Service Provider (DSP) Alerts within Target Response Time and CSP Alerts delivered across DCC gateway within the Target Response Time.	Measures average rather than actual volume performance against Service Provider Service Levels.
CPM4: Section H13.1	Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 1 or 2 that are resolved in accordance with the Incident Management	Calculation of Category 1 and 2 Incidents (for which the DCC is responsible for resolving), closed within the month (Performance Measurement Period). In accordance with Incident Management Policy.	Measures resolution times of Incidents per the measure rather than impact of outage to Users. Does not directly measure the number of incidents occurring in a month.

Summary of review outcomes			
Performance Measure ID	**Description within the SEC**	**Summary of Measurement Methodology**	**Observation of issues**
	Policy within the Target Resolution Time.		
CPM5: Section H13.1	Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 3, 4 or 5 that are resolved in accordance with the Incident Management Policy within the Target Resolution Time.	Calculation number of Category 3, 4 and 5 Incidents for which the DCC is responsible for resolving, closed within the month that meet the Target Resolution Period divided by number of Category 3, 4 and 5 Incidents for which the DCC is responsible for resolving closed within the month.	Given the length of time to resolve, further transparency required to be sure that resolution is being reported against the correct month. Category 3, 4 and 5 resolution times calculated as an average.
CPM6: Section H13.1	Percentage of time (in minutes) when the Self-Service Interface is available to be accessed by all Users during the Target Availability Period.	Calculation is total time SSI available for the month.	This is measure only of the Self-Service Interface (SSI) availability not wider Service availability.
CPM7: Section L 'Smart Metering Key Infrastructure & DCC Key Infrastructure' 8.6	Percentage of Certificates delivered within the applicable Target Response Time for the Smart Metering Key Infrastructure (SMKI) Services.	Calculation of average weighted service level, of signing requests over Individual Smart Metering Key Infrastructure (SMKI) Service Interface reported in the month. Where demand is greater than 375,000 requests a manual adjustment is made.	Using weighted service levels, believe this is measuring averages and not time of actual communications of Certificates over the SMKI Service Interface.
CPM8: Section L8.6	Percentage of documents stored on the SMKI Repository delivered within the applicable Target Response Time for the SMKI Repository Service.	Calculates the number of SMKI Repository Requests where the SMKI Repository Response Time is less than or equal to the relevant Target Response Time over the number of SMKI Repository Requests received.	SMKI measure, the SMKI Repository Response Time calculated as the time at which the response to the SMKI Repository Request is sent minus the time at which the SMKI Repository Request is received.
CPM9: Section D 'Modification Process' 11.1	Out of the DCC Assessments required to be completed during the Performance Measurement Period,	Needs to be added to PMM.	Needs to be added to PMM.

Summary of review outcomes			
Performance Measure ID	**Description within the SEC**	**Summary of Measurement Methodology**	**Observation of issues**
	how many were completed within the required timescales.		

Review recommendations

The review recommended that the DCC Operational Performance Reporting is addressed for the following areas:

- Report and measure service performance by User business processes using Service Reference Variants (SRVs).
- A measure of end to end DCC Service Availability across the DCC environment reported by Communications Service Provider (CSP) region.
- A change to the production of the PMR to improve the timeliness of production of the PMR, to ensure the PMR remains operationally relevant to Users.
- Changes or additions to Smart Metering Equipment Technical Specifications (SMETS) 2 arrangements for the PMR are, where appropriate, taken forward for SMETS1. This would ensure consistency across SMETS Device types and make sure that reports are focussed on outcomes, reflective of the experience of Users at an industry reported level.
- A change be made to CPM 5 to report resolution times of Incidents (Category 3, 4 and 5) individually per Reporting Period.

What is the issue?

Through workshops and User surveys, it is clear that Users want to see reporting that reflects the business processes that the DCC supports, for example Installation & Commissioning, Billing, and Prepayment top up.

Key findings with the PMR reporting were:

- Instances where the reported performance is contradictory to the operational experience of Users
- Instances where the reported metrics, although correct, do not appear to reflect the impact of performance issues on Users
- Gaps in reporting whereby important aspects of operational performance are not being addressed by the current set of metrics

What is the impact this is having?

The current arrangements do not provide suitable transparency in the use of the PMM that the DCC has utilised to date.

3. Solution

Proposed Solution

The Proposed Solution is for the DCC to implement updated reporting on the metrics. The enhanced reporting requirements are outlined in the business requirements. These requirements were formed from the recommendations made by the OMR:

- The DCC will report and measure monthly service performance for User business processes using SRVs
- The DCC shall add specific outcome-based measures to the PMR to provide a Measure of performance as well as Indicators on the success of the key business processes
- The DCC will measure end to end service availability across the DCC environment and report this by CSP region
- The DCC shall reduce the time it takes to create the PMR to within ten Working Days from the end of the measurement reporting period
- In relation to CPM 5, the DCC will improve transparency in the reporting provided for incident Categories 3, 4 and 5

This will increase the transparency of the PMM and give Parties a more accurate view of the DCC's performance.

To ensure the DCC consistently report on the measures above, amendments will be made to the CPMs within SEC Section H 'DCC Services'. The metrics recommended by the OMR and detailed in the business requirements will be contained in the DCC's PMR.

The business requirements for this solution can be found in Annex A.

The redlined changes to the SEC required to deliver the solution can be found in Annex B.

The new DCC Performance Indicators Document, which will be required by the Code, can be found in Annex C.

The PMM will be updated and consulted upon by the DCC pre-implementation of this modification. It will work with the Working Group Immediately following Authority determination, to ensure the methodology meets the desired format of the PMR.

Consequential changes relating to the Service Providers to fully deliver the reporting metrics are being progressed separately under MP122B. Interim approaches for most affected metrics are being implemented under MP122A.

Ofgem's DCC Operational Performance Regime Review is seeking improved metrics for install and commission, firmware management, Change of Supplier, Prepayment and service availability. Metrics for all of these categories will be provided under MP122A. However, install and commission, firmware management and service availability are marginally affected by the Service Provider dependencies. As noted above, the DCC has interim approaches in all of these cases.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
	Large Suppliers		Small Suppliers
	Electricity Network Operators		Gas Network Operators
	Other SEC Parties	✓	DCC

The DCC

The DCC will be required to facilitate the necessary changes to the DCC System to implement and report on the metrics outlined in the business requirements. The extent of the DCC System impacts are outlined below.

Consequential impacts on SEC Parties

SEC Parties will see an increase in timeliness and transparency of the DCC's PMR, which provides a view of the DCC's service performance.

Parties should see the following improvements:

- The reported DCC performance will align with the operational experience of Users
- The reported metrics will show a greater reflection of the impact of performance issues on Users
- All aspects covering operational performance will be addressed in the PMR using the new metrics

In addition, the reporting that is delivered as a result of this modification could allow the DCC to highlight anomalies inconsistent with the performance of other Parties for a given business process. For instance, it can identify Parties with incorrect or inconsistent behaviour and liaise with that Party to resolve issues, whether the root cause lies with the DCC or the SEC Party.

DCC System

The Working Group and the DCC have tried to confine the DCC impacts to the DCC's Technical Operations Centre (TOC), with this being made a design principal in the early stages of refinement.

However, some of the metrics require DCC Service Provider data, including the DSP, CSPs and SMETS1 Service Providers. Furthermore, contractual changes will need to be made with the Service Providers where those metrics provided by them need to be delivered within ten Working Days from the end of the reporting period. These changes will be covered by MP122B.

The full range of activities from design, through development, testing, and implementation to maintain the system as Business as Usual would be performed by DCC in-house contractors and permanent staff.

DCC infrastructure

To meet the business requirements, the DCC will require additional infrastructure, specifically storage and processing power for the TOC system. The DCC has also noted it may need to build a new database to facilitate the requirements. These costs will be facilitated by economies of scale and will be absorbed into TOC running costs.

The Proposed Solution is not expected to add noticeable traffic or processing to the Smart Metering System or network.

Application support

Additional TOC staffing will be required to support the changes in this modification.

This will require additional Full Time Equivalent (FTE) for proactive monitoring of the metrics as it is not feasible to produce the report within ten Working Days unless there is continual reporting monitoring throughout the month.

The additional roles are related to the creation of the report due to the large amount of additional reporting required and additional staff to chase internal DCC teams, Service Providers and Parties for commentary where performance has deviated from desired performance levels.

Consequential DCC contract changes

Reducing the time it takes to create the PMR to within ten Working Days from the end of the measurement reporting period will require the DCC to negotiate contract changes with the its Service Providers, including the SMETS1 Service Providers. The specific contractual impacts with the DCC's Service Providers are detailed in Annex E. A set of Change Requests have been raised to assess these impacts further (see Appendix 2); the Preliminary Assessment against these Change Requests has also been provided.

Testing

The DCC has confirmed the development and testing of the TOC and internal DCC changes will not require the Pre-Integration Testing (PIT), Systems Integration Testing (SIT) and User Integration Testing (UIT) pattern associated with a scheduled SEC Release, and will not require the testing services of the System Integrator or Communication Services Providers (CSPs). Changes will be confined to the DCC TOC environment and will be fully tested as part of a DCC TOC release cycle.

The full impacts on DCC Systems and the DCC's proposed testing approach for the TOC and DCC changes targeted for the February 2021 SEC Release can be found in the DCC Impact Assessment response in Annex D.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Section A 'Definitions and Interpretation'
- Section H 'DCC Services'

The changes to the SEC required to deliver the proposed solution can be found in Annex B.

The new DCC Performance Indicators Document, which will be required by the Code, can be found in Annex C.

Performance Measurement Methodology

The PMM will be updated and consulted upon by the DCC pre-implementation of this modification. It will work with the Working Group Immediately following Authority determination, to ensure the methodology meets the desired format of the PMR.

Consumers

Five Parties responded to the Refinement Consultation. All five Parties agreed this modification would bring about indirect benefits to consumers.

They noted that more awareness and clarity will be provided around DCC issues, such as downtime of DCC's Systems. One Supplier added that the improved reporting will highlight the usability of prepayment for enrolled SMETS1 meters and SMETS2 meters.

Another Party advised the revised performance reporting should provide a better view of the DCC's actual performance in relation to key business processes. Improved reporting should lead to easier and earlier identification of issues that are impacting the service consumers receive, and trigger resolution actions to improve the performance and the consumer experience.

Other industry Codes

This modification will not impact any other industry Codes.

Greenhouse gas emissions

This modification will not impact greenhouse gas emissions.

5. Costs

DCC costs

The estimated DCC implementation costs, including all the required testing to implement this modification is £210,000. The TOC costs consist of the following:

- Delivery of Data Model algorithms, building of the report, testing, update of its database, update of its interfaces.
- Add additional monitoring to support live 'spike'[2] monitoring.

[2] Spike monitoring is used where there is something on the system (a spike) which identifies an event that has affected service for one or more users. This is a way to flag that there is a system issue.

In addition, there will be up to £845,500 a year for ongoing application support to produce the subsequent reporting from this modification within ten Working Days from the end of the reporting period. This cost may be reduced in subsequent years.

The breakdown of these costs, including the cost to meet a 10 Working Day and a 25 Working Day SLA are as follows:

Breakdown of DCC implementation costs			
Reporting SLA	**Design, testing and Implement to Live**	**Application Support (one year)**	**Total cost**
10 Working Days	£210,000	£845,000	£1,055,500
25 Working Days	£210,000	£725,500	£935,500

More information on the costs can be found in the DCC Impact Assessment response in Annex D.

SECAS costs

The estimated SECAS implementation costs to implement this modification is two days of effort, amounting to approximately £1,200. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

SEC Party costs

All the SEC Parties that responded to the Refinement Consultation (other than the DCC) advised that they would not incur any costs in implementing this modification.

6. Implementation approach

Approved implementation approach

The Panel has agreed an implementation date of:

- **25 February 2021** (February 2021 SEC Release) if a decision to approve is received on or before 30 October 2020; or
- **31 March 2021** (standalone SEC Release) if a decision to approve is received after 30 October 2020 but on or before 30 November 2020.

SECAS notes the interdependencies Ofgem's DCC Operational Performance Regime Review has with this modification. Ofgem aims to implement the changes resulting from this review on 1 April 2021 and it requires certainty by November 2020 that this modification will be implemented before then.

The DCC has advised that this modification will require a four-month lead time for it to implement the necessary changes. Noting this lead time, the February 2021 SEC Release is the next available SEC Release to implement this modification in to allow the changes to be implemented before 1 April 2021.

If this is missed, a standalone SEC Release at the end of March is recommended to deliver the changes ahead of the new reporting year.

This modification would implement all of the required changes to the SEC, irrespective of whether the DCC could report on all of the new measures. SECAS proposes, and the Working Group agrees, that a derogation could be granted by the Panel to the DCC for those changes that are dependent upon contractual changes with the DCC's Service Providers. This would allow the DCC to negotiate the necessary contract changes and implement any required change requests separately under MP122B without being non-compliant with the obligations set out in Section H.

7. Assessment of the proposal

Observations on the issue

Change Sub-Committee views

The Change Sub-Committee (CSC) questioned the timing of the raising of the proposal, given that, at the time, the Panel had not endorsed the OMR. Specifically, the CSC was concerned if this proposal duplicated any work undertaken by the OMR.

SECAS advised that the OMR was in its final stages when the proposal was raised, and that the Operations Group had been involved throughout its development. SECAS had already identified the recommendations it planned to make as a result of the review, and these were presented to the Operations Group on 7 April 2020.

SECAS acknowledged that it was, at the time, pre-empting the Panel's review of the OMR recommendations (which took place on 17 April 2020). However, given the interdependencies between this proposal and Ofgem's DCC Operational Performance Regime Review, it was necessary for this proposal to progress in tandem with it.

Panel views on the modification timeline

The Panel considered the Authority's suggestion that the modification be made an Urgent Proposal. However, it deemed this was not necessary at the time and instead the Panel opted to prioritise obtaining a DCC Preliminary Assessment to better understand the impacts on the DCC Systems.

The Panel queried the overall timescales for this modification, noting its interdependencies with Ofgem's Operational Performance Regime Review. Ofgem confirmed that it requires this modification to be implemented by April 2021, and that it would require certainty that the changes were approved when it issues its direction in November 2020.

SECAS later informed the Panel of the discussions between itself, the DCC and Ofgem around the timeline of the modification. These culminated in an agreement to target the presentation of the Modification Report to the August 2020 Panel meeting, with a view to an Authority determination being made by the end of October 2020. The timeline took into consideration the DCC's estimated lead time of four months and was therefore aiming for an implementation date of 25 February 2021 as part of the February 2021 SEC Release. The Authority agreed with the timeline and consequently opted not to make the modification an Urgent Proposal.

Industry engagement during the Refinement Process

The DCC informed the Operations Group of its intent to hold DCC-led workshops during its Impact Assessment. This was to ensure the assessment provided a true reflection of the solution being delivered by the DCC. This would also ensure Users' expectations were met as to how each requirement would be delivered.

The Operations Group agreed further engagement was required but was not in favour of DCC-led workshops, preferring them to be held in the form of further Working Group meetings. Operations Group members were concerned that DCC-led meetings would not provide adequate representation of Service Users and could lead to some Parties' views not being heard. The Working Group agreed with this approach and SECAS advised its intent to organise these meetings. SECAS aimed to hold these discussions in ad-hoc Working Group meetings occurring in quick succession. This would ensure there was no undue delay to the modification, noting Ofgem's request for the decision on this modification to be made by November 2020.

Design principals

The DCC and the Working Group agreed that a set of design principals should be made to ensure that the solution was efficient and that it met the desired outcomes of the OMR.

1. Using data already held by the DCC and its TOC wherever possible

The first principal that the DCC put forward was that the DCC should use data already held in the TOC and other DCC data sources wherever possible. Its rationale was that for any new data required from its Service Providers, it would be extremely unlikely that the DCC could raise an assessment and implement the change in time for February 2021 SEC Release.

This was accepted as a principal, although the Proposer was wary of relying solely on the TOC data as without the DCC's Service Providers, the data may not be completely accurate and fully reflect User experience.

2. Minimising DCC contractual changes

The DCC proposed that this modification should not generate any contractual changes beyond producing the PMR. It noted that if contract changes were required, the DCC would not be able to start negotiations and implement the agreed changes within the modification timeline. The Working Group accepted this principal but acknowledged that if DCC Service Provider data was needed then it should not be ruled out.

SECAS noted the potential to raise a separate modification for the metrics requiring contractual changes, with these being implemented later. However, the Working Group was not in favour of this and preferred to keep all the requirements under this modification.

3. Publication of the operational metrics

The DCC proposed that all of the new data resulting from this modification should be published in a new and separate report from the PMR. This was due to concerns it had with the consequential size of the PMR if it were to be used to publish the new metrics and publishing it within the 25 Working

Day Service Level Agreement (SLA). (Note that requirement 4 of this modification also seeks to reduce this SLA to ten Working Days.)

The DCC advised how moving the metrics to a new reporting document, separate from the PMR, would help the DCC fulfil the current 25 Working Day SLA and proposed new 10 Working Day SLA. It noted that any data sourced from the TOC could be delivered within 10 Working Days from the end of the reporting period. However, the PMR must undergo quality assurance processes, which take time, which is why the DCC suggested moving the new metrics to a separate document.

The Working Group was against the idea of a separate report and requested to include all of the new metrics in the current PMR.

4. DCC exclusions list

The DCC noted that most processes have a dependence where a successful SRV response is required before the next SRV can be sent. However, it advised that some Users have set orchestrations that run for several SRVs without taking into account the requirement for success of a previous dependent SRV. In this scenario, the DCC believes this shouldn't be reported as a DCC failure.

Noting the above example, the DCC agreed to develop a DCC Exclusion List against measures where circumstances identify that the measures is impacted by actions that fall outside DCC's control (i.e. User action/error).

The Working Group accepted this and noted that there must be governance around how the exclusions list is managed. It was agreed that as the DCC builds the new report, it would identify any potential exclusions, and these would be agreed by the Working Group pre-implementation and managed by the Operations Group on an enduring basis.

Metrics for Service Reference Variants[3]

The DCC noted that whilst requirement 1 is achievable, the requirement identifies multiple SRVs to measure against ten business processes. This inevitably carries a degree of complexity which the TOC would have to design a solution to facilitate.

The DCC also noted that certain SRVs are harder to measure than others, given that Users follow business processes in different ways e.g. Install and Commission.

Whilst the DCC noted possible limitations as to how the TOC could measure each SRV in the way the business requirements outlined, it agreed to work with Users to make sure any alternatives still meet the overarching principal.

Common SRVs for each business process

The DCC noted that the orchestration for each business process could be different for each User. For example:

- some SRVs can be used after the business process is complete;

[3] Business requirement 1: The DCC will report and measure monthly service performance for User business processes using SRVs.

- some SRVs are not used by all Users; and
- some Users can send SRVs in different orders to one another.

The DCC advised this was particularly applicable to the Install and Commission process.

It suggested it could try to encode a separate orchestration per User, but this would be costly and time consuming. Also, if the User decided to change its orchestration, the reporting would have to be updated with associated changes.

In the case of the Install and Commission process, another suggestion was to agree a single Install and Commission process for all Users, but this would be a big industry change and may result in large costs for Users to change their business processes.

The Working Group agreed it would be possible to define a standard set of SRVs for all Users for each business process. SECAS sought feedback from each member of the Working Group on the minimum SRVs needed to complete each of the business process and provided the SRVs recommended in the OMR as a basis. The subsequent agreed set of SRVs for each business process is documented in the business requirements in Annex A.

The Working Group also requested that the DCC report the overall daily view of each of the agreed SRVs in Annex A. This would indicate any issues with the DCC System and should highlight DCC downtime and maintenance time.

Measuring SRVs used across multiple business processes

The DCC noted that some SRVs are used across multiple business process, the most common being SRV 1.1.1 'Update Import Tariff'. The DCC asked if, for example, the data for SRV 1.1.1, should be logged against each business process or as an aggregated volume against all of the business processes. The Working Group agreed each SRV should be measured separately for each business process.

As the DCC TOC does not have access to the contents of SRVs, determining exactly which business process an SRV relates to will not be possible. Instead, the TOC will apply “fuzzy logic” rules to apportion, with a reasonable level of certainty, the SRV to the associated business process.

What are the success criteria?

The Working Group agreed the criteria for measuring the DCC’s performance. It agreed this would be determined by whether the SRV returned a response to the Service User, irrespective of what the response was (e.g. if it returned a failed response this would still count as a ‘success’ for the DCC).

It was agreed that the criteria for measuring the success/failure of an entire business process would be determined by the number of responses and those that returned a failed response. This would be assessed by the Operations Group upon the presentation of the PMR based on commentary provided by the DCC on each failure.

In its Impact Assessment, the DCC proposed reporting against the SRVs with additional granularity by reporting against the following categories:

- No Response received (successful response code)
- No Response received (unsuccessful response code)
- Responses Received (successful response code i.e. "I/0")

- Response Received (unsuccessful response code i.e. response code other than "I/0")

Note, the DCC propose reporting ‘no Response received’ as a response can be received by the DCC but not transmitted to the Service User as their system or gamma gateway may be down.

The Working Group agreed to these metrics.

SRVs in Anomaly Detection Threshold quarantine

The DCC proposed excluding the time SRVs have been quarantined by the Anomaly Detection Threshold (ADT) processes. It advised that where there is an ADT quarantine, the User can release the SRVs up to 30 days later. Therefore, if a User choose to release SRVs from quarantine this would skew reported Round Trip Times unless this time was removed. The DCC noted it already had a number of ADT quarantine reports for Parties.

The Working Group agreed that ADT quarantine time could be excluded from the measures.

Mode of Operation SLAs for SRVs

The DCC noted that there were different SLAs for SRVs dependent upon Mode of Operation (MoO). It expressed concern that reporting separately for each SLA dependent on MoO would significantly increase the reporting output.

It believed the SRV combinations that result in a 24-hour SLA weren’t going to give a good indication of the performance as they traverse the DCC System. The DCC subsequently suggested the measurement is limited to SRVs with a 30 second SLA.

However, the Working Group believed that reporting for each MoO would still be useful and agreed the DCC should report on every MoO for every SRV, and that this should be reported at an aggregated level.

Measuring failed SRVs

When a SRV fails it should produce a response code with a corresponding DCC Alert. The OMR originally requested that both be measured. However, the DCC advised that it cannot directly associate an SRV with an ‘E’ response code to the corresponding DCC Alert other than by time / Device Identification / DCC Service User. The DCC noted the two numbers should be approximately the same and proposed reporting only the Response Code rather than the DCC Alert. This was accepted by the Working Group.

The DCC will report on the Round Trip Time of SRVs as requested. It advised that if an SRV has updated on the meter, but the response is received by DSP after the DSP time-out for communication, an E21 ‘Communications Failure – Unable to Communicate with Device’ or E30 ‘Time-out – “Future Dated” Command’ will be delivered in response. This will therefore form the maximum Round Trip Time.

The DCC was asked to advise if it could report on a successful response to an SRV for both SMETS1 and SMETS2 after an E21 has been triggered. The DCC advised that it did report how many responses were received after a time out, but it could not, with 100% accuracy, link them to the original SRV.

Measuring Alerts

Which Alerts will be measured?

CPM 3 of Section H requires the DCC to measure the percentage of Alerts delivered within the applicable Target Response Time. However, the Working Group believed that the DCC was not reporting on all Alerts despite this measure, and that they were not measured in the most beneficial way for Service Users.

The original recommendation made by the OMR were for additional metrics to be provided for the following Alerts:

- AD1 'Power Outage Event'
- 8F35 'Supply Outage Restored'
- 8F36 'Supply Outage Restored – Outage >= 3 minutes'

After consideration, SECAS and the Working Group agreed that this should be expanded to all Alerts.

The DCC highlighted the impact this would have on the reporting output and estimated it could equate to approximately 140 pages. The Working Group agreed that it would work with the DCC to agree how the report should be presented once this modification has been approved.

From what points will the Alerts be measured?

The DCC advised it could only measure Alerts from the point they enter and leave the DSP. The DCC cannot currently include the CSP or HAN time. The exclusion of HAN time was accepted but the Proposer did not want to exclude CSP time as this makes up a large chunk of the journey. The DCC advised that it is working on an internal project to deliver this capability for all Alerts by the end of 2020.

As an interim measure to meet the 31 March 2021 deadline, the DCC will report on the volume of each Alert and when it had been sent to the Service User.

Note this requirement is dependant on Service Provider changes and these are covered under CR1418 and CR1438, both titled 'Throughput of Alerts'. More information on this CR can be found in Annex E. These changes are being progressed separately under MP122B.

How will Alerts be measured when there is a User system outage?

A Working Group member asked how the DCC would measure an Alert that could not be delivered to due to a User system outage and how this would differ if the User's systems were active. The DCC confirmed it would try again to deliver the Alert every two hours for up to 48 hours, after which the DSP would stop retrying. The Working Group agreed that the DCC should continue to measure the Alert and if it was successful up until the second attempt, after which it would be discounted as it could not be attributed to a DCC error.

Install and Commission metrics

Identifying the Region

Install and Commission, as with all the business process, is to be reported by Region. However, the DCC cannot identify the Region for a failed Electricity Smart Metering Equipment (ESME) or Gas

Smart Metering Equipment GSME installation until a Meter Point x Number (MPxN) is added to a Communications Hub. If a User does not add an MPxN, the DCC proposed not reporting the Region for that case. These could either be excluded from reporting or an "Unknown" Region could be reported.

The Working Group agreed this was a key requirement and along with SECAS put forward options for the DCC to investigate:

1. The DCC identifies the SRV payload and identifies the planned destination for the SRV
2. The DSP identifies the "destination" of the SRV at the CSP gateway at the time of sending it
3. The DCC retrieve the information based on the Communications Hub model

Of the three options, the DCC advised that the third would be the lowest impact. The Working Group agreed to take this forward. However, the DCC noted that any Communications Hubs installed in the wrong Region may skew reporting results.

Some HANs may only have a GSME installed and the Meter Point Reference Number (MPRN) does not identify the Region in the same way the first two digits of the Meter Point Administration Number (MPAN) does. Considering this, the Working Group asked the DCC if it could report the Region in this scenario. The DCC confirmed it already holds the data required to establish the Region of a GSME.

Reporting the total number of installations

As recommended by the OMR, the DCC was requested to provide metrics on the total number of smart metering installations. The DCC advised that this should be broken down by SEC Party as a failure to meet historic installation volumes could be due to issues outside of the DCC's control. For example, engineers not working due to training or a pandemic. The Working Group agreed to the break down by SEC Party and that the data should be anonymised.

Reporting Install and Leave

The DCC was asked to measure the daily total volume of Install and Commission versus Install and Leave. This would act as an Indicator. The DCC queried the definition of Install and Leave as it is a term used generically by Parties.

One Party believed Install and Leave would be defined as not being able to commission the full suite of smart meters before leaving the premise, not just a lack of Wide Area Network (WAN).

The DCC preferred this be defined as being due to no-WAN only, as it does not know what Devices Suppliers are trying to install. However, the Working Group felt an Install & Leave defined as no-WAN only would not be of any use to Parties.

The Working Group agreed that for the purpose of this modification, Install and Leave shall include both Proactive Install and Leave and Reactive Install and Leave[4] as defined under the Supply Standard License Conditions. It noted that the DCC should rarely have to report proactive instances as a Supplier would not send any SRVs in this scenario.

[4] Install and Leave shall include both Proactive Install & Leave and Reactive Install & Leave as defined under the Supply Standard License Conditions.

This requirement is reliant upon CSP changes and CR 1429 'Additional CSP Reporting to validate 90 Day No SMWAN Incidents' has been raised to address this. More information on this CR can be found in Annex E. These changes are being progressed separately under MP122B.

Change of Supplier metrics

The Working Group agreed that the Change of Supplier (CoS) metrics could be reported by providing an anonymised league table. The DCC would also provide commentary in scenarios where there is a complete failure in the CoS process for a given Supplier.

Change of Tenancy metrics

SECAS advised the Working Group that it believed SRV 3.2 'Restrict Access for Change of Tenancy' would provide the best measure of success for the Change of Tenancy process. However, it questioned the benefit of measuring the Change of Tenancy process given it had not generated considerable feedback during the OMR. The Working Group agreed that despite this the Change of Tenancy process should still be reported as it is key to consumer experience. It also agreed that SRV 3.2 would provide the best measure of success for the process.

Measuring meter reads

This business process was originally titled 'Billing' in the OMR and only highlighted SRVs 5.1 'Create Schedule' and 4.6.1 'Retrieve Import Daily Read Log'. The DCC suggested that this process be re-titled 'Meter Reads' as the DCC has no visibility of Energy Supplier billing.

The Working Group subsequently asked SECAS to confirm what led to the 'billing' requirements in the OMR. SECAS confirmed the following:

- The OMR survey showed Large and Small Suppliers both rated 'Billing' as an important business process and one that is not appropriately reflected within the current PMR
- Scheduling and receiving actual reads, via the DCC, is a key enabler for settling energy consumption and billing end customers
- Producing accurate bills is a key benefit of having a smart meter installed – it gives consumers control over their usage

SRV 5.1 was subsequently removed from the measure. This was because it was deemed to be a DCC-only SRV and that it simply sets up the billing schedule but does not directly bill consumers. SECAS and the Working Group agreed that the metrics should expanded to report on all scheduled and on-demand meter reads.

The agreed list of SRVs was:

- 4.6.1 'Retrieve Import Daily Read Log'
- 4.6.2 'Retrieve Export Daily Read Log'
- 4.8.1 'Read Active Import Profile Data'
- 4.8.2 'Read Reactive Import Profile Data'
- 4.8.3 'Read Export Profile Data'

- 4.10 ‘Read Network Data’
- 4.17 ‘Retrieve Daily Consumption Log’

Prepayment metrics

The Working Group agreed that the Prepayment metrics could be reported by providing an anonymised league table, as with CoS. The DCC would also provide further commentary where appropriate to do so.

Device Firmware metrics

The DCC initially highlighted that measuring Device Firmware business processes is complex.

An Operations Group member gave its view that all requests to update Device and Communications Hub Firmware should be counted by the DCC. The member was concerned that requests not reaching the DCC’s Service Providers were being discounted from the overall count. The Operations Group agreed that the DCC must report the volume of firmware updates by the number of Devices within a Service Request. It agreed that this should form a principal for the requirements against all of the metrics to ensure the PMR met Service Users expectations.

Measuring SRV 11.1 ‘Distribute Firmware’

The DCC advised that it could provide reporting for the success of SRV 11.1, but the response for which it monitors is merely an acknowledgement of the command and doesn’t indicate that success or failure to deliver the firmware. This is because Device manufacturers and Suppliers are responsible for ensuring the target Device can validate the firmware Image.

The DCC noted that failure responses are more of an indication of a validation failure of some kind and nothing to do with the ability to deliver the firmware to the Device.

The DCC was also asked to report on the success of transferring Device Images from the Communications Hub to the target Device. The DCC advised it would do this by reporting on meters included in SRV 11.1 with a Response Code of I99 that then had a subsequent Alert Code of 0x8F72 or 0x8F1C. As there is a five day SLA response to this SRV, in order to hit the proposed 10 Working Day report production SLA, there will need to be a category where the report has been run and a firmware update is in progress but there is still time within the SLA to receive a response.

The DCC advised it cannot report on SRV 11.1 until contractual changes are made with the DSP, CSPs and the SMETS1 Service Providers. In the interim, the DCC will report on SRV 11.3 ‘Activate Firmware’ only for both SMETS1 and SMETS2 firmware updates until its necessary Change Requests have been implemented. See Section 6 for the implementation approach for this modification.

CRs 1421 and 1440 ‘SRV 11.1 (Update Firmware)’ have been raised to implement the Service Provider changes needed for this requirement. However, neither of these CRs will be needed if SECMP0007 is approved. More information on these CRs can be found in Annex E. These changes are being progressed separately under MP122B.

Communications Hub Firmware metrics

For measuring the Communications Hub Firmware business process, the DCC advised that it does not have data available to report on the delivery of a Communications Hub firmware Images to the Communications Hub. The DCC highlighted that it has raised this limitation with SECAS and that a possible workaround has been agreed in the interim: instead of measuring both the distribution and activation of the Image, the DCC would instead measure only the activation of the Image.

The DCC has since advised that a mechanism to measure the delivery of firmware Images to the Communications Hub is being investigated under SECMP0007 'Firmware updates to IHDs and PPMIDs'. SECMP0007 is targeted for the November 2021 SEC Release. The Working Group agreed that it would like the DCC to include this measure in its Impact Assessment, irrespective of the progression of SECMP0007. This was due to SECMP0007 still being in refinement at the time, and therefore it was still uncertain if it would be approved. SECMP0007 is now in the Report Phase. Please see the SECMP0007 webpage (link provided above) for the latest progress.

The DCC's Impact Assessment noted that once SECMP0007 is implemented (if approved), the required reporting change would be relatively low impact to implement.

CR 1423 'Comms Hub Firmware Image Data' has since been raised to cover the aspects of this requirement requiring Service Provider changes. However, this CRs will not be needed if SECMP0007 is approved. More information in this CR can be found Annex E.

Service availability metrics[5]

The DCC advised that by facilitating a solution for business requirements 1 and 2, it can split the data by CSP Region. It noted two approaches to fulfil the requirement:

1. Monitoring service activity (DCC's preferred approach)
2. Sending test Service Requests

Approach 1 would identify a lack of activity across parts of the network, which will denote an outage or a reduction in service availability. The DCC's rationale for this approach is that even when there are outages or maintenance for DCC Interfaces, some Users still continue to use them. Therefore, it felt a lack of activity would be a better reflection of the service performance.

Approach 2 would utilise test Service Requests across the networks to measure service performance. However, it noted the OMR has recommended against this approach. In addition, the Operations Group was not in favour of this approach, noting that they are not a reliable indicator of performance. The Working Group agreed with this view.

Noting these, the Proposer and the Working Group agreed to use the first approach.

Which DCC Interfaces will be measured?

The OMR and subsequently the business requirements requested that the DCC measure service availability for the following DCC Interfaces:

- DCC User Interface

[5] Business requirement 3: The DCC will measure end to end service availability across the DCC environment and report this by CSP region.

- Registration Data Interface
- Smart Metering Key Infrastructure (SMKI) Repository Interface
- SMKI Services Interfaces
- Self-Service Interface (SSI)

In its Impact Assessment the DCC highlighted that it can only provide metrics for the DCC User Interface and only on a monthly basis where an Incident has been raised. Contract changes are required on the DSP to report hourly and daily reporting and to ensure any downtime is reported regardless of incidents raised.

In addition, the DCC advised that contract changes are required with the DSP and SMKI Services Service Providers to measure the availability of the other DCC Interfaces noted above. SECAS highlighted this with Ofgem as its OPR review had highlighted these Interfaces.

The Working Group agreed that it would not drop the other four DCC Interfaces from the requirements. Subsequently, the DCC has raised Change Requests and will implement the necessary changes as and when they are ready. SECAS will request that the implementation of such Change Requests be monitored by the Panel, who may wish to delegate this to the Operations Group.

Planned Maintenance

During refinement, the Proposer highlighted that an Indicator should be added in the form of planned downtime. This would show what actual availability is for Users. is the Working Group acknowledged that the DCC is permitted to carry out planned maintenance and so this would be an Indicator rather than a Measure.

The DCC advised that it could provide this as an overall view across the DCC System, but it does not break this down by each DCC Interface. Service Provider contract changes will be required to measure this for each individual Interface. DCC Change Requests have already been raised for these changes to take place.

Service downtime

The OMR recommended that service downtime should be measured by the DCC providing an average per event. The DCC advised that it currently monitors downtime individually for Incident Categories 1 and 2. It then provides an average by giving a total and dividing this by number of Incidents Categories. However, the Working Group agreed it does not want downtime to be averaged per Incident as this could skew results. Working Group members wanted to know the total number of hours that Users were not able to use the given Interface.

Reducing the SLA for producing the PMR[6]

The DCC advised that requirement 4 will require contract amendments with all of its Service Providers, which could take at least six months to implement and impact on the DCC costs.

[6] Business requirement 4: The DCC shall reduce the time it takes to create the PMR to within ten Working Days from the end of the measurement reporting period.

SECAS suggested that this requirement be implemented as a “part 2” under this modification, possibly in the June 2021 SEC Release. This would give the DCC more time to negotiate the contracts and allow them to comply with the obligation once it is implemented. However, the Operations Group did not want to take this approach. Working Group members echoed this preference. Therefore, this requirement will be implemented at the same time as the other requirements in this modification.

A Working Group member noted a possible workaround to be used in the period of the contract negotiations. An agreement could be made with the Service Providers to deliver the reporting data sooner than the 25 Working Days currently in the SEC, if their Systems could deliver it. However, if they delivered the necessary data later than agreed, but within the current 25 Working Day deadline, they would not be in breach of their obligation.

DCC’s Impact Assessment response

The DCC advised that its current contractual arrangements with its Service Providers require data for the PMR to be provided within 10 Working Days, and commentary provided within five Working Days after that.

To meet a requested PMR timescale of 10 Working Days for completion of the report, the DCC would need to either massively collapse these timescales or move to more real-time reporting to avoid a rush and resource failure at month end.

The DCC advised that for the metrics reliant only upon the TOC, it could provide reporting within 10 Working Days from the end of the reporting period. However, this would require 16 support staff, 10 of which is additional reporting FTE, of which the ongoing cost would be covered by the £845,500 cost for application support.

The DCC has provided scale of the FTE against three reporting SLAs below:

DCC costs for meeting reporting SLAs		
Reporting SLA	**Additional reporting FTE**	**Cost (one year)**
10 Working Days	10 FTE	£845,000
20 Working Days	9 FTE	Not given
25 Working Days	8 FTE	£725,500

More information on the costs and application support can be found in the DCC Impact Assessment response in Annex D.

For the metrics reliant upon the DCC’s Service Providers, CR 1330 ‘PMR reduced timescales’ has been raised. For information on this CR can be found in Annex E. These changes are being progressed separately under MP122B.

Incident Category 3, 4 and 5 metrics[7]

The DCC advised that the current monthly PMR already fulfils the request to provide a breakdown of the number of Category 3, 4 and 5 incidents closed in the period, and the number that achieve the Target Resolution Time.

The DCC believes it better to report the Incidents closed in the period instead of opened, as this ensures that all Incidents raised are reported on. Otherwise, if an Incident is raised and not closed in the period, it would not appear in a future report. It also means that Incidents raised towards the end of the reporting period and are not resolved but still within SLA are accurately reported on. The Working Group agreed with this method.

The DCC initially estimated that this requirement would produce an additional 2,000 pages of reporting. The Woking Group queried this and clarified that it only wanted statistics for each Incident Category, not commentary for each Incident within each category. For example:

- Number of Category 3 Incidents open
- Number of Category 3 Incidents raised in total in the period
- Number of Category 3 Incidents closed off and of those, how many were within the SLA

Any specific details for an Incident(s) would be addressed verbally at Operations Group.

The Working Group agreed that data must also be broken down by SMETS1 and SMETS2.

Measuring the Target Initial Response Time

The DCC noted it does not currently provide an Indicator on whether Incidents are meeting the Target Initial Response Time. This would be complex and require business process changes for the DCC, and integration with the Service Provider systems. However, the Working Group believed this could be achievable for the 31 March 2021 deadline.

The DCC advised that this requirement is reliant on Service Provider changes to report the metrics in full. CR 1420 'Incident reporting to support revised PMR' has been raised to address this. More information on this CR can be found in Annex E. These changes are being progressed separately under MP122B.

DCC costs

The DCC advised that over time as the reporting becomes more efficient, the ongoing application support costs should reduce. It noted the high costs were attributed to large amount of review and commentary required to support the data. It noted that, for example, the suggestion of a standalone graph for each individual SRV noted in the requirements would inevitably increase the reporting.

The Working Group agreed that as it determines what the reporting should look like after this modification is approved, the level of granularity could decrease and therefore costs could decrease. It was agreed that the Working Group, which includes Operations Group members, could be used to

[7] Business requirement 5: In relation to CPM 5, the DCC will improve transparency in the reporting provided for incident Categories 3, 4 and 5.

determine the presentation of the report rather than the Operations Group. In the meantime, the ongoing support costs should be seen as the worst-case scenario costs.

Changes to the SEC

Where will the reporting be documented?

In the early stages of this modification, SECAS proposed moving the OMR Measures in Section H to a defined document outside of the SEC. This document would be referenced in Section H by name only and Section H would define that any changes to it be authorised by the Panel (who could choose to delegate this to the Operations Group). This option would mean that the document is not subject to the Modification Process. SECAS's rationale for this approach was to increase the efficiency for the DCC or the industry to make changes to the document, whilst maintaining appropriate governance by obligating them to seek approval from the Panel or a delegated Sub-Committee.

However, Ofgem was not convinced that this approach would be beneficial to Parties. Additionally, its view was that this could be detrimental to the overall OPR process.

Ofgem's view was that the new DCC Measures should be set and remain unchanged within the regulatory year(s), rather than have the flexibility SECAS proposed above. It further noted its preference for the Measures to be governed by the Modification Process, rather than the DCC consulting with Parties and seeking approval from Panel or a delegated Sub-Committee.

SECAS also sought the Operations Group's views. The Chair noted that the original intent had been to allow metrics to be added and removed from the PMR report in a more flexible manner than is currently possible. However, after considering Ofgem's views and rationale against this approach, it accepted the metrics need to be within the SEC. SECAS requested the DCC to build flexibility into the DCC Systems. This would prevent any further modifications having such a high impact and be easier for the DCC to facilitate changes. Members agreed this should form one of the principals behind the business requirements as noted when discussing requirement 2 above.

Considering Ofgem's views, SECAS has included the Measures within Section H. However, it has created a new document containing the Indicators. This was viewed as an appropriate approach, given the DCC cannot be held accountable for the Indicators.

When will the Code changes be made?

Due to several of the metrics requiring contractual changes with the DCC's Service Providers, it is unlikely they will be implemented in time for 31 March 2021 deadline for the OPR review.

Both the Operations Group and the Working Group had stated their preference not to have a second Modification Proposal or a second part to this modification to implement any requirements beyond the 31 March 2021 deadline. Considering this, SECAS proposed that all the required text changes to the Code be implemented under this modification, irrespective of whether the DCC could report on all of them. To prevent the DCC from being non-compliant with the Code, a derogation could be granted to the DCC for those changes that are dependent upon contractual changes with the DCC's Service Providers. This would allow the DCC to negotiate the necessary contract changes and implement any required change requests without being non-compliant with the obligations set out in Section H.

Trialling of the new PMR metrics

It was suggested that trialling the new metrics could be conducted in parallel with this proposal. This was to provide assurance that the performance measures are made fit for purpose prior to them being adopted. However, this option was not taken up due to its potential impacts on the duration of this modification.

Reporting guidance

The DCC proposed that a guidance note be produced to support the new PMR resulting from this modification. The Proposer questioned what guidance would offer above the PMM. The Working Group agreed the PMM would suffice as guidance for Users and the DCC.

Support for Change

Operations Group views

The OMR was carried out on behalf of the Operations Group and it sought to assess the issues raised regarding the DCC's PMR. Therefore, the Operations Group supports this modification as it seeks to implement the recommendations made by the OMR. Ultimately this modification would provide all Parties with an increase in timeliness and transparency of the DCC's PMR.

Working Group views

Working Group members have been unanimously supportive of the intent of this modification. This is due to the increased transparency, accuracy and timeliness of the DCC's PMR.

Cost benefit analysis

Four of the five Refinement Consultation respondents believe this modification should be approved noting the costs and benefits. Two respondents highlighted the dependencies with this modification and Ofgem's OPR review, with which the consequential changes are to be implemented on 1 April 2020. They advised that this modification needs to be prioritised for implementation in February 2021. Together with the updated OPR they believe both these reporting measures will work well together.

Another Party noted the high DCC implementation costs but considered, on balance, it expects the benefits to Service Users to outweigh these costs.

The DCC believed the cost benefits to be unclear as, at the time of the consultation, it had yet to carry out the Impact Assessment and the finer detail of the metrics were yet to be agreed. However, it advised the metrics that are specific to DCC performance will be provide benefit to Service Users, if it is given enough time to produce quality data.

Views against the General SEC Objectives

Proposer's views

Objective (b)[8]

The Proposer believes that MP122A will facilitate SEC Objective (b). It will help provide a clear account of the Service that the DCC is providing to ensure that they are compliant with their obligations.

Objective (g)[9]

The Proposer believes that MP122A will facilitate SEC Objective (g) by providing clear and relevant reports that will detail exactly what is happening with the DCC Systems and performance. It will also highlight any anomalies that might require addressing.

Industry views

Four Refinement Consultation respondents agreed that this modification would better facilitate the General SEC Objectives for the same reasons noted by the Proposer. However, one respondent believed it would benefit SEC Objective (a)[10] instead.

In reference to SEC Objective (g), the DCC believes this will only be met where the required reporting is specific to DCC performance and does not include Service User issues, and where the DCC is not asked to report on industry wide performance. It also noted the decreased timeframe available to produce the PMR puts data quality and narrative accuracy at risk, and therefore increases the risk that inaccurate information is presented.

Panel's conclusions

In light of the estimated Service Provider costs, the Panel agreed that this modification should be split into MP122A and MP122B. The core changes to the DCC's TOC and internal processes, already fully assessed, will proceed forward to final decision under this modification MP122A and will be progressed as an Authority Determined Modification.

The consequential Service Provider impacts and costs will be scrutinised and confirmed via MP122B, which will remain in the Refinement Process.

[8] 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.

[9] To facilitate the efficient and transparent administration and implementation of this Code.

[10] To facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain.

Appendix 1: Progression timetable

The below timetable shows the key milestones which are targeted in order to implement this modification. An Authority Decision received by 30 October 2020 would give the DCC the four-month lead time it needs to be able to implement this modification in the February 2020 SEC Release.

Timetable	
Event/Action	**Date**
Draft Proposal raised	24 Mar 2020
Presented to CSC for comment and recommendations	31 Mar 2020
Panel converts Draft Proposal to Modification Proposal	17 Apr 2020
Business requirements developed with Proposer and DCC	Apr – May 2020
DCC Preliminary Assessment	13 May – 28 May 2020
Modification discussed with Operations Group	2 Jun 2020
Modification discussed with Working Group	3 Jun 2020
Refinement Consultation	12 Jun – 3 Jul 2020
Modification discussed with Working Group	23 Jun 2020
Modification discussed with Working Group	24 Jun 2020
Modification discussed with Working Group	30 Jun 2020
Modification discussed with Working Group	8 Jul 2020
DCC Impact Assessment	16 Jul – W/C 31 Aug 2020
Modification discussed with Working Group	13 Aug 2020
Modification Report approved by Panel	11 Sep 2020
Modification Report Consultation	14 Sep – 18 Sep 2020
Change Board vote	23 Sep 2020
Authority decision expected by	28 Oct 2020

Appendix 2: Consequential DCC Change Request costs

Consequential Service Provider costs

The DCC has raised eight CRs required in order to implement the Proposed Solution in its entirety as outline in the business requirements in Annex A. These Change Requests relate to the changes needed to the contractual arrangements with its Service Providers.

These changes will be delivered by MP122B. The core changes already assessed will proceed forward to decision under MP122A, while the consequential Service Provider impacts and costs can be scrutinised and confirmed via MP122B.

The DCC's Service Providers have provided a preliminary Rough Order of Magnitude (ROM) and the breakdown of these costs, including the implementation timescales are as follows:

Breakdown of Preliminary Change Request costs				
Change Request	**Cost to complete an IA**	**Time to complete IA (max)**	**Implementation ROM cost**	**Implementation timescales**
CR 1418	£8,702	30 days	£300,000 to £450,000	3 months
CR 1420	£82,000	30 days	£110,000	1 month
CR 1421	£93,000	50 days	£1,800,000 to £2,500,000	12 months
CR 1423	£135,051	50 days	£2,500,000 to £3,500,000	12 months
CR 1429	£24,965	30 days	£60,000	3 months
CR 1430	£533,000	50 days	£1,200,000 to £2,500,000	6 months
CR 1438	£220,000	50 days	£1,330,000 to £1,480,000	6 months
CR 1440	£120,000	50 days	£1,450,000 to £1,850,000	12 Months
Total	**£1,216,718**		**£7,750,000 to £12,450,000**	

The DCC has advised that CRs 1421, 1423, and 1440 will require changes to the Smart Metering System, and hence will require PIT, SIT and UIT if these are selected. They will also require changes to the GB Companion Specification (GBCS), the DCC User Interface (DUIS) and potentially other Technical Specifications.

The DCC note that there is significant overlap between CRs 1421 & 1423 and SECMP0007 'Firmware Updates to IHDs and PPMIDs'. If SECMP0007 is approved, these two Change Requests will not be needed, and the overall ROM cost would decrease by between £4,300,000 and £6,000,000. SIT and UIT testing is out of scope of its Preliminary Assessment of CRs, but PIT testing is included where appropriate.

The DCC will also incur costs to support the CR design work as part of the Impact Assessment, and for implementation of the CRs. These have been estimated on the basis that all the CRs are taken forward and are as follows:

DCC Change Request costs		
DCC IA cost	**Time to complete IA (max)**	**ROM**
£65,250	40 days	£642,000

More information on the costs can be found in the DCC Change Request Preliminary Assessment response in Annex E. These costs will be reviewed and the changes progressed under MP122B, and are provided here for information only.

Appendix 3: Glossary

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

Glossary	
Acronym	**Full term**
ADT	Anomaly Detection Threshold
CoS	Change of Supplier
CPM	Code Performance Measure
CR	Change Request
CSC	Change Sub-Committee
CSP	Communication Services Provider
DCC	Data Communications Company
DSP	Data Services Provider
DUIS	DCC User Interface
ESME	Electricity Smart Metering Equipment
FTE	Full Time Equivalent
GBCS	GB Companion Specification
GSME	Gas Smart Metering Equipment
HAN	Home Area Network
IHD	In-Home Display
KPI	Key Performance Indicator
MoO	Mode of Operation
MPAN	Meter Point Administration Number
MPRN	Meter Point Reference Number
OMR	Operational Metrics Review
OPR	Operational Performance Regime
PIT	Pre-Integration Testing
PMR	Performance Measurement Report
PMM	Performance Measurement Methodology
PPMID	Prepayment Meter Interface Device
ROM	Rough Order of Magnitude
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SLA	Service Level Agreement
SMETS	Smart Metering Equipment Specifications
SMKI	Smart Metering Key Infrastructure
SRV	Service Reference Variant
SSI	Self-Service Interface
TOC	Technical Operations Centre

Glossary	
Acronym	**Full term**
UIT	User Integration Testing

This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.

MP122 'Operational Metrics'

Annex A

Business requirements – version 1.3

About this document

This document contains the business requirements that support the solution for this Modification Proposal. It sets out the changes required to the DCC monthly Performance Metrics Report (PMR).

These changes have been requested by the Operations Group (OPSG) following the Operational Metrics Review (OMR). The DCC will use this information to provide an assessment of the changes that will shape the final report.

These changes are targeted for implementation in the February 2021 SEC Release, as required by Ofgem. Therefore, if a manual mechanism of the Proposed Solution can be delivered to enable the DCC to implement these changes on or before 1 April 2021, the DCC is requested to investigate this and advise in its Impact Assessment. Any automated mechanisms could then be implemented at a later date, as and when they are ready.

1. Business requirements

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

Business Requirements	
Ref.	**Requirement**
1	The DCC will report and measure monthly service performance for Service Reference Variants (SRVs) used in User business processes
2	The DCC shall add specific outcome-based measures to the Performance Measurement Report (PMR) to provide a Measure of performance as well as Indicators on the success of the key business processes where they have end to end visibility.
3	The DCC will measure end to end service availability across the DCC environment and report this by Communication Services Provider (CSP) Region
4	The DCC shall reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period
5	In relation to Code Performance Measure (CPM) 5, the DCC will improve transparency in the reporting provided for incident Categories 3, 4 and 5

1.1 General

The metrics defined in this document are expected to be reported within the DCC's PMR as required by the Code.

The DCC is expected to highlight any changes to the metrics which would impact the contracts with its Service Providers and therefore impact its ability to fulfil Requirement 4 of this document.

1.2 Ofgem Operational Performance Regime Review

The review of the Operational Performance Regime (OPR) has been carried out due to concern that the current metrics may not be providing the best DCC incentives. Ofgem proposed to replace them with more outcome-based measures.

These outcome-based measures have been drawn from the OMR and consist of updated metrics for the OPR to target four areas specifically:

- Install and Commission;
- Prepayment;
- Firmware management (covered by sections 2.2.5 'In Life Device Management' and 2.2.6 'Update CH Firmware' below); and
- Service Availability.

Where relevant performance will be broken down by meter type and Region.

2. Business requirements

2.1 Requirement 1: The DCC will report and measure monthly service performance for SRVs used in User business processes

The OPSG requested changes to the PMR to enable it to more accurately measure DCC performance of SRVs and associated Service Responses against their business processes.

2.1.1 Measuring SRVs

The following list of SRVs will be included in the monthly PMR with Rate, Speed, Volume, and Payload (RSVP) metrics (see Table 1).

The start point will be the Service User sending the SRV and the end point will be the Service User receiving or not receiving the associated Service Response (success or failure response).

Note that success of an SRV would be if Users received a response to it, irrespective of what the response is. If Users don't receive a response, this would count as a failure against the SRV.

The performance of a business process will depend on whether the SRV relates to a Smart Metering Equipment Specifications (SMETS)1 or SMETS2+ Device and should therefore be reported with SMETS1 and SMETS2 metrics separated and clearly identified. This is due to the different SLAs for each Device type as stated in the SEC.

Note, not all SRVs are applicable for SMETS1 and these are marked within table 1 below.

Table 1: Business process applicability table

Business Process	SRV	Description	SMETS1 applicable
Install and Commission[1]	8.11	Update HAN Device Log	Yes
	6.21	Request Handover of DCC Controlled Device (Update Supplier Certificates)	No
	8.1.1	Commission Device	Yes
	8.7.2	Join Service (Join GPF with GSME)	Yes
	6.20.1	Set Device Configuration' (Import MPxN)	No
	1.1.1	Update Import Tariff (Primary Element)	Yes
	6.8	Update Device Configuration (Billing Calendar)	Yes
	8.14.1	Communications Hub Status Update Install Success	No
Change of Supplier (Gain)	6.23	Update Security Credentials (CoS)	Yes
	1.1.1	Update Import Tariff (Primary Element)	Yes
	6.8	Update Device Configuration (Billing Calendar)	Yes
Change of Tenancy	3.2	Restrict Access for Change of Tenancy	Yes
Tariff Updates	1.1.1	Update Import Tariff (Primary Element)	Yes
Pre-Payment	1.6	Update Payment Mode (Payment Mode = Prepayment)	Yes
	2.1	Update Prepay Configuration	Yes
	2.2	Top Up Device (Update Balance with positive value)	Yes

[1] Note, although some of the SRVs listed under Install and Commission are applicable to SMETS1, the rollout of SMETS1 Devices has ended and therefore the overall Install and Commission business process is not applicable to SMETS1.

Table 1: Business process applicability table			
Business Process	**SRV**	**Description**	**SMETS1 applicable**
Security and Key Management	6.15.2	Update Security Credential (Device) – Credential Type = Digital Signature	No
	6.15.2	Update Security Credential (Device) – Credential Type = Key Agreement	No
	6.17	Issue Security Credentials – Credential Type = Digital Signature	No
	6.17	Issue Security Credentials – Credential Type = Key Agreement	No
Update Device Firmware	11.1	Update Firmware ***Note**: In respect of SMETS2+ Devices the DCC must ensure that the associated firmware update has been delivered to all relevant Communications Hub Functions within five days of receipt of the Service Request.*	Yes
	11.3	Activate Firmware (Individual SR for each GUID for firmware activation) ***Note**: SMETS1 five-day Target Response Time.*	Yes
Logistics CH Ordering and Returns	8.14.3	Communications Hub Status Update – Fault Return	No
	8.14.4	Communications Hub Status Update – No Fault Return	No
Distribution Networks Post I&C Activity	6.15.1	Update Security Credentials (Update Network Operator Certificates)	Yes
	6.5	Update Device Configuration (Voltage)	Yes
	6.22	Configure Alert Behaviour (Update ENO Alter Configuration)	No
Meter Reads	4.6.1	Retrieve Import Daily Read Log	Yes
	4.6.2	Retrieve Export Daily Read Log	No
	4.8.1	Read Active Import Profile Data	Yes
	4.8.2	Read Reactive Import Profile Data	Yes
	4.8.3	Read Export Profile Data	Yes
	4.10	Read Network Data	Yes
	4.17	Retrieve Daily Consumption Log	No

RSVP metrics will be used as an indicator of performance for identified key User business processes as defined in table 1. The RSVP metrics will measure the relevant SRVs, service responses, acknowledgements and Alerts processing times within the DCC Total Systems.

2.1.2 Measuring Alerts

Code Performance Measure 3 of the SEC requires that the DCC measures the percentage of Alerts delivered within the applicable Target Response Time. Therefore, SECAS acknowledge that this requirement is not making any changes to the Code and the DCC should already be providing reporting against all Alerts. However, it is understood that the DCC only reports on a subset of Alerts.

The DCC is to include in its assessment the requirement to measure all Alerts (DCC Alerts and Device Alerts) using the current method for determining how long they took to be delivered.

In addition to the above, the DCC is asked to include in its assessment the requirement to measure for all Alerts the time it takes from when it reaches the Communications Hub to when it enters the Service User's gateway. The DCC does not currently include this phase in its measure.

2.1.3 Data representation

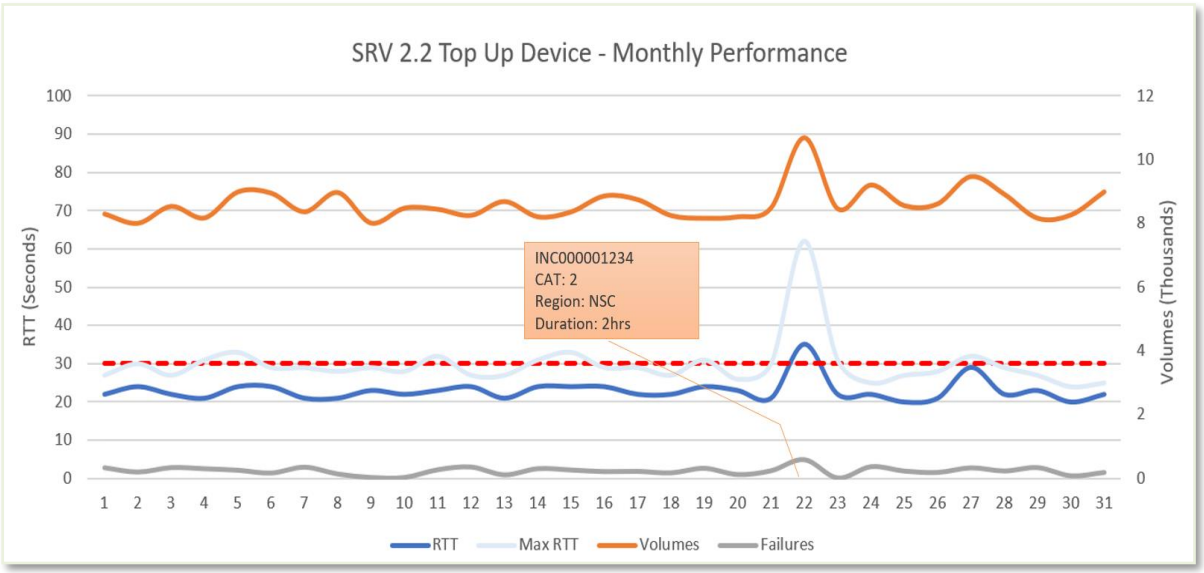
The RSVP metrics shall be reported within the PMR.

Daily RSVP metrics

The OMR recommended that the daily RSVP metrics be plotted using a line graph representation with daily data points:

- The x-axis will indicate the day of the month and the y-axis shows response time and volumes.
- Data points are plotted for the SRV daily average RTT, volume of daily requests and daily request failures.
- The average monthly RTT for the SRV or group of SRVs is provided to give a reference point and indicate whether daily response times are above or below the monthly average.

This is shown as a dotted red line on the example provided below:



Note, minimum RTT will also be displayed in the graph. As noted in the Modification Report, the presentation of this graph as well as any other graphs in the PMR will be agreed between the DCC, the Proposer and the Working Group pre-implementation of this modification.

Monthly RSVP metrics

The following monthly metrics are to be recorded and reported within the PMR:

The SRVs in table 1 above shall also be reported at a monthly level to provide a summary of performance over the period. The summary will include both Indicators and Measures as defined below. The measures are to be reported for all regions combined for SMETS1 (excluding Install and Commission) and separated by Region for SMETS2+ Devices.

- An Indicator of the Monthly Average (Mean) and Median RTT including time spent within the Home Area Network (HAN). The Median is recommended because, when compared to the

average/mean, this measure is less likely to be skewed by extremely large or small numbers and therefore provides a better idea of the typical response time.

- An Indicator of the range of RTT values measured within the month to show the longest and slowest response time recorded.
- A Measure of the percentage of responses delivered within the Target Response Time is calculated by including the response time for all Service Requests that compose a business process. For example, the Install and Commission process will be represented by the seven common SRVs that make up the SMETS2 Install and Commission process for Electricity Smart Metering Equipment (ESME) Devices. In the case of Install and Commission, the TRT target should also be provided for Gas Smart Metering Equipment (GSME). The TRT has the meaning given to that expression in SEC Section H3.14 'Target Response Times'. Targets are those defined in SEC Appendix E 'DCC User Interface Services Schedule'.
- An Indicator of the total number (volume) of SRV requests (listed in table 1) recorded for the period.
- An Indicator of the percentage of SRVs that failed to be delivered due to a communications failure or timeout (E20[2] or E21[3]) or a subsequent failure alert code (N12[4] or N13[5]).

An illustrative example of these measures is shown in table 2 below:

Table 2: Prepayment – Top Up Device Remotely

Monthly Performance Measure	Region A	Region B	Region C	SMETS1
Average RTT	29	15	33	12
Median RTT	26	15	35	11
Range (Shortest)(Longest)	(4)(200)	(1)(20)	(20)(49)	(10)(20)
Percentage of Service Responses delivered within the Target Response Time	**97%**	**99%**	**95%**	**99%**
Volumes	100K	90K	110K	5K
Percentage of Service Requests that failed to be delivered	2%	9%	4%	10%
Percentage of Service Requests that generated N12 or N13 Alerts	-	-	-	-

[2] Communications Failure – Unable to Communicate with Device.
[3] Communications Failure – No Response Received from Device.
[4] Failure to deliver Command to Device.
[5] Failure to receive Response from Device.

2.2 Requirement 2: The DCC shall add specific outcome-based measures to provide a Measure of performance as well as Indicators on the success of the key business processes where they have end to end visibility

The purpose of Requirement 2 is to provide metrics for the overall success of a sub-set of key business processes.

The measure of success will look at the overall outcome of the business process and will be irrespective of the success/failure of each individual common SRV within that process.

The following outcome-based metrics are to be broken down by Device type (not including Install and Commission) and Region.

These metrics have been categorised into Measures and Indicators and are labelled in column “M/I” below.

2.2.1 Measuring success of key business processes

For each business process referenced in table 1 above, the DCC shall measure the combination of SRVs attempted by a Service User for an iteration of that process and report the percentage of those iterations across all Users that returned at least one failure Alert or no response. This metric would be defined as an Indicator.

The DCC shall also use non-communicating Devices identified during each business process as a proxy for gauging estate health.

The DCC is asked to provide a list of error codes for each Service Reference Variant in Table 1, to facilitate the Working Group determining if a business process has been completed successfully if such error codes are received by the User.

Additional outcome-based metrics:

2.2.2 Install and Commission

Note, although some of the common SRVs listed in table 1 for Install and Commission are applicable to SMETS1, the overall measure of success for the outcome of this business process shall not be applicable to SMETS1.

This is because the installation of SMETS1 Devices is prohibited under the Code.

Install and Commission metrics			
ID	**Requirement**	**M/I**	**Metric**
IC1	Provide a greater level of visibility for the time taken for the DCC Total System for the install and commission process. Note: Install and Commission is a complex process and is orchestrated differently by each User making measurement of the end-to-end process challenging.	M	Measure the Response Times of the common Service Requests and report the percentage that failed to meet the Target Response Times. Note, this Measure will be provided by the RSVP metrics for the common SRVs listed in table 1 above.
		I	Measure daily total volume of successful and failed installations broken down by CH/ESME/GSME and Region.
		I	Measure daily total volume of installs for the period against the predicted number of installs. This will be broken down by SEC Party and anonymised as a failure to meet historic install volumes could be due to issues outside DCC control. The predicted installations will be based on historic DCC recorded installation volumes data and therefore may only be used for informational purposes.
		I	Measure daily total volume of Install and Commission versus Install and Leave[6]. The reporting is to include a category for any Communications Hubs awaiting a decision that are still within the 90-day investigation period for Install and Leave.
IC2	Provide information on the impact of service degradation and outage on the User.	I	The DCC uses predictive modelling techniques to record and predict behaviour of meter installations in near real-time. The deviation from the norm provides a good indicator of degradation in service and the volume of messages provides a proxy measure of impact on Users. In addition, Sev1 and Sev2 incident data can be combined to provide a more accurate reflection of the User's experience.

[6] The Working Group agreed that for the purpose of this modification, Install and Leave shall include both Proactive Install and Leave and Reactive Install and Leave as defined under the Supply Standard License Conditions.

2.2.3 Change of Supplier

The following Change of Supplier metrics could be provided in the form of an anonymised league table of Service Users.

Change of Supplier metrics			
ID	**Requirement**	**M/I**	**Metric**
CoS1	Provide a measure of the success of the Change of Supplier Process.	M	Measure daily total percentage of successful SRV 6.23 'Update Security Credentials (CoS)' SRVs delivered. Where the response erroneously reports a failure, the presence of subsequent critical and non-critical SRs sent by the gaining Supplier will be used as an indicator of success. Include a measure above by Device type and Region.
		M	Measure daily total percentage of successful SRVs 1.1.1 'Update Import Tariff (Primary Element)' and 6.8 'Update Device Configuration (Billing Calendar)' delivered. Include a measure above by Device type and Region.
		I	Provide information on the reason for failure e.g. where a CoS database becomes unavailable or other Service Provider issue materialises.
		I	Measure the overall success of SRV 6.23 on a daily basis aggregated by each Supplier Party.

2.2.4 Meter Reads

Meter Reads metrics			
ID	**Requirement**	**M/I**	**Metric**
B1	Provide a measure of the success of the scheduling of meter reads and delivery of meter reads.	M	Measure the combination of SRVs listed for this business process in table 1 and advise the overall percentage that returned a failure response or no response.

2.2.5 Prepayment

The following Prepayment metrics could be provided in the form of an anonymised league table of Service Users.

The DCC is also requested to provide commentary to recognise any DCC outages or Category 1/2 Incidents.

Prepayment metrics			
ID	**Requirement**	**M/I**	**Metric**
PP1	Provide a measure of the success of topping up a Device remotely.	M	Measure the percentage of successful SRV 2.2 'Top Up Device' SRVs successfully delivered to the Devices. Include a measure by Device type and Region.
		I	Provide information on the volumes of success and failures within the period.
		I	Provide a table showing the percentage attempts to top up before success. Provide metric for the first and second attempts and the percentage of failures. Where failure is above 5%, provide further details on the reason for the failure.
PP2	Provide a measure of the success for Update Device Change of Mode on Devices.	M	Measure the percentage of successful SRVs 1.6 'Update Payment Mode' and SRV 2.1 'Update Prepay Configuration' successfully delivered to the Devices. Include a measure by Device type and Region.

2.2.6 Update Device Firmware

The outcome-based measures for this business process are a subset of the those defined for 'In Life Device Management' in table 1 above. Specifically, these are aimed at providing a measure of success for the process of updating Device firmware.

Update Device Firmware metrics			
ID	**Requirement**	**M/I**	**Metric**
DF1	Provide a measure of the success of delivering the Device image to the Communications Hub.	M	Provide a Measure for the number of target Devices listed in SRV 11.1 'Update Firmware' and how many HANs pertaining to those Devices successfully received an Image.
DF2	Provide information of the success of transferring the Device images from CH to the Device.	I	Measure Device image verification success (0x8F72) and verification failure (0x8F1c) responses to provide information on the percentage of images that are successfully transferred from the CH to the Device. Record Devices that did not issue an Alert after the SLA has elapsed to identify failure to transfer from CH to the Device.
DF3	Provide information on successful activation of Device firmware image.	I	Measure the percentage of success and failure responses to the SRV 11.3 'Activate Firmware' request.

2.2.7 Update CH Firmware

This business process is not listed in table 1 above as the DCC is responsible for managing the Communications Hub firmware. Therefore, there are no SRVs for Service Users to use relating to this business process.

Update CH Firmware metrics			
ID	**Requirement**	**M/I**	**Metric**
CHF1	Provide a measure of the success of delivering CH firmware image to the Communications Hub.	M	Measure the percentage of successful CH firmware payload images successfully delivered to the CH.
CHF2	Provide a measure of the successful activation of the CH firmware image.	M	Measure the percentage of successful CH firmware image activations.

CHF1 implementation

SECAS note that the functionally for CHF1 could be delivered under SECMP0007 'Firmware updates to IHDs and PPMIDs'. However, SECMP0007 would not directly provide the reporting sought by Parties for this measure.

The Proposer and the Working Group have agreed that they would like the DCC to include the measure of CHF1 in its Impact Assessment, irrespective of the progression of SECMP0007. Therefore, the DCC shall assess this requirement against both of the following scenarios:

- CHF1 is implemented as a separate modification separate to SECMP0007; and
- CHF1 is implemented as a change to the reporting only after SECMP0007 is implemented.

2.2.8 Alerts Management

Alerts metrics			
ID	**Requirement**	**M/I**	**Metric**
A1	Provide a measure of the success of delivering Alerts.	M	Measure the percentage of Alerts successfully delivered within the required SLA. For Alerts impacted by throttling, i.e. during an Alert storm, this will measure all Alerts sent to the User.
		I	Measure the total number of Alerts that fail to be delivered within the SLA time and a breakdown of the number of failures by Alert code to identify the type of Alert impacting overall performance.

Please see section 2.1.2 of this document for greater detail on what the Proposer and the Working Group are seeking from this business process.

2.3 Requirement 3: The DCC will measure end to end Service Availability across the DCC environment and report this by CSP region

2.3.1 Defined DCC Services

Note: This section refers to the combination of each of the following DCC interface and supporting sub-systems as a 'Service':

- the DCC User Interface
- the Registration Data Interface
- the Smart Metering Key Infrastructure (SMKI) Repository Interface
- the SMKI Services Interfaces
- the Self-Service Interface (SSI)

Service availability shall be measured as a percentage for each of the above Services.

It should be noted that, whilst this approach accounts for overall service availability of each Service, it would not be reflective of instances in which the Service is partially unavailable.

Those key business processes impacted by partial availability shall be reported alongside the metrics and indicators for service availability of a particular Service. An illustrative example of this is provided in Table 3 below. Note that the Service Level percentages reported for each key business process are an indicator, and would quantify the time, during the reporting period, in which the DCC has the capability to successfully process and deliver a particular Service Request that makes up a particular business process, as defined in Table 1 of this document.

2.3.2 Service Availability metrics

In addition to the considerations above, the DCC is asked to report on how much cost and effort will be required to include the following elements in the solution.

Monthly view of end-to-end Service availability

A monthly view of end-to-end service availability for each of the Services described above is reported on as a single percentage figure, as well as depicted as a line graph across the days of the month. This will enable a higher level of granularity and easier identification of potential issues that might have impacted Users throughout the reported period. As stated before, this measure for end-to-end availability should include sub-systems linked to each individual interface. If a particular sub-system (i.e. server) is responsible for supporting multiple interfaces, and this sub-system experiences an outage, then the availability measure for each of the affected Services should be impacted and reflected in the monthly measure.

End-to-end Service availability by CSP Region

The view for service availability, where relevant[7], is split by CSP Regions, for better correlation with Users operational experience.

[7] Service availability contains some services that are not regionally based, for example SSI availability has no reliance on CSP region and so would not need to be split by regional availability. SMETS1 is not broken down by region.

Reporting Service availability by time of day

Time of day is considered when measuring and reporting on service availability for any particular Service, as this can have a direct impact on User's operations.

The OMR suggests a split (Monday to Friday) between hours where installations are more prominent (08:00-20:00) and hours where other business processes (i.e. CoS) take place (20:00-08:00).

With regards to weekends, the OMR recommends Saturdays to be split between 08:00-12:00 (on-site activities are still performed, i.e. installations) and 12:00 to 08:00. Sundays are generally considered as days of on-site operations inactivity.

Measuring Service downtime

Service downtime for each interface and its supporting system components is measured in minutes, and then expressed in hours over the reporting period (e.g. 235 minutes of unavailability in a month would equate to a total of 3.91 hours).

Note, the Proposer and the Working Group do not want a measure of service downtime to be given as an average as this could skew results.

The DCC shall record the overall downtime for each DCC Interface separately, including a breakdown of Planned Maintenance and Unplanned Maintenance.

Additionally, as each Service provided by the DCC is made up of an interface and multiple supporting sub-systems, a particular Service is to be considered available only when all of its supporting sub-systems are available, and is to be considered unavailable otherwise.

Planned Maintenance

Note: In accordance with SEC Section H8, the DCC "*shall (insofar as is reasonably practicable) undertake Maintenance of the DCC Systems in such a way as to avoid any disruption to the provision of the Services (or any part of them).*" Additionally, the DCC shall limit Planned Maintenance of the DCC Systems generally to not more than six hours in any month (including maintenance of the SSI). Given this allowance, the OMR acknowledges that Planned Maintenance, complying with Section H8.4 of the SEC, should be excluded from, and not impact, the calculation for Service Availability defined in the formula above.

However, the Proposer and the Working Group request the DCC provide an Indicator for planned downtime as this would show what actual availability is for Users. It is acknowledged that the DCC is permitted to carry out planned maintenance and so it is an Indicator rather than a Measure.

Measuring Service reliability

The DCC shall produce reliability measures for each of the interfaces described above and reported alongside the figures for service availability. Recommended measures for reliability of a system are reported below:

- Total Number of Incidents (category 1 to 5) across the reporting period. Additional Indicators to inform Users on the reliability of the DCC services would include the overall number of Category 1 & 2 incidents per Reporting Period (the OMR notes that the DCC already provides

summary information about Category 1 & 2 Major Incidents to Users voluntarily). The OMR also believes the PMR should include the total volume of Category 3, 4 & 5 Incidents in the Reporting Period, where the Incident resolution is attributed to the DCC as the Responsible Party.

- Average amount of downtime per event (related to the Mean Time To Repair (MTTR) measure, which is defined as total maintenance time divided by the total number of repairs).
- Mean Time Between Failures (MTBF), calculated across the reporting period, as operating time (hours) divided by the total number of failures.

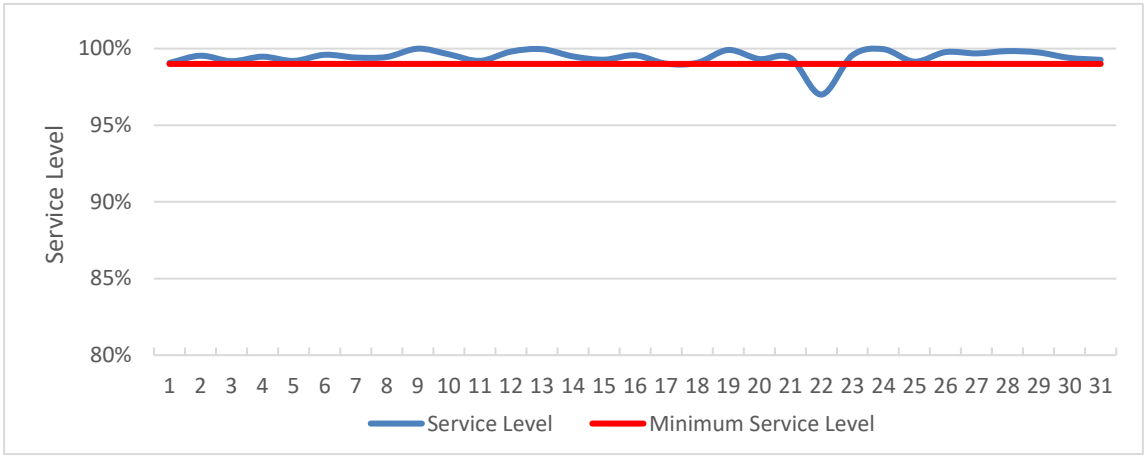
An illustrative example of the recommended Measures (M) and Indicators (I) proposed by the OMR for the reporting of service availability and reliability of each interface is provided in Table 3 below:

Table 3: Service Availability Measures

Service Availability DCC User Interface – Service Level					M/I
Monthly Performance Measure	**Previous Service Level**	**Service Level**	**Target Service Level**	**Minimum Service Level**	
Service Availability – DCC User Interface	99.95%	99.40%	99.95%	99.00%	M

Service Availability DCC User Interface – Monthly View

I



Service Availability DCC User Interface – Time of Day Breakdown

Monthly Performance Measure	Hours of Operational Activity	Hours of Operational Inactivity	
Service Availability – DCC User Interface	98.80%	100.00%	I

Service Availability DCC User Interface – Service Availability by Region*

*N/A, regional split not applicable for this interface

Monthly Performance Measure	Region A	Region B	Region C	
Service Availability – DCC User Interface	99.00%	99.80%	99.40%	I

Service Availability DCC User Interface – Reliability

Total Number of Incidents (of which cat. 1,2) (of which cat. 3,4,5)	4 (1) (3)	I

Mean Time To Repair (MTTR)	3.02 hours	I
Mean Time Between Failures (MTBF)	8.09 days	I

Service Availability DCC User Interface – Business Processes View				
Monthly Performance Indicator	**Previous Service Level**	**Service Level**	**Status**	
Install and Commission (ESME)	99.80%	99.40%	Degraded	I
Install and Commission (GSME)	98.20%	99.90%	Available	I
Change of Supplier (Gain)	XX.XX%	XX.XX%	Available	I
Change of Tenancy	XX.XX%	XX.XX%	Available	I
Tariff Updates	XX.XX%	XX.XX%	Available	I
Billing (Scheduled)	XX.XX%	XX.XX%	Available	I
Billing (Unscheduled)	XX.XX%	XX.XX%	Available	I
Pre-Payment	XX.XX%	XX.XX%	Available	I
Security and Key Management	XX.XX%	XX.XX%	Available	I
In-Life Device Management	XX.XX%	XX.XX%	Degraded	I
Logistics CH Ordering and Returns	XX.XX%	XX.XX%	Available	I
Distribution Networks Post I&C Activity	XX.XX%	XX.XX%	Available	I
Alerts Management	XX.XX%	XX.XX%	Available	I

2.4 Requirement 4: The DCC shall reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period

The SEC states that the DCC must create the PMR within 25 Working Days. However, the DCC shall reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period. This is to ensure the PMR remains operationally relevant to Users.

The effect would be that, depending on bank holidays and month end falling on Working Days, the report could be reviewed by the OPSG the month following the end of the reporting period. For example, a report for the month of February could be reviewed at the end of March at the OPSG report review meeting.

2.5 Requirement 5: In relation to CPM 5, the DCC will improve transparency in the reporting provided for incident Categories 3, 4 and 5

Feedback from Distribution Network Operators (DNO) highlighted a lack of transparency in the reporting of Incident Categories 3, 4 & 5 where the DCC is the responsible Party for the resolution of the incident in accordance with the SEC Appendix AG 'Incident Management Policy'.

CPM 5 does not split out the resolution of these per Incident Category. Therefore, in order to improve transparency and confidence in the reporting provided for incident Categories 3, 4 and 5, CPM 5 is to be amended to show individual incident resolution times for each incident category.

Data will be provided in the form of statistics for each Incident Category. The DCC is not expected to provide detail pertaining to each individual Incident raised.

This would be broken down by SMETS1 and SMETS2 and be supplemented by further Indicators detailing;

- the number of Incidents per Category 3, 4 and 5 raised in the reporting period,
- the number that met the Target Initial Response Time[8]; and
- the number that met the Target Resolution Time.

The Categorisation Matrix within SEC Appendix AG 'Incident Management Policy' states the SLAs for each Incident Category.

The Proposer and the Working Group agree to the DCC's recommendation to report the Incidents closed in period instead of opened, as this ensures that all Incidents raised are reported on. Otherwise, if an Incident is raised and not closed in period, it would not appear in a future report. It also means that Incidents raised towards the end of the reporting period that are not resolved but still within SLA are accurately reported on.

[8] Target Initial Response Time is defined in SEC Appendix AG 'Incident Management Policy' as the time period within which an Incident within each Category should be recorded on the Incident Management Log and assigned to a resolver.

3. Definitions

3.1 Definitions

Measure

A “Measure” is something that the DCC is responsible for providing a level of service for, and against which targets for DCC performance can be set.

Indicator

An “Indicator” is something the DCC is not accountable for but that provides a Key Performance Indicator (KPI) that may be of value or use to the industry but cannot have a target attributed to it.

Device Type

Means, in respect of a Device, a generic description of the category of Devices into which the Device falls.

Region

Means each of the regions of Great Britain that are subject to different DCC Service Provider Contracts.

SMETS1 Device

Means one of the following:

- a SMETS1 ESME;
- a SMETS1 GSME;
- a SMETS1 CHF;
- a SMETS1 GPF;
- a SMETS1 PPMID;
- a SMETS1 IHD; and
- any other device operating on a home area network created by a SMETS1 CHF.

SMETS2+ Device

Means a Device which is not a SMETS1 Device.

3.2 Rate, Speed, Volume, Payload (RSVP) definitions

Rate (R)

The sample period over which the performance is measured. For the purposes of the PMR the rate will be either daily or monthly. A daily measure provides the level of granularity required to capture service degradation or outages that impact a User's business process. A monthly measure will provide a higher-level executive view of service performance.

Speed (S)

A measure of the Round-Trip Time (RTT) for an SRV or group of SRVs measured within the rate period. The RTT is measured from receipt of the SRV from the User, to sending a Service Response to the User, and includes time spent within the Home Area Network (HAN). Speed should be measured as an average (mean) as well as a median, as an average can be skewed by extremely large or small values. The OMR acknowledges that measuring RTT excluding the HAN would provide a more useful measure of DCC performance but introduces a number of challenges as this is not currently a technical capability of the system. However, an interim solution would be to calculate a response time using the CSP test message average response time, added to the DSP measured response time for the SRV. This time should be reported and plotted alongside the RTT. This solution is dependent on the CSP test message issues raised in section 3.2.5 of the OMR being addressed.

Volume (V)

The total number of Service Requests or group of SRVs processed by the DCC Total System within the period.

Payload (P)

The confirmed success or failure of the Service Request within the period. A failure is recorded when a Service Response contains an Error Response Code relating to a communications failure or timeout (E20 or E21), or a subsequent failure Alert code (N12 or N13). This confirms the sending of an SRV and the receipt of a response regardless of whether the response and therefore the request to perform an action has been successful or not.

4. Glossary

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

Glossary	
Acronym	**Full term**
CH	Communications Hub
CoS	Change of Supplier
CPM	Code Performance Measure
CSP	Communication Services Provider
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
GSME	Gas Smart Metering Equipment
KPI	Key Performance Indicators
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
OMR	Operational Metrics Review
OPR	Operational Performance Regime
OPSG	Operations Group
RSVP	Rate, Speed, Volume and Payload
RTT	Round Trip Time
SMETS	Smart Metering Equipment Specifications
SMKI	Smart Metering Key Infrastructure
SR	Service Request
SRV	Service Reference Variant
SSI	Self-Service Interface
TRT	Target Response Time

This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.

MP122A 'Operational Metrics'

Annex B

Legal text – version 1.0

About this document

This document contains the redlined changes to the SEC that would be required to deliver this Modification Proposal.

Section A 'Definitions and Interpretation'

These changes have been redlined against Section A version 9.0.

Add the following new definitions in Section A1.1 as follow:

Business Process	means a combination of Service Requests as described in Section H13.1A or H13.1B (Code Performance Measures).
Performance Indicators	means an indicator of service performance from time to time determined by the Panel under Section H13.5B (Performance Indicators), on which the DCC is to report but which does not constitute a Performance Measure.
Target Initial Response Time	means the time period within which an Incident within each Incident Category is to be recorded on the Incident Management Log and assigned to a resolver, as set out in the Incident Management Policy.

Amend the following definitions in Section A1.1 as follows:

Target Availability Period means, in relation to ~~the Self-Service~~each DCC Interface (excluding the one listed in paragraph (f) of the definition of DCC Interface), a period of time in respect of each month, expressed in minutes and calculated as:

(a) the total number of minutes in that month, minus

(b) the number of minutes during which the ~~relevant~~ DCC ~~Service Provider~~ has, acting in compliance with Sections H8.2 and H8.3 (Maintenance of the DCC Systems), arranged for the ~~Self-Service~~given DCC Interface to be unavailable during that month for the purposes of Planned Maintenance.

Schedule H 'DCC Services'

These changes have been redlined against Section H version 9.0.

Amend Section H13 as follows:

H13. PERFORMANCE STANDARDS AND REPORTING

Code Performance Measures

H13.1 Each of the following performance measures constitute a Code Performance Measure (to which the following Target Service Level and Minimum Service Level will apply, measured over the following Performance Measurement Period):

No.	Code Performance Measure	Performance Measurement Period	Target Service Level	Minimum Service Level
1	Percentage of On-Demand Service Responses delivered within the applicable Target Response Time.	monthly	99%	96%
2	Percentage of Future-Dated Service Responses delivered within the applicable Target Response Time.	monthly	99%	96%
3	Percentage of Alerts delivered within the applicable Target Response Time. Alerts consolidated in accordance with the Alert Management Mechanism will not be counted.	monthly	99%	96%
4	Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 1 or 2 that are resolved in accordance with the Incident Management Policy within the Target Resolution Time.	monthly	100%	85%
5	Percentage of Incidents, measured and reported as a separate Code Performance Measure for each of Incident Categories 3, 4 and 5, which the DCC is responsible for resolving ~~and which fall within Incident Category 3, 4 or 5~~ that are resolved in accordance with the Incident Management Policy within the Target Resolution Time.	monthly	90%	80%
5A	Percentage of Incidents which fall within Incident Category 3, 4 or 5 that are recorded on the Incident Management Log and assigned to a resolver within the Target Initial Response Time.	monthly	90%	80%
6	Percentage of time (in minutes) during which each DCC ~~when the Self-Service~~ Interface (excluding the one listed in paragraph (f) of the definition of DCC	monthly	99.5%	98%

	Interface) is available ~~to be accessed by all Users~~ during the Target Availability Period. There shall be a separate Code Performance Measure for each combination of DCC Interface, Region and the two relevant times of day (the first such relevant time of day being Monday-Friday 08.00-20.00 and Saturday 08.00-12.00; the second being every other time). For this purpose, a DCC Interface is only considered to be available where it and the DCC Systems on which it relies are fully available, such that those persons which are intended to be able to use the DCC Interface can use the full functionality which is intended to be available to them.			
6A	Percentage of each of the Business Processes described in Section H13.1A which is delivered within the applicable Target Response Time. There shall be a separate Code Performance Measure for each combination of Business Processes and either Region (for SMETS2) or SMETS1.	monthly	99%	96%
6B	Percentage of firmware images successfully delivered to Communication Hubs.	monthly	99%	96%
6C	Percentage of firmware image activations successfully implemented on Communication Hubs.	monthly	99%	96%

H13.1A The Business Processes referred to in Code Performance Measure 6A above are a combination of Service Reference Variants as set out in the table below. The percentage of each Business Process which is delivered within the Target Response Time shall be measured and calculated by reference to whether the messages that together comprise that Business Process were sent and received within the required Target Response Time. For this purpose, a Service Response will not be considered to have been received if the Service Response contains an error Response Code relating to a communications failure or timeout (E20 or E21).

Business Process	**Service Reference Variant**	**Description**	**SMETS1 applicable**
Install and Commission	8.11	Update HAN Device Log	Yes
	6.21	Request Handover of DCC Controlled Device (Update Supplier Certificates)	No
	8.1.1	Commission Device	Yes
	8.7.2	Join Service (Join GPF with GSME)	Yes
	6.20.1	Set Device Configuration' (Import MPxN)	No
	1.1.1	Update Import Tariff (Primary Element)	Yes
	6.8	Update Device Configuration (Billing Calendar)	Yes
	8.14.1	Communications Hub Status Update Install Success	No
	6.23	Update Security Credentials (CoS)	Yes

Business Process	Service Reference Variant	Description	SMETS1 applicable
Change of Supplier (Gain)	1.1.1	Update Import Tariff (Primary Element)	Yes
	6.8	Update Device Configuration (Billing Calendar)	Yes
Change of Tenancy	3.2	Restrict Access for Change of Tenancy	Yes
Tariff Updates	1.1.1	Update Import Tariff (Primary Element)	Yes
Pre-Payment	1.6	Update Payment Mode (Payment Mode = Prepayment)	Yes
	2.1	Update Prepay Configuration	Yes
	2.2	Top Up Device (Update Balance with positive value)	Yes
Security and Key Management	6.15.2	Update Security Credential (Device) – Credential Type = Digital Signature	No
	6.15.2	Update Security Credential (Device) – Credential Type = Key Agreement	No
	6.17	Issue Security Credentials – Credential Type = Digital Signature	No
	6.17	Issue Security Credentials – Credential Type = Key Agreement	No
Update Device Firmware	11.1	Update Firmware Note: In respect of SMETS2+ Devices the DCC must ensure that the associated firmware update has been delivered to all relevant Communications Hub Functions within five days of receipt of the Service Request.	Yes
	11.3	Activate Firmware (Individual SR for each GUID for firmware activation) Note: SMETS1 five-day Target Response Time.	Yes
Logistics CH Ordering and Returns	8.14.3	Communications Hub Status Update – Fault Return	No
	8.14.4	Communications Hub Status Update – No Fault Return	No
Distribution Networks Post I&C Activity	6.15.1	Update Security Credentials (Update Network Operator Certificates)	Yes
	6.5	Update Device Configuration (Voltage)	Yes
	6.22	Configure Alert Behaviour (Update ENO Alter Configuration)	No
Meter Reads	4.6.1	Retrieve Import Daily Read Log	Yes

Business Process	Service Reference Variant	Description	SMETS1 applicable
	4.6.2	Retrieve Export Daily Read Log	No
	4.8.1	Read Active Import Profile Data	Yes
	4.8.2	Read Reactive Import Profile Data	Yes
	4.8.3	Read Export Profile Data	Yes
	4.10	Read Network Data	Yes
	4.17	Retrieve Daily Consumption Log	No

Note, where the response for the 'Update Security Credentials (CoS)' Service Request erroneously reports a failure, the presence of subsequent Critical and Non-Critical Service Requests sent by the gaining supplier will be used as an indicator of success.

Service Provider Performance Measures

H13.2 The DCC may modify the Reported List of Service Provider Performance Measures where it has:

(a) undertaken reasonable consultation with the Parties regarding the proposed modification;

(b) given due consideration to, and taken into account, any consultation responses received; and

(c) provided to the Panel, the Parties, the Authority and (on request) the Secretary of State a statement of its reasons for the modification together with copies of any consultation responses received,

and as soon as reasonably practicable following any such modification, the DCC shall provide an up-to-date copy of the Reported List of Service Provider Performance Measures to the Panel, the Parties, the Authority and (on request) the Secretary of State.

H13.3 Prior to agreeing any changes to the DCC Service Provider Contracts that will alter the Service Provider Performance Measures, the DCC shall:

(a) undertake reasonable consultation with the Panel and Parties regarding such changes;

(b) give due consideration to, and take into account, any consultation responses received; and

(c) provide to the Panel, the Parties, the Authority and (on request) the Secretary of State a statement of its reasons for proposing to agree such changes.

Reporting

H13.4 The DCC shall, within ~~25~~ 10 Working Days following the end of each Performance Measurement Period, produce a report setting out the Service Levels achieved in respect of each Performance Measure. Such report must identify:

(a) those Performance Measures (if any) for which the Service Level was less than the Target Service Level and/or the Minimum Service Level;

(b) where a Service Level is less than the Target Service Level, the reason for the Service Level achieved;

(c) where a Service Level is less than the Minimum Service Level, the steps the DCC is taking to prevent the re-occurrence or continuation of the reason for the Service Level achieved; and

(d) any anticipated reductions in the DCC's Internal Costs and/or External Costs (as both such expressions are defined in the DCC Licence) arising as a consequence of the DCC Service Providers failing to achieve the Target Service Levels in respect of the Service Provider Performance Measures.

H13.5 A copy of the report produced pursuant to Section H13.4:

(a) shall be provided by DCC, immediately following its production, to the Panel, the Parties, the Authority and (on request) the Secretary of State; and

(b) may be provided by the Panel, at its discretion, to any other person.

Report on Performance Indicators

H13.5A As part of the report required under Section H13.4, the DCC shall also report on its performance against the Performance Indicators for the same period.

H13.5B The Panel shall establish and periodically review, in consultation with the Parties and the Authority, a document (to be known as the DCC Performance Indicators Document) which lists the reasonable service metrics which are to constitute the Performance Indicators, and which are therefore to be measured and reported on by the DCC. Such Performance Indicators may include:

(a) graphs of daily performance in respect of delivery of each of the Business Processes;

(b) monthly median figures for performance in respect of delivery of each of the Business Processes;

(c) the total number of each of the Business Processes delivered each month;

(d) for each DCC Interface separately, the average amount of downtime per Incident; and

~~(a)~~(e) for each DCC Interface separately, the mean amount of time between Incidents.

Performance Measurement Methodology

H13.6 The DCC shall:

(a) establish and periodically review the Performance Measurement Methodology in accordance with Good Industry Practice and in consultation with the Panel, the Parties and the Authority; ~~and~~

~~(a)~~(b) seek approval from the Panel for any proposed changes that the DCC wishes to make to the Performance Measurement Methodology; and

~~(b)~~(c) as soon as reasonably practicable following any modification which ~~it may make to the Performance Measurement Methodology~~the Panel approves, provide an up to date copy of

the Performance Measurement Methodology to the Panel, the Parties, the Authority and (on request) the Secretary of State.

OPR Exceptional Events

H13.7 Sections H13.7 to H13.14 shall apply only to the extent that the OPR Reporting established under the DCC Licence applies by reference to reporting under this Code. OPR Exceptional Events shall not apply in respect of Performance Measure reporting under Section H13.4.

H13.8 For the purposes of OPR Reporting, in measuring performance for each Performance Measure, the DCC shall exclude from the Service Level calculation any and all instances of delayed or non-performance for which the DCC has relief for an OPR Exceptional Event by virtue of Section H13.12.

H13.9 The DCC may claim relief for the purposes of OPR Reporting in respect of the Performance Measures to the extent this is due to OPR Exceptional Events. Where the DCC also wishes to claim relief in respect of its obligations under this Code, the DCC must also separately claim relief for Services FM under Section M3 (Services FM and Force Majeure).

H13.10 The DCC cannot claim an OPR Exceptional Event has occurred:

(a) in relation to any wilful act, neglect or failure to take reasonable precautions against the relevant OPR Exceptional Event by the DCC or its servants, agents, employees or contractors (including the DCC Service Providers);

(b) in relation to any circumstances resulting from a failure or delay by any other person in the performance of that other person's obligations under a contract with the DCC other than this Code (unless that other person is itself prevented from or delayed in complying with its obligations as a result of OPR Exceptional Events); and/or

(c) as a result of any shortage of labour, material or other resources unless caused by circumstances which are themselves OPR Exceptional Events,

and in any event, the DCC shall not be entitled to relief for the purposes of OPR Reporting if and to the extent that it is required to comply with the BCDR Procedure in accordance with Sections H10.9 and H10.10 (the Business Continuity and Disaster Recovery Procedure) but has failed to do so (unless this failure is also due to OPR Exceptional Events affecting the operation of the BCDR Procedure).

H13.11 The DCC shall, as soon as reasonably practicable (and in any event within five (5) days of the occurrence of the OPR Exceptional Event), give to the Users that were due to receive the affected Services and to the Panel full details of the OPR Exceptional Event and any relief for the purposes of OPR Reporting which the DCC wishes to claim in connection with the OPR Exceptional Event.

H13.12 The DCC shall be entitled to relief for the purposes of OPR Reporting in respect of OPR Exceptional Events to the extent that the Panel agrees following consultation with any relevant Sub-Committee that the requirements of Sections H13.9 and H13.10 are met, and that:

(a) the DCC could not have avoided the occurrence of the OPR Exceptional Event (or its consequences or likely consequences) by taking steps which the DCC was required to take (or procure) under this Code and any Bilateral Agreement or might reasonably be expected to have taken;

(b) the OPR Exceptional Event directly caused the non-performance of the Services for which relief is claimed;

(c) the time lost and/or relief from the obligations under this Code and any Bilateral Agreement claimed by the DCC could not reasonably be expected to be mitigated or recovered by the DCC acting in accordance with Good Industry Practice; and

(d) the DCC is taking all steps in accordance with Good Industry Practice to overcome or minimise the consequences of the OPR Exceptional Event on the performance of the Services.

H13.13 The Panel shall reach a determination as to whether the DCC is entitled to relief for the purposes of OPR Reporting in respect of an OPR Exceptional Event in accordance with Section H13.12 within 10 Working Days after the DCC notifies the Panel of the OPR Exceptional Event under Section H13.11.

H13.14 The DCC shall notify the affected Users and the Panel as soon as reasonably practicable after the OPR Exceptional Event ceases or no longer causes the DCC to be unable to comply with its obligations under this Code and/or any Bilateral Agreement in respect of the Services.

This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.

DCC Performance Indicators Document – v1.0

Purpose

This document contains the Data Communications Company (DCC) Performance Indicators produced in accordance with Smart Energy Code (SEC) Section H 'DCC Services' H13.5B.

The DCC shall provide metrics on the Performance Indicators within this document in its Performance Measurement Report (PMR).

Definitions

Performance Indicator: means an indicator of service performance from time to time determined by the Panel under SEC Section H13.5B 'Performance Indicators', on which the DCC is to report but which does not constitute a Performance Measure.

Business Process Performance Indicators

For each Business Process referenced in SEC Section H13.1A, the DCC shall measure the combination of SRVs attempted by a Service User for an iteration of that process and report the percentage of those iterations across all Service Users that returned at least one failure Alert or that did not return a response. This metric would be defined as an Indicator.

The DCC shall also use non-communicating Devices identified during each Business Process as a proxy for gauging estate health.

Specific Business Process Performance Indicators

The following section defines a set of Performance Indicators for each of the identified Business Processes defined in SEC Section H13.1A.

These metrics are to be made available to Users in addition to Code Performance Measure 6A in SEC Section H.

Table 1: Install and Commission metrics

ID	Requirement	Definition
IC1	Provide a greater level of visibility for the time taken for the DCC Total System for the install and commission process.	Measure daily total volume of successful and failed installations broken down by CH/ESME/GSME and Region.
		Measure daily total volume of installs for the period against the predicted number of installs. This will be broken down by SEC Party and anonymised as a failure to meet historic install volumes could be due to issues outside DCC control. The predicted installations will be based on historic DCC

Table 1: Install and Commission metrics		
ID	**Requirement**	**Definition**
	Note: Install and Commission is a complex process and is orchestrated differently by each User making measurement of the end-to-end process challenging.	recorded installation volumes data and therefore may only be used for informational purposes.
		Measure daily total volume of Install and Commission versus Install and Leave[1]. The reporting is to include a category for any Communications Hubs awaiting a decision that are still within the 90-day investigation period for Install and Leave.
IC2	Provide information on the impact of service degradation and outage on the User.	The DCC uses predictive modelling techniques to record and predict behaviour of meter installations in near real-time. The deviation from the norm provides a good indicator of degradation in service and the volume of messages provides a proxy measure of impact on Users. In addition, Incident Category 1 and Incident Category 2 data can be combined to provide a more accurate reflection of the User's experience.

Table 2: Change of Supplier metrics		
ID	**Requirement**	**Definition**
CoS1	Provide a measure of the success of the Change of Supplier Process.	Provide information on the reason for failure e.g. where a CoS database becomes unavailable or other Service Provider issue materialises.
		Measure the overall success of SRV 6.23 on a daily basis aggregated by each Supplier Party.

Table 3: Prepayment metrics		
ID	**Requirement**	**Definition**
PP1	Provide a measure of the success of topping up a device remotely.	Provide information on the volumes of success and failures within the period.
		Provide a table showing the percentage attempts to top-up before success. Provide metric for the first and second attempts and the percentage of failures. Where failure is above 5%, provide further details on the reason for the failure.

[1] Install and Leave shall include both Proactive Install and Leave and Reactive Install and Leave as defined under the Supply Standard License Conditions.

Table 4: Update Device Firmware metrics		
ID	**Requirement**	**Definition**
DF1	Provide information of the success of transferring the device images from CH to the device.	Measure Device image verification success (0x8F72) and verification failure (0x8F1c) responses to provide information on the percentage of images that are successfully transferred from the CH to the Device. Record Devices that did not issue an Alert after the SLA has elapsed to identify failure to transfer from CH to the Device.
DF2	Provide information on successful activation of device firmware image.	Measure the percentage of success and failure responses to the SRV 11.3 'Activate Firmware' request.

Table 5: Alerts metrics		
ID	**Requirement**	**Definition**
A1	Provide a measure of the success of delivering Alerts.	Measure the total number of Alerts that fail to be delivered within the SLA time and a breakdown of the number of failures by Alert code to identify the type of Alert impacting overall performance.

Additional Performance Measurement Report metrics

The following monthly metrics are to be recorded and reported within the PMR:

Monthly Average and Median RTT Including HAN time

- An Indicator of the Monthly Average (Mean) and Median Round Trip Time (RTT) including time spent within the Home Area Network (HAN).

  The Median is reported because, when compared to the average/mean, this measure is less likely to be skewed by extremely large or small numbers and therefore provides a better idea of the typical response time.

Indicator of the range of RRT values

- An Indicator of the range of RTT values measured within the month to show the longest and slowest response time recorded.

Indicator of SRV volumes

- An Indicator of the total number (volume) of SRV requests listed in SEC Section H13.5B, recorded for the period.

Indicator for Failed SRVs

- An Indicator of the percentage of SRVs that failed to be delivered due to a communications failure or timeout (E20 or E21).

Indicator for planned downtime

- An Indicator for Planned Maintenance to show what actual availability is for Service Users. It is acknowledged that the DCC is permitted under SEC Section H 'DCC Services' to carry out Planned Maintenance.

  Note, Unplanned Maintenance will not be counted under this Indicator.

SEC Modification Proposal, SECMP0122

Operational Metrics

Full Impact Assessment (FIA), "February Release"

Version:	**0.8**
Date:	**3rd September, 2020**
Author:	**DCC**
Classification:	**DCC Public**

Data Communications Company

Contents

1 Document History

1.1 Revision History

Revision Date	Revision	Summary of Changes
30/07/2020	0.1	Initial draft version, internal DCC review
05/08/2020	0.5	Completed internal DCC review, release as draft version
18/08/2020	0.6	Updated with Working Group feedback, PIA for external CRs split out into separate document
25/08/2020	0.8	Further reviews with SECAS and Working Group. PIAs for August 21 broken out into separate document.

1.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP122 Business Requirements v1.2 (draft6)	SECAS	24/07/2020
2	MP122 Preliminary Assessment Request	SECAS	14/05/2020
3	OPSG OMR Report Final	OPSG	12/05/2020`
4	MP122 DCC Preliminary Assessment v0.5	DCC	25/06/2020
5	SECMP0122 PIA August 2021 Release	DCC	04/09/2020

References are shown in this format, [1].

1.3 Document Information

The Proposer for this Modification is Gemma Slaney from Western Power Distribution. The original proposal was submitted on 24th March 2020.

The first Preliminary Impact Assessment (PIA) for this Modification was requested of DCC on 18th May 2020 and was submitted on 28th May 2020.

It should be noted that the Preliminary Impact Assessment was written against an earlier version of the Business Requirements. In the interests of expediency, SECAS and the DCC agreed to go straight to the Full Impact Assessment once the Change Board gave approval, and the final versions of the Business Requirements were delivered on 16th July, 2020.

Both the Business Requirements and specific measures and indicators are included from document [1] to allow a direct comparison with the proposed solution.

The Full Impact Assessment was requested on 16th July, 2020. An initial version was supplied on 5th August, 2020. Information relating to external data sources requiring contractual negotiation has been separated out into a separate document.

2 Context and Requirements

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

The context, and issue statement, and requirements following have been provided by SECAS and the Proposer.

2.1 Context

Issues with transparency of reporting and relevance of the measures contained within the Data Communications Company (DCC) Performance Measurement Report (PMR) have arisen. In its monthly review of the PMR, the Operations Group has found it increasingly difficult to report to the Smart Energy Code (SEC) Panel on the issues within the report.

As a result of the issues encountered by the Operations Group, the Operational Metrics Review (OMR) was undertaken to better understand the PMR measures, consider amendments and recommendations of new performance indicators.

Through workshops and surveys of Users, it is clear that Users want to see reporting that reflects the business processes that the DCC supports, for example, Installation and Commissioning, Billing, and Prepayment top up.

2.2 Operational Metrics Review

The OPSG OMR Report [3] which is included in

Appendix B: Supporting Information, outlines the findings of the Operational Metrics Review, commissioned by the Operations Sub-Group (OPSG), to identify improvements in the metrics used to measure the DCC service. The need for the review was identified following issues raised by the OPSG in relation to the monthly PMR. In October 2019, work commenced on the Operations Group's Operational Metrics Review project to identify improvements in the metrics used to measure the DCC service. The need for the review was identified following issues raised by the Operations Group in relation to the monthly PMR produced by the DCC.

The PMR provides details of the Code Performance Service Levels achieved as set out in SEC Sections H13.1, L8.6 and D11.3 and the Service Provider Performance Measures.

The review of the Operational Performance Regime (OPR) has been carried out due to concern that the current metrics may not be providing the best DCC incentives. Ofgem proposed to replace them with more outcome-based measures.

2.3 Business Requirements for this Modification

This section contains the definitions, considerations and assumptions for each business requirement as provided by the Proposer and SECAS.

Term	Definition
Measure	Is something that the DCC is responsible for providing a level of service for, and against which targets for DCC performance can be set.
Indicator	Is something the DCC is not accountable for but that provides a KPI that may be of value or use to the industry. It cannot have a target attributed to it.
Device Type	In respect of a Device, a generic description of the category of Devices into which the Device falls.
Region	Means each of the regions of Great Britain that are subject to different DCC Service Provider Contracts
SMETS 1 Device	Means one of the following: • a SMETS1 ESME • a SMETS1 GSME • a SMETS1 CHF • a SMETS1 GPF • a SMETS1 PPMID • a SMETS1 IHD • any other device operating on a Home Area Network created by a SMETS1 CHF
SMETS 2+ Device	a Device which is not a SMETS1 Device

Table 1: General Terms and Definitions Used in the Business Requirements and Document

2.4 General Notes

The metrics defined in this document are expected to be reported within the DCC's PMR as required by the Code.

The DCC is expected to highlight any changes to the metrics which would impact the contracts with its Service Providers and therefore impact its ability to fulfil Requirement 4 of this document.

2.5 Business Requirements

This section which contains the functional business requirements and is taken almost verbatim from document [1]. The section numbering following has been organised to match the information in the headings in [1].

Based on the following high-level requirements a full solution will be developed.

Req.	High Level Business Requirement
1	The DCC will report and measure monthly service performance for Service Reference Variants (SRVs) used in User business processes
2	The DCC shall add specific outcome-based measures to the Performance Measurement Report (PMR) to provide a Measure of performance as well as Indicators on the success of the key business processes where they have end to end visibility.
3	The DCC will measure end to end service availability across the DCC environment and report this by Communication Services Provider (CSP) Region
4	The DCC shall reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period
5	In relation to Code Performance Measure (CPM) 5, the DCC will improve transparency in the reporting provided for incident Categories 3, 4 and 5

Table 2: Business Requirements for SECMP0122

Based on the OMR, as described in section 2.2, outcome-based measures have been drawn from the OMR and consist of updated metrics for the OPR to target four areas specifically:

- Install and Commission
- Prepayment
- Firmware management (covered by sections 2.2.5 'In Life Device Management' and 2.2.6 'Update CH Firmware' below)
- Service Availability

Where relevant performance will be broken down by meter type and Region.

2.1 Requirement 1: Report and measure monthly service performance for SRVs used in User business processes

The Operations Sub-Group (OPSG) requested changes to the PMR to enable it to more accurately measure DCC performance of SRVs and associated Service Responses against their business processes.

2.1.1 Measuring SRVs

The following list of SRVs will be included in the monthly PMR with Rate, Speed, Volume, and Payload (RSVP) metrics.

DCC Note: Rate, Speed, Volume and Payload (RSVP) as described in this section and following, will be used as an indicator of performance for identified key User business processes. The RSVP metric will measure the relevant SRVs, service responses, acknowledgements and Alert processing times within the DCC Total Systems. Each element of RSVP is defined as follows.

Term	Definition
Rate	The sample period over which the performance is measured. For the purposes of the PMR the rate will be either daily or monthly. A daily measure provides the level of granularity required to capture service degradation or outages that impact a User's business process. A monthly measure will provide a higher-level executive view of service performance.
Speed	A measure of the Round Trip Time (RTT) for an SRV or group of SRVs measured within the rate period. The RTT is measured from receipt of the SRV from the User, to sending a Service Response to the User, and includes time spent within the Home Area Network (HAN). Speed should be measured as an average (mean) as well as a median, as an average can be skewed by extremely large or small values. The OMR acknowledges that measuring RTT excluding the HAN would provide a more useful measure of DCC performance but introduces a number of challenges as this is not currently a technical capability of the system. However, an interim solution would be to calculate a response time using the CSP test message average response time, added to the DSP measured response time for the SRV. This time should be reported and plotted alongside the RTT. This solution is dependent on the CSP test message issues raised in section 3.2.5 of the OMR being addressed.
Volume	The total number of Service Requests or group of SRVs processed by the DCC Total System within the period.
Payload	The success or failure of the Service Request within the period. A failure is recorded when a Service Response contains an Error Response Code relating to a communications failure or timeout (E20[1] or E21[2]), or a subsequent failure alert code (N12[3] or N13[4]).

Table 3: Rate, Speed, Volume, Payload Definitions

The start point will be the Service User sending the SRV and the end point will be the Service User receiving or not receiving the associated Service Response (success or failure response).

Note that success of an SRV would be if Users received a response to it, irrespective of what the response is. If Users don't receive a response, this would count as a failure against the SRV.

[1] Communications Failure – Unable to Communicate with Device
[2] Communications Failure – No Response Received from Device
[3] Failure to deliver Command to Device
[4] Failure to receive Response from Device

The performance of a business process will depend on whether the SRV relates to a Smart Metering Equipment Specifications (SMETS)1 or SMETS2+ Device and should therefore be reported with SMETS1 and SMETS2 metrics separated and clearly identified. This is due to the different SLAs for each Device type as stated in the SEC.

Note, not all SRVs are applicable for SMETS1 and these are marked in Table 4 below.

Business Process	SRV	Description	SMETS1 Applicable
Install and Commission[5]	8.11	Update HAN Device Log	Yes
	6.21	Request Handover of DCC Controlled Device (Update Supplier Certificates)	No
	8.1.1	Commission Device	Yes
	8.7.2	Join Service (Join GPF with GSME)	Yes
	6.20.1	Set Device Configuration' (Import MPxN)	No
	1.1.1	Update Import Tariff (Primary Element)	Yes
	6.8	Update Device Configuration (Billing Calendar)	Yes
	8.14.1	Communications Hub Status Update Install Success	No
Change of Supplier (Gain)	6.23	Update Security Credentials (CoS)	Yes
	1.1.1	Update Import Tariff (Primary Element)	Yes
	6.8	Update Device Configuration (Billing Calendar)	Yes
Change of Tenancy	3.2	Restrict Access for Change of Tenancy	Yes
Tariff Updates	1.1.1	Update Import Tariff (Primary Element)	Yes
Pre-Payment	1.6	Update Payment Mode (Payment Mode = Prepayment)	Yes
	2.1	Update Prepay Configuration	Yes
	2.2	Top Up Device (Update Balance with positive value)	Yes
Security and Key Management	6.15.2	Update Security Credential (Device) – Credential Type = Digital Signature	No
	6.15.2	Update Security Credential (Device) – Credential Type = Key Agreement	No
	6.17	Issue Security Credentials – Credential Type = Digital Signature	No
	6.17	Issue Security Credentials – Credential Type = Key Agreement	No
Update Device Firmware	11.1	Update Firmware ***Note**: In respect of SMETS2+ Devices the DCC must ensure that the associated firmware update has been delivered to all relevant Communications Hub Functions within five days of receipt of the Service Request.*	Yes
	11.3	Activate Firmware (Individual SR for each GUID for firmware activation) ***Note**: SMETS1 five-day Target Response Time.*	Yes
Logistics CH Ordering and Returns	8.14.3	Communications Hub Status Update – Fault Return	No
	8.14.4	Communications Hub Status Update – No Fault Return	No
Distribution Networks Post I&C Activity	6.15.1	Update Security Credentials (Update Network Operator Certificates)	Yes
	6.5	Update Device Configuration (Voltage)	Yes
	6.22	Configure Alert Behaviour (Update ENO Alter Configuration)	No
Meter Reads	4.6.1	Retrieve Import Daily Read Log	Yes
	4.6.2	Retrieve Export Daily Read Log	No
	4.8.1	Read Active Import Profile Data	Yes
	4.8.2	Read Reactive Import Profile Data	Yes
	4.8.3	Read Export Profile Data	Yes
	4.10	Read Network Data	Yes
	4.17	Retrieve Daily Consumption Log	No

Table 4: Business Process Applicability Table

[5] Note, although some of the SRVs listed under Install and Commission are applicable to SMETS1, the rollout of SMETS1 Devices has ended and therefore the overall Install and Commission business process is not applicable to SMETS1.

RSVP metrics will be used as an indicator of performance for identified key User business processes as defined in Table 4. The RSVP metrics will measure the relevant SRVs, service responses, acknowledgements and Alerts processing times within the DCC Total Systems.

2.1.2 Measuring Alerts

Code Performance Measure 3 of the SEC requires that the DCC measures the percentage of Alerts delivered within the applicable Target Response Time. Therefore, SECAS acknowledge that this requirement is not making any changes to the Code and the DCC should already be providing reporting against all Alerts. However, it is understood that the DCC only reports on a subset of Alerts.

The DCC is to include in its assessment the requirement to measure all Alerts (DCC Alerts and Device Alerts) using the current method for determining how long they took to be delivered.

In addition to the above, the DCC is asked to include in its assessment the requirement to measure for all Alerts the time it takes from when it reaches the Communications Hub to when it enters the Service User's gateway. The DCC does not currently include this phase in its measure.

2.1.3 Data Representation

The RSVP metrics shall be reported within the PMR.

Daily RSVP metrics

The OMR recommended that the daily RSVP metrics be plotted using a line graph representation with daily data points:

- The x-axis will indicate the day of the month and the y-axis shows response time and volumes.
- Data points are plotted for the SRV daily average RTT, volume of daily requests and daily request failures.
- The average monthly RTT for the SRV or group of SRVs is provided to give a reference point and indicate whether daily response times are above or below the monthly average.

The average monthly RTT is shown as a dotted red line on the example provided below.

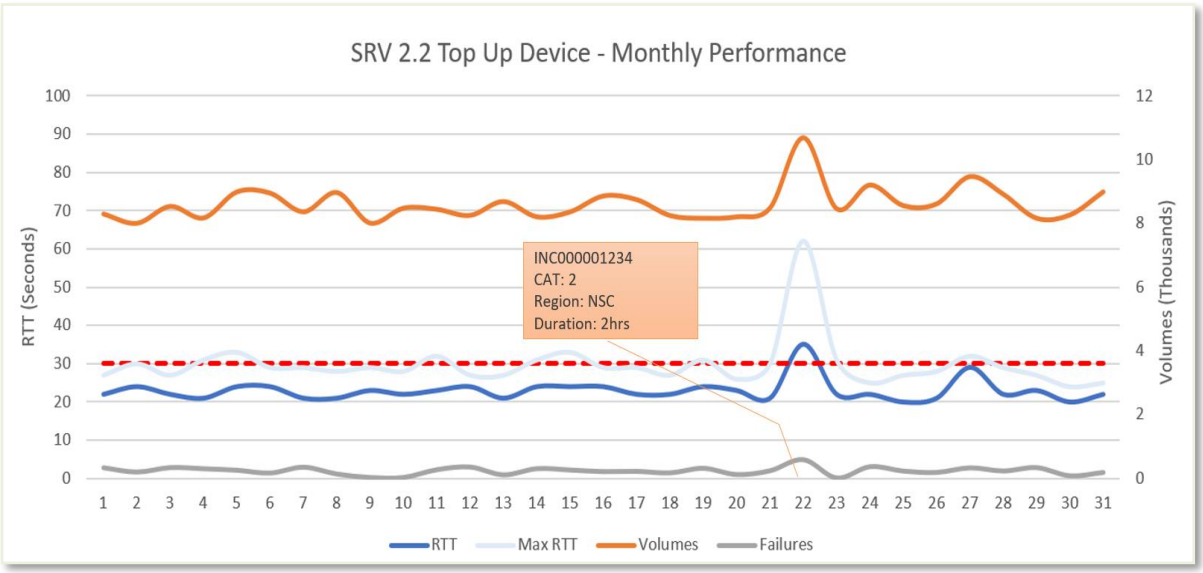


Figure 1: Monthly Performance with Daily Data Points

Note, although not shown in the above figure, minimum RTT will also be displayed in the graph. As noted in the Modification Report, the presentation of this graph as well as any other graphs in the PMR will be agreed between the DCC, the Proposer and the Working Group pre-implementation of this Modification.

The SRVs in Table 4 above shall also be reported at a monthly level to provide a summary of performance over the period. The summary will include both Indicators and Measures as defined below. The measures are to be reported for all Regions combined for SMETS1 (excluding Install and Commission) and separated by Region for SMETS2+ Devices.

The following monthly metrics are to be recorded and reported within the PMR:

- An Indicator of the Monthly Average (Mean) and Median RTT including time spent within the Home Area Network (HAN). The Median is recommended because, when compared to the average/mean, this measure is less likely to be skewed by extremely large or small numbers and therefore provides a better idea of the typical response time.

- An Indicator of the range of RTT values measured within the month to show the longest and slowest response time recorded.

- A Measure of the percentage of responses delivered within the Target Response Time (TRT) is calculated by including the response time for all Service Requests that compose a business process. For example, the Install and Commission process will be represented by the seven common SRVs that make up the SMETS2 Install and Commission process for Electricity Smart Metering Equipment (ESME) Devices. In the case of Install and Commission, the TRT target should also be provided for Gas Smart Metering Equipment (GSME) Devices. The TRT has the meaning given to that expression in SEC Section H3.14 ‘Target Response Times’. Targets are those defined in SEC Appendix E ‘DCC User Interface Services Schedule’.

- An indicator of the total number (volume) of SRV requests listed in Table 4 recorded for the period.

- An Indicator of the percentage of SRVs that failed to be delivered due to a communications failure or timeout (E20[6] or E21[7]) or a subsequent failure alert code (N12[8] or N13[9]).

An illustrative example of these measures is shown below.

Monthly Performance Measure	Region A	Region B	Region C	SMETS1
Average RTT	29	15	33	12
Median RTT	26	15	35	11
Range (Shortest)(Longest)	(4)(200)	(1)(20)	(20)(49)	(10)(20)
Percentage of Service Responses delivered within the Target Response Time	**97%**	**99%**	**95%**	**99%**
Volumes	100K	90K	110K	5K
Percentage of Service Requests that failed to be delivered	2%	9%	4%	10%
Percentage of Service Requests that generated N12 or N13 Alerts	-	-	-	-

Table 5: Prepayment – Top Up Device Remotely

2.2 Requirement 2: Add specific outcome-based measures to provide a Measure of performance as well as Indicators on the success of the key business processes where they have end to end visibility

The purpose of this Requirement is to provide metrics for the overall success of a subset of key business processes.

The measure of success will look at the overall outcome of the business process and will be irrespective of the success/failure of each individual common SRV within that process.

The following outcome-based metrics are to be broken down by Device type (not including Install and Commission) and Region.

These metrics have been categorised into Measures and Indicators and are labelled in column "M/I" below.

2.2.1 Measuring success of key business processes

For each business process referenced in Table 4 above, the DCC shall measure the combination of SRVs attempted by a Service User for an iteration of that process and report the percentage of those iterations across all Users that returned at least one failure Alert or no response. This metric would be defined as an Indicator.

The DCC shall also use non-communicating Devices identified during each business process as a proxy for gauging estate health.

[6] Communications Failure – Unable to Communicate with Device.
[7] Communications Failure – No Response Received from Device
[8] Failure to deliver Command to Device
[9] Failure to receive Response from Device

The DCC is asked to provide a list of error codes for each Service Reference Variant in Table 4, to facilitate the Working Group determining if a business process has been completed successfully if such error codes are received by the User.

2.2.2 Install and Commission

Note, although some of the common SRVs listed in Table 4 for Install and Commission are applicable to SMETS1, the overall measure of success for the outcome of this business process shall not be applicable to SMETS1.

This is because the installation of SMETS1 Devices is prohibited under the Code.

ID	Requirement	M/I	Definition
IC1	Provide a greater level of visibility for the time taken for the DCC Total System for the Install and Commission process	M	Measure the Response Times of the common Service Requests and report the percentage that failed to meet the Target Response Times. Note, this Measure will be provided by the RSVP metrics for the common SRVs listed in Table 4 above
	Note: Install and Commission is a complex process and is orchestrated differently by each User making measurement of the end-to-end process challenging.	I	Measure daily total volume of successful and failed meter installations broken down by Comms Hub (CH)/ESME/GSME and Region.
		I	Measure daily total volume of installs for the period against the predicted number of installs. This will be broken down by SEC Party and anonymised as a failure to meet historic install volumes could be due to issues outside DCC control. The predicted installations will be based on historic DCC recorded installation volumes data and therefore may only be used for informational purposes.
		I	Measure daily total volume of Install and Commission versus Install and Leave. The reporting is to include a category for any Communications Hubs awaiting a decision that are still within the 90 -day investigation period for Install and Leave.[10]
IC2	Provide information on the impact of service degradation and outage on the User.	I	The DCC uses predictive modelling techniques to record and predict behaviour of meter installations in near

[10] The Working Group agreed that for the purpose of this modification, Install and Leave shall include both Proactive Install and Leave and Reactive Install and Leave as defined under the Supply Standard License Conditions.

			real-time. The deviation from the norm provides a good indicator of degradation in service and the volume of messages provides a proxy measure of impact on Users. In addition, Sev1 and Sev2 incident data can be combined to provide a more accurate reflection of the User's experience.

Table 6: Install and Commission Metrics

2.2.3 Change of Supplier (CoS)

The following Change of Supplier metrics could be provided in the form of an anonymised league table of Service Users

ID	Requirement	M/I	Definition
CoS1	Provide a measure of the success of the Change of Supplier (CoS) Process.	M	Measure the percentage of successful SRV6.23 'Update Security Credentials (CoS)' SRVs delivered. Where the response erroneously reports a failure, the presence of subsequent critical and non-critical SRs sent by the gaining supplier will be used as an indicator of success. Include a measure above by device type and Region.
		M	Measure daily total percentage of successful SRVs 1.1.1 'Update Import Tariff (Primary Element)' and 6.8 'Update Device Configuration (Billing Calendar)' delivered. Include a measure above by Device type and Region.
		I	Provide information on the reason for failure e.g. where a CoS database becomes unavailable or other Service Provider issue materialises.
		I	Measure the overall success of SRV 6.23 on a daily basis aggregated by each Supplier Party.

2.2.4 Meter Reads

ID	Requirement	M/I	Definition
B1	Provide a measure of the success of the scheduling of meter reads and delivery of meter reads.	M	Measure the combination of SRVs listed for this business process in Table 4 and advise the overall percentage that

			returned a failure response or no response.

2.2.5 Prepayment

The following Prepayment metrics could be provided in the form of an anonymised league table of Service Users.

The DCC is also requested to provide commentary to recognise any DCC outages or Category 1/2 Incidents.

ID	Requirement	M/I	Definition
PP1	Provide a measure of the success of topping up a device remotely.	M	Measure the percentage of successful SRV2.2 SRVs successfully delivered to the devices. Include a measure by device type and Region.
		I	Provide information on the volumes of success and failures within the period.
		I	Provide a table showing the percentage attempts to top up before success. Provide metric for the first and second attempts and the percentage of failures. Where failure is above 5%, provide further details on the reason for the failure.
PP2	Provide a measure of the success for Update Device Change of Mode on Devices.	M	Measure the percentage of successful SRVs 1.6 'Update Payment Mode' and SRV 2.1 'Update Prepay Configuration' successfully delivered to the Devices. Include a measure by Device type and Region.

2.2.6 Update Device Firmware

The outcome-based measures for this business process are a subset of the those defined for 'In Life Device Management' in Table 4 above. Specifically, these are aimed at providing a measure of success for the process of updating Device firmware.

ID	Requirement	M/I	Definition
DF1	Provide a measure of the success of delivering the device image to the Communications Hub.	M	Measure the number of target Devices listed in SRV 11.1 'Update Firmware' and how many HANs pertaining to those Devices successfully received an Image
DF2	Provide information of the success of transferring the device images from CH to the Device.	I	Measure device image verification success (0x8F72) and verification failures (0x8F1c) to provide information on the percentage of images that are

			successfully transferred from the CH to the device. Record devices that did not issue an alert after the SLA has elapsed to identify failure to transfer from CH to the device.
DF3	Provide information on successful activation of device firmware image.	I	Measure the percentage of success and failure responses to the SRV11.3 Activate Firmware request.

2.2.7 Update Comms Hub Firmware Metrics

This business process is not listed in Table 4 above as the DCC is not responsible for managing the Communications Hub firmware. Therefore, there are no SRVs for Service Users to use relating to this business process.

ID	Requirement	M/I	Definition
CHF1	Provide a measure of the success of delivering CH firmware image to the Communications Hub.	M	Measure the percentage of successful CH firmware payload images successfully delivered to the CH
CHF2	Provide a measure of the successful activation of the CH firmware image.	M	Measure the percentage of successful CH firmware image activations.

SECAS note that the functionally for CHF1 could be delivered under SECMP0007 ‘Firmware updates to IHDs and PPMIDs. However, SECMP0007 would not directly provide the reporting sought by Parties for this measure.

The Proposer and the Working Group have agreed that they would like the DCC to include the measure of CHF1 in its Impact Assessment, irrespective of the progression of SECMP0007. Therefore, the DCC shall assess this requirement against both of the following scenarios:

- CHF1 is implemented as a separate modification separate to SECMP0007; and
- CHF1 is implemented as a change to the reporting only after SECMP0007 is implemented.

2.2.8 Alert Management

ID	Requirement	M/I	Definition
A1	Provide a measure of the success of delivering alerts.	M	Measure the percentage of alerts successfully delivered within required SLA time. For alerts impacted by throttling, i.e. during an alert storm, this will measure all alerts sent to the User.
		I	Measure the total number of Alerts that fail to be delivered within the SLA time and a breakdown of the number of

			failures by Alert code to identify the type of Alert impacting overall performance.

Please see section 2.1.2 Measuring Alerts of this document above for detail on what the Proposer and the Working Group are seeking from this business process.

2.3 Requirement 3: Measure end to end Service Availability across the DCC environment and report this by CSP Region

2.3.1 Defined DCC Services

This requirement refers to the combination of each of the following DCC interface and supporting sub-systems as a 'DCC Service':

- the DCC User Interface
- the Registration Data Interface
- the Smart Metering Key Infrastructure (SMKI) Repository Interface
- the SMKI Services Interfaces
- the Self-Service Interface (SSI)

Service availability shall be measured as a percentage for all the above Services.

Whilst this approach accounts for overall service availability of each Service, it would not be reflective of instances in which the Service is partially unavailable.

Those key business processes impacted by partial availability shall be reported alongside the metrics and indicators for service availability of a particular Service. An illustrative example of this is provided in Figure 2 below. Note that the Service Level percentages reported for each key business process are an indicator, and would quantify the time, during the reporting period, in which the DCC has the capability to successfully process and deliver a particular Service Request that makes up a particular business process, as defined in Table 4 of this document.

2.3.2 Service Availability Metrics

In addition to the considerations above, the DCC is asked to report on how much cost and effort will be required to include these elements in the solution.

Monthly view of end-to-end Service availability	A monthly view of end-to-end service availability for each of the Services described above is reported on as a single percentage figure, as well as depicted as a line graph across the days of the month. This will enable a higher level of granularity and easier identification of potential issues that might have impacted Users throughout the reported period. As stated before, this measure for end-to-end availability should include sub-systems linked to each individual interface. If a particular sub-system (i.e. server) is responsible for supporting multiple interfaces, and this sub-system experiences an outage, then the availability measure for each of the affected Services should be impacted and reflected in the monthly measure.

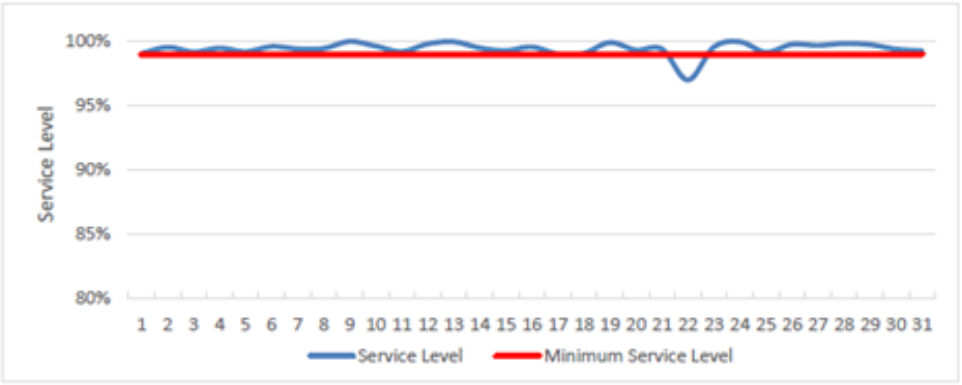
End-to-end Service availability by CSP Region	The view for service availability, where relevant[11], is split by CSP Regions, for better correlation with User's operational experience.
Reporting Service availability by time of day	Time of day is considered when measuring and reporting on service availability for any particular Service, as this can have a direct impact on User's operations. The OMR suggests a split (Monday to Friday) between hours where installations are more prominent (08:00-20:00) and hours where other business processes (i.e. CoS) take place (20:00-08:00). With regards to weekends, the OMR recommends Saturdays to be split between 08:00-12:00 (on-site activities are still performed, i.e. installations) and 12:00 to 08:00, and Sundays are generally considered as days of on-site operations inactivity.
Measuring Service downtime	The DCC shall record the overall downtime for each DCC Interface separately, including a breakdown of Planned Maintenance and Unplanned Maintenance. Additionally, as each Service provided by the DCC is made up of an interface and multiple supporting sub-systems, a particular Service is to be considered available (therefore contributing to the argument 'Uptime' in the formula) only when all of its supporting sub-systems are available, and is to be considered unavailable (and therefore contributing to the argument 'Unplanned Downtime' in the formula) otherwise.
Planned Maintenance	Note: In accordance with SEC Section H8, the DCC "*shall (insofar as is reasonably practicable) undertake Maintenance of the DCC Systems in such a way as to avoid any disruption to the provision of the Services (or any part of them)*." Additionally, the DCC shall limit Planned Maintenance of the DCC Systems generally to not more than six hours in any month (including maintenance of the SSI). Given this allowance, the OMR acknowledges that Planned Maintenance, complying with Section H8.4 of the SEC, should be excluded from, and not impact, the calculation for Service Availability defined in the formula above. However, the Proposer and the Working Group request the DCC provide an Indicator for planned downtime as this would show what actual availability is for Users. It is acknowledged that the DCC is permitted to carry out planned maintenance and so it is an Indicator rather than a Measure.
Measuring Service Reliability	The DCC shall produce reliability measures for each of the interfaces described above and reported alongside the figures for service availability. Recommended measures for reliability of a system are reported below: • Total Number of Incidents (category 1 to 5) across the reporting period. Additional Indicators to inform Users on the reliability of the

[11] Service availability contains some services that are not regionally based, for example SSI availability has no reliance on CSP Region and so would not need to be split by regional availability. SMETS1 is not broken down by Region.

	DCC services would include the overall number of Category 1 & 2 incidents per Reporting Period (the OMR notes that the DCC already provides summary information about Category 1 & 2 Major Incidents to Users voluntarily). The OMR also believes the PMR should include the total volume of Category 3, 4 & 5 Incidents in the Reporting Period, where the Incident resolution is attributed to the DCC as the Responsible Party. • Average amount of downtime per event (related to the Mean Time To Repair (MTTR) measure, which is defined as total maintenance time divided by the total number of repairs). • Mean Time Between Failures (MTBF), calculated across the reporting period, as operating time (hours) divided by the total number of failures. An illustrative example of the recommended Measures (M) and Indicators (I) proposed by the OMR for the reporting of service availability and reliability of some of the interfaces is provided below:

Service Availability DCC User Interface – Service Level					M/I
Monthly Performance Measure	Previous Service Level	Service Level	Target Service Level	Minimum Service Level	
Service Availability – DCC User Interface	99.95%	99.40%	99.95%	99.00%	M

Service Availability DCC User Interface – Monthly View



I

Service Availability DCC User Interface – Time of Day Breakdown

Monthly Performance Measure	Hours of Operational Activity	Hours of Operational Inactivity	
Service Availability – DCC User Interface	98.80%	100.00%	I

Service Availability DCC User Interface – Service Availability by Region*

*N/A, regional split not applicable for this interface

Monthly Performance Measure	Region A	Region B	Region C	
Service Availability – DCC User Interface	99.00%	99.80%	99.40%	I

Service Availability DCC User Interface – Business Processes View				
Monthly Performance Indicator	Previous Service Level	Service Level	Status	
Install and Commission (ESME)	99.80%	99.40%	Degraded	I
Install and Commission (GSME)	99.20%	99.00%	Available	I
Change of Supplier (CoS)	XX.XX%	XX.XX%	Available	I
Change of Tenancy	XX.XX%	XX.XX%	Available	I
Tariff Updates	XX.XX%	XX.XX%	Available	I
Billing (Scheduled)	XX.XX%	XX.XX%	Available	I
Billing (Unscheduled)	XX.XX%	XX.XX%	Available	I
Pre-Payment	XX.XX%	XX.XX%	Available	I
Security and Key Management	XX.XX%	XX.XX%	Available	I
In Life Device Management	XX.XX%	XX.XX%	Degraded	I
Logistics CII Ordering and Returns	XX.XX%	XX.XX%	Available	I
Distribution Networks Post I&C Activity	XX.XX%	XX.XX%	Available	I
Alerts Management	XX.XX%	XX.XX%	Available	I

Figure 2: Service Availability Table

DCC notes that the table supplied by SECAS does not match the Business Processes identified in Table 4 above. The text has been deliberately blurred to highlight this.

2.4 Requirement 4: Reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period

The SEC states that the DCC must create the PMR within 25 Working Days. However, the DCC shall reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period. This is to ensure the PMR remains operationally relevant to Users.

The effect would be that, depending on Bank Holidays and month end falling on Working Days, the report could be reviewed by the Operations Group the month following the end of the reporting period. For example, a report for the month of February could be reviewed at the end of March at the Operations Group report review meeting.

2.5 Requirement 5: In relation to CPM 5, the DCC will improve transparency in the reporting provided for incident Categories 3, 4 and 5

Feedback from Distribution Network Operators (DNO) highlighted a lack of transparency in the reporting of Incident Categories 3, 4 & 5 where the DCC is the responsible Party for the resolution of the incident in accordance with the SEC Appendix AG 'Incident Management Policy'.

CPM5 does not split out the resolution of these per Incident Category. Therefore, in order to improve transparency and confidence in the reporting provided for incident Categories 3, 4 and 5, CPM5 is to be amended to show individual incident resolution times for each incident category.

Data will be provided in the form of statistics for each Incident Category. The DCC is not expected to provide detail pertaining to each individual Incident raised.

This would be broken down by SMETS1 and SMETS2 and be supplemented by further Indicators detailing:

- the number of Incidents per Category 3, 4 and 5 raised in the reporting period
- those that met the Initial Target Response Time[12]
- those that met the Target Resolution Time

The Categorisation Matrix within SEC Appendix AG 'Incident Management Policy' states the SLAs for each Incident Category.

The Proposer and the Working Group agree to the DCC's recommendation to report the Incidents closed in period instead of opened, as this ensures that all Incidents raised are reported on. Otherwise, if an Incident is raised and not closed in period, it would not appear in a future report. It also means that Incidents raised towards the end of the reporting period that are not resolved but still within SLA are accurately reported on.

[12] Target Initial Response Time is defined in SEC Appendix AG 'Incident Management Policy' as the time period within which an Incident within each Category should be recorded on the Incident Management Log and assigned to a resolver.

3 Description of Solution Components and Methodology

3.1 The DCC Technical Operations Centre

The DCC Technical Operations Centre is a 24x7x365 capability with an in-depth technical understanding of the DCC systems, process and technology to ensure the DCC service “lights stay on”. This is done by Assuring, Controlling, Monitoring and Informing the DCC network.

The TOC is staffed 24 x 7 x 365 by dedicated DCC sourced system experts and a core network monitoring team and is located at the DCC Brabazon site. The TOC staff are technical experts that understand the DCC systems, processes and technology in sufficient level of detail to be able to provide a 3rd level support capability.

The TOC solution has four key objectives:

1. Service Visualisation of data sources in near real time to provide an adaptable and configurable Operations Management dashboard.
2. Operations Analytics and/ or intelligence allowing highly accurate monitoring of key DCC KPI’s across all data sources, identify anomalies and generate intelligent insights through correlation/ trend analysis – and other statistical analysis models - of data sources to automate root cause identification and provide other useful insights to facilitate DCC in their operational objectives.
3. Capability for proactive alerting of operational metrics, using appropriate algorithms/ logic, that can be triggered through use of configurable thresholds and detection of anomalous behaviour, allowing DCC to pre-emptively address possible incidents.
4. Summary of key infrastructure availability across DCC supply base to provide a high-level view of service availability, subject to appropriate security constraints.

The DCC TOC will be responsible for the design, development, implementation and Business-As-Usual maintenance of the solution for this Modification.

3.2 Solution Constraints and Changes

As described in the following sections, DCC have reviewed and separated the requirements and parts of requirements into categories that can be delivered using existing data available in the TOC, and those needing further data that needs to be supplied by a range of Service Providers.

1. Where the data is identified as being already available to the TOC, working within the constraints of the current solution should involve no commercial change to the DCC Solution, although there will be a direct impact on support and maintenance. This is referred to as the "February 2021 Release".

2. Where further "external data" has been identified, it has been separated out with individual DCC Change Requests sent to the relevant Service Providers, as identified in the solution analysis in section 4 following. These data requests are highlighted in this document, but will be considered as PIAs in a separate document [5], with a ROM cost assessed for each requirement. If the Working Group decides it wants to go ahead with this external data and associated development, it will be sent out for a FIA. Note that these additional external data requests will also require contractual negotiations between the DCC and the impacted Service Providers, which is expected to take at least six months to complete. These changes have been grouped

into an arbitrary August 2021 release for ease of reference, although detailed planning will be required if DCC is given the go ahead to include this data.

For both data types, the TOC will need to create data structures and processes to enable the efficient, consistent and reliable reporting of the metrics requested. Some metrics are readily available, although not necessarily in the correct format, while some metrics will need to be derived.

3.3 Working Methodology

During the requirement gathering and refinement, the DCC and SECAS hosted workshops with the Working Group. These workshops aimed to validate the proposals in the OMR in terms of the viability of implementing the recommendations, to refine the requirements further, and to enable fast delivery of new requirements and improvements. It should be noted that the requirements have evolved significantly since the development and delivery of the initial Preliminary Impact Assessment [2], and the versions in section 2 and onwards above should be used as the basis of this document.

DCC would use the mockups of reports provided in the OMR [3] as a starting point representing how users want reports presented, and these would form the basis for wireframes of the reports. These will be developed during the development of the solution(s), and will be shared with the Working Group for review and approval.

3.4 Data Delivery, Testing, and User Acceptance

It is assumed that the changes using internal data already available to the TOC will be implemented and tested as a separate release, and will include testing iteratively during development. The development and testing will not follow the PIT, SIT, and UIT pattern associated with a "conventional" SEC Release, and will not require the testing services of the System Integrator or Communication Services Provider (CSP) beyond potential changes to CSP internal systems.

Any new external data provided by the Service Providers will require a limited technical change to reflect the provision of the data to the DCC. In some cases, mostly relating to the SMETS1 Service Providers (S1SPs), there is no current data provision, so a data transfer mechanism will have to be developed.

4 Requirements Review and Solution Overview

The DCC have reviewed the requirements and details including report mockups as provided in documents [1] and [3]. The Solution will attempt to implement the proposals in two separate phases based on whether the required data is already available to the TOC, or whether new "external" data will need to be provisioned from the Service Providers.

DCC have noted responses for each requirement, as summarised following using the numbering referenced in section 2.3. In the following sections, DCC's exceptions or concerns are noted against specific requirements; where there is no commentary against a section, DCC believes the requirement is achievable without significant issue.

4.1 General Design Approach

The following design principles have been applied while evaluating the business requirements and determining a solution.

- DCC will use data already held in TOC Data Warehouse and other DCC data sources wherever possible. If further "external" data is required, it will be noted and a Change Request (CR) and PIA will be raised against the relevant Service Provider. The detailed responses in document [5] will include a ROM and time estimate for that change. Any such changes will result in contractual changes beyond producing this report, and will impact the timelines.

- Any changes to Performance Measurement Reporting will automatically trigger a change to Performance Measurement Methodology (PMM) which will require a formal consultation with SECAS.

- Any contracted Performance Measurement changes will require the Service Providers to deliver an updated Performance Methodology Approach (PMA), which will require contractual change.

- Any contract changes must automatically trigger a review of all Service Credits and Service Debits.

- To provide commentary wherever there is a failure to achieve a Service Level to a level of granularity and timescales required by this Modification, DCC will need to invest in additional resource outside of the Reporting space to investigate points of identified deterioration in performance with DSP, CSPs, S1SPs, DCC Incident and Problem teams, and SEC Parties.

- The contents of this Modification will be added to the existing PMR.

- The concept of an Exclusion List which is already part of the PMR, will be maintained in this Modification. The Exclusion List will be implemented where circumstances identify that an Indicator is impacted by actions that fall outside DCC's control (i.e. User action/error). This list will be configurable and will be agreed with the Working Group during development, and managed by Operations Group after Go Live.[13] SECAS have

[13] As examples, E21 and E30 errors could be result of issues caused by DCC, Service Users or End Consumers; E4 errors could be caused by Service Users attempting to communicate with devices that they don't own or as a result of DCC failing to load a Registration Data Provider file.

noted the aim of the OMR wasn't necessarily to address the DCC's performance alone, but to measure key business processes as a whole, considering User impacts.

- Non-communicating Devices identified during the meter read process will be a standard filter or exclusion applied to all SRVs and Business Processes.

4.2 Requirement 1

For all the metrics identified, it should be possible to provide RSVP metrics. Grouping of SRVs add complexity that comes with a computational and storage overhead.

The payload category will look for a successful Service Request, but it must be noted that there are different types of failures, many of which are valid failures for the DCC, such as authentication errors. This is one area where further detailed requirements will need to be established.

For both the RSVP Data representation of SRVs and the Monthly PMR metrics, DCC believes this is achievable within the limitations of what the DCC can currently report.

Requirement 2.1.1, Measuring SRVs

Using current data, the DCC can measure from the point the DSP receives the SRV from the Service User to the point where it is sent back by the DSP.

As the revised criteria stated in the requirement is to monitor from the point where the SEC Party sent the SRV to when they receive the response back it will need a contractual change with DSP. A CR and PIA have been raised to cover this requirement. As an interim measure to meet the OPR timescales, DCC can report using current data Round Trip Time from the point that SRV is processed by DSP to the point that its Response has completed processing by DSP. The following table identifies all current Report Status IDs with an additional column indicating whether an SRV with this Report Status would be considered for reporting.

Report Status ID	Description	Included in Reporting
1	On Demand Southbound Pending Completion	No
2	On Demand Northbound Complete	Yes
3	DCC Only/Transform Complete	Yes
4	Device Alert/Meter Scheduled Complete	Yes
5	DSP Scheduled Southbound Pending Completion	No
6	DSP Scheduled Northbound Complete	Yes
7	DCC Alert Complete	Yes
8	Rejected Southbound	Yes
9	Quarantine Hold Southbound	No
10	Quarantine Release Southbound	No
11	Sequence Hold Southbound	No
12	Sequence Release Southbound	No
13	Re-queue Southbound	No
14	Not Fulfilled Southbound	No
15	No longer used	N/A
16	No longer used	N/A

Report Status ID	Description	Included in Reporting
17	Re-queue Northbound	No
18	Not Fulfilled Northbound at DCC Service User Gateway	Yes
19	Not Fulfilled Northbound at SMWAN Gateway	Yes
20	Pre-installation Hold Southbound	No
21	Pre-installation Release Southbound	No
22	CSP Notification Complete	Yes
23	Arqiva Firmware Distribution Southbound Complete	Yes
24	Telefonica Firmware Distribution Southbound Pending Completion	No
25	Telefonica Firmware Distribution Northbound Complete (Firmware Validation Report processed)	Yes
26	Firmware Distribution Exception	Yes
27	Device Future Dated Cancelled	Yes
28	Device Future Dated Northbound Complete	Yes
29	DSP Future Dated Cancelled	Yes
30	Device Level Firmware Distribution Southbound	No
31	Quarantine Reject	No
32	Local Delivery Request Complete	Yes
33	Local Delivery Response Complete	Yes
34	No Response Received	Yes
35	S1SP alert	Yes
36	Copy Service Request sent to S1SP	No
37	Unsolicited Response	No

For Requirement 2.1.1, DCC propose excluding the time SRVs have been quarantined by the ADT or ADA processes. Responses will not be received for ADA failures. Where there is an ADT quarantine, the SEC Party can release at up to 30 days later. If a SEC Party chooses to release data from quarantine this will skew reported Round Trip Times unless this time is stripped out.

In this requirement, reporting has been requested for each Service Request, which also requires breaking down by Region (CSP), S1SP and device type. Some commands can be sent to Comms Hub, ESME, GSME, GPF and other devices. DCC have calculated this may require one page per SRV for Graphical and Tabular visualisation, and as commentary may be required, this will significantly increase the reporting output.

DCC note that there are different Service Level Agreements dependent upon Mode of Operation (e.g., a 1.1.1 that is Device Future dated (Mode of Operation 4) for instance has a 24hr SLA). Reporting separately for each SLA dependent on Mode of Operation (MoO) would significantly increase the reporting output as outlined below:

MoO	SLA (seconds)	Service Reference Variant
2	30	1.1.1
4	86400	1.1.1
10	86400	1.1.1
2	30	1.6
4	86400	1.6
3	30	11.1
2	30	11.3
4	86400	11.3
2	30	2.1
4	86400	2.1
2	30	2.2
3	30	2.2
2	30	3.2
10	86400	3.2
2	30	4.1
2	30	4.17
6	86400	4.17
2	30	4.6.1
6	86400	4.6.1
10	86400	4.6.1
2	30	4.6.2
6	86400	4.6.2
2	30	4.8.1
6	86400	4.8.1
2	30	4.8.2
6	86400	4.8.2
2	30	4.8.3
6	86400	4.8.3
2	30	6.15.1
2	30	6.15.2
2	86400	6.17
2	30	6.20.1
2	30	6.21
2	30	6.22
2	30	6.23
4	86400	6.23
10	86400	6.23
2	30	6.5
2	30	6.8

2	30	8.1.1
2	30	8.11
3	30	8.14.1
3	30	8.14.3
3	30	8.14.4
2	30	8.7.2

The SRV and combinations that result in a 24hr Service Level Agreement (SLA) will not give a good indication of the performance of SRVs as they traverse the DCC system so it is suggested the measurement is limited to SRVs with a 30 second SLA. However if a view of DSP Schedules is also part of the overall picture, for example, meter reads, an additional breakdown by SLA / Mode of Operation will be needed.

As the DCC TOC do not have access to the contents of the SRVs, determining exactly which business process an SRV relates to will not be possible. Instead, rules will be applied to apportion with a reasonable level of certainty, the SRV to the associated business process. This is predominantly relevant to SRV 1.1.1.

There are other SRVs where DCC are only able to report on the presence of the SRV, not on the specific purpose of the SRV. This is relevant, but not limited to SRV 8.11 (Update HAN Device Log), 1.6 (Update Payment Mode: credit / prepayment), 6.15.2 and 6.17 (Credential Type for both). Regarding these SRVs, DCC will attempt to use business logic to estimate the function being carried out.

Note that success of an SRV would be if Users received a response to it, irrespective of what the response is. If Users don't receive a response, this would count as a failure against the SRV. DCC propose reporting against this metric in the following categories:

- No Response received (successful response code)
- No Response received (unsuccessful response code)
- Responses Received (successful response code i.e. "I/O")
- Response Received (unsuccessful response code i.e. response code other than "I/O")

Requirement 2.1.1 Table 4 Notes

For Business processes and applicable SRVs, it should be noted that there is no guaranteed way to, for example, to separate SR1.1.1 Service Requests into those used in the Install and Commission (I&C) process and those used in Change of Supply or Change of Tenancy. It is simpler to report all SR1.1.1s and use the same metric across all business processes. This holds for all the business processes listed following.

Install and Commission	Using current DCC TOC data, DCC can provide a report that shows the response time of the Install and Commission SRVs based upon all SRVs being sent on the commissioned date. Any SRVs sent after the commissioned date will be excluded from the report.

Change of Supplier (Gain)	CoS SRVs seen on the same day as the SRV 6.23 will be considered to be part of the business process SRVs. This is significant for SRV 1.1.1 which spans multiple business processes.
Change of Tenancy	This has a single SRV associated with this process and can be reported atomically.
Tariff Updates	DCC propose reporting all 1.1.1's not identified as being included in other Business Processes (i.e. Install and Commission and Change of Supply).
Security and Key Management	These SRVs should be seen in pairs so reporting will be based on this.
Update Device Firmware	DCC will audit the firmware request, and audit corresponding alerts to create a proxy for the firmware to be downloaded to the CH. It should be noted that meter issues may cause alerts to be sent, so this measurement is only a proxy of the DCC service.
Distribution Networks Post I & C Activity	These SRVs aren't specific to Distribution Network Operators but there are markers within DCC data that will allow DCC to provide a reliable proxy for this business process.

Requirement 2.1.2, Measuring Alerts

There are seven Service Providers and approximately 60 alert types. Depending on how this will be represented, this will require additional reporting pages. An example output table as shown in **Error! Reference source not found.** above would equate to approximately 140 pages. Contractual changes are required as this is currently only reported as a total number of alerts. A CR and PIA have been raised. As an interim measure to meet the February deadline, the DCC can report on the volume of alerts and when they have been sent to the Service User.

The DCC TOC currently does not receive any data from the CSP containing measurements from when the alert reaches the Comms Hub. The DCC also cannot currently identify when an alert enters the Service User's gateway, only when the DSP tried to send it to them. Both of these changes will require further data supply and contractual change. Change requests and PIAs have been raised. As an interim measure to meet the February deadline, DCC can report on the volume of alerts received.

Requirement 2.1.3, Monthly RSVP Metrics

For each E20 / E21 / E30 / E31 response code, there should be a corresponding DCC Alert (N12, N13). However DCC cannot directly associate an SRV with an E response code to the corresponding DCC Alert other than by time / device id / DCC Service User. The two numbers should be approximately the same though so it's not clear what the driver is for reporting these two measures separately. DCC propose reporting only Response Code rather than Alert.

For the E20 / E21 / E30 / E31 response code, a failure to communicate with device can be as a result of issues within DCC control (failure/ poor performance of WAN), SEC Party control (site visit required, failure to resolve persistent non-communication, orchestration, device issue etc.) or End Consumer control (comms hub tampered with, ironing board placed against Comms Hub, van

parked outside etc.). DCC will be unable to identify what is the cause of the comms failure where this does not relate to a WAN failure.

DCC will add an element to the graph shown in Figure 1 to indicate the RTT Minimum time.

4.3 Requirement 2

Requirement 2.2.1, Monthly RSVP Metrics

DCC estimate that delivering requirement as requested will create approximately 10-15 pages of additional reporting and can deliver as requested.

As indicated in section 2.1.1 on page 25 above, DCC propose reporting against this and other metrics in the following categories:

- No Response received (successful response code)
- No Response received (unsuccessful response code)
- Responses Received (successful response code i.e. "I/O")
- Response Received (unsuccessful response code i.e. response code other than "I/O")

Relating to Security and Key Management, for 6.15.2 DCC see two SRVs – the first updates Device Digital Signing and a second updates Key Agreement Public Security Credentials. For 6.17 DCC sees Digital Signature and Key Agreement. For 6.17 DCC cannot see payload, so DCC can only see when they go as a pair. DCC will use business logic to create the pairing; if DCC see both, DCC will assume successful, but if only one, assume failure.

The DCC will produce error code mapping applicable to each of the SRVs noted in the business requirements as part of the development process, and this will be reviewed by the Working Group.

Requirement 2.2.2, Install and Commission

For the first Indicator, each Supplier has a different orchestration for their Install and Commission process. DCC propose a successful Install and Commission is marked as where the Device achieves "Commissioned" status. With regards to the CHs, DCC will report as Successful cases where there is at least one Meter attached. DCC recommends the following metric: As long as the Comms Hub has birthed (Status – Commissioned) the DCC will report on the successful completion of the SRV (Response Code I0) being sent to the Comms Hub or meters respectively.

For the second Indicator, DCC propose using the previous week's installation data to give an indicator of expected installation activity.

For the third Indicator, DCC will report as requested the number of successful 8.14.1’s against 8.14.2’s. DCC will also include a third category which identifies the installations that haven’t received either SRV at the point of report creation. DCC additionally recommends specific to Install and Leave due to the 90 day resolution period that DCC either report only on closed Incidents or additionally provide reporting on the previous three months.

For the third indicator, in order to report accurately on Incident Resolution Timescales for Install and Leave, DCC will need to raise a contractual change with the CSPs. A CR and PIA have been raised. As an interim measure to meet the February deadline, DCC will attempt to match Incidents raised automatically as a result of 8.14.2 only.

Requirement 2.2.3, Change of Supplier (CoS)

For the first Measure, SEC Party activity can have an impact on the “Success” of a 6.23. If a Service User sends the 6.23 too early for instance it will result in an E4. As discussed in the Working Group, but not requested in the Business Requirements, DCC will produce a list of Service Responses that identify failure to deliver the command with volumes.

For the second Measure, DCC do not believe this can be reported accurately as Service Requests are not linked but can be inferred. Based on the TOC data, DCC will identify devices that have had a 6.23 in the month and then analyse subsequent 1.1.1 and 6.8 SRVs also sent to the device on the same day.

For the first Indicator, “Provide information on the reason for failure”, DCC are unable to provide information for the failure of every individual failure of a 6.23 as many failure reasons are outside DCC control and are invisible to DCC (e.g. end consumer removes Comms Hub). DCC will provide a list of failure Response Codes and volumes. DCC propose to provide a Commentary for any failures of SRV 6.23 that relate to Incidents for multiple premises. Where possible DCC will identify Service User error as a category.

For the second Indicator, DCC will provide an anonymised league table of successful 6.23 by Device Type by Region by SEC Party as requested. This table will show a bar chart with no annotation along the x-axis showing the source, and a y-axis showing percentages or absolute values.

Requirement 2.2.4, Meter Reads

For B1, DCC data currently allows a report that matches the requirement. In a similar fashion to Requirement 2.1.1 DCC propose the following measures:

- No Response received (successful response code)
- No Response received (unsuccessful response code)
- Responses Received (successful response code i.e. "I/O")
- Response Received (unsuccessful response code i.e. response code other than "I/O")

Also for B1, situations where a device has become long term (60 days) non-communicative, but attempts are still being made to read the device should be excluded from the measure but reported separately. This long term parameter should be checked with the Working Group, but is currently set to 60 days.

DCC believe requirement 2.2.4 should include on demand meter read SRVs also.

Requirement 2.2.5, Prepayment

Per request DCC will provide an anonymised league table of successful SR 2.2 by Device Type by Region by SEC Party.

Requirement 2.2.6, Update Device Firmware

For DF1, note that based on the current TOC data, DCC can provide the success of SRV 11.1, but the successful response to that message is merely an acknowledgement of the command and doesn’t indicate that the success or failure to deliver the firmware, as the SRV11.1 is a special case of a DCC Only command. Failure responses are more of an indication of a validation failure of some kind and nothing to do with the ability to deliver the firmware to the device. It is possible

for DCC to identify the devices targeted by SRV 11.1 and report on the successful update of the image to the devices targeted, but this will need a new external data supply, as well as a contractual change with the DSP, CSPs, and S1SPs. Change Requests and PIAs have been raised. As an interim measure, DCC will report only the successful activation of the image per DF1.

For DF2, DCC can report on meters included in SRV 11.1 with a response code of I99 that then had a subsequent 0x8F72 or 0x8F1C. As there is a 5 day SLA response to this SRV, in order to hit the 10 day report production SLA (2.4 Requirement 4) there will need to be a category where the report has been run and firmware update is in progress but there is still time within SLA to receive a response. It should also be noted that where an Alert doesn't exist it could be a device issue that is responsible as opposed to an issue with the network.

For DF2 and DF3, DCC cannot currently report against the metrics for SMETS 1. This will need a contractual change with S1SPs. Change Requests and PIAs have been raised. As an interim measure to meet the February deadline, DCC will report on SMETS 2 only.

Requirement 2.2.7, Update Comms Hub Firmware

DCC cannot report the success of firmware updates to PPMIDs until the delivery of SECMP0007 (at least November 2021) or with the development of additional functionality as part of a SEC Release. The Proposer and the Working Group have agreed that they would like the DCC to include the measure of CHF1 in its Impact Assessment, irrespective of the progression of SECMP0007.

For CHF 1, DCC is currently unable to report on this measure as the sending of the firmware image to a Comms Hub happens entirely in CSP systems and DCC and DSP have no visibility. This will need a new external data supply, as well as a contractual change with the DSP, CSPs, and S1SPs. Change Requests and PIAs have been raised. As an interim measure, DCC will report only the successful activation of the image per CHF 2.

As noted in the requirements above, the delivery of SECMP0007 will enable the required reporting for this requirement. However this Modification has not been approved yet, and the earliest potential delivery of the required DSP functionality is November 2021. Once implemented, the required reporting change would be relatively low impact to implement.

Requirement 2.2.8, Alert Management

Note that the DCC response notes in Requirement 2.1.2, Measuring Alerts apply to this requirement as well. A new data supply and contractual changes are required as this is currently only reported as a total number of alerts. A CR and PIA have been raised. As an interim measure, the DCC can report on the volume of alerts and when they have been sent to the Service User.

For the A1 Measure, any Alerts that are suppressed, e.g., as a result of Alert Storm regulating the Alerts sent, will be excluded from the report.

4.4 Requirement 3

By completing a solution for Requirements 1 and 2, which include the ability to measure RSVP performance, the DCC can split availability data by CSP.

An alternative approach to measuring availability would be to send "dummy" Service Requests across the networks, would both add load to the network, and require constant monitoring, while not helping to localize or diagnose any potential network outages. Note that the OMR report also expressed a preference to move away from using Test messages to measure performance. This approach has been rejected.

Requirement 2.3.1, Defined DCC Services

DCC can currently measure the Service Availability for the following services on a monthly basis:

- the DCC User Interface
- the Registration Data Interface
- the Smart Metering Key Infrastructure (SMKI) Repository Interface
- the Self-Service Interface (SSI)

Changes will be implemented to alter this to an hourly reporting scheme.

To measure the availability of the SMKI Services Interfaces at the level of granularity requested, contract changes are required with the SMKI Service Service Provider. A Change Request and PIA have been raised. As an interim measure, DCC will continue to report per the current Performance Measurement Reporting.

Requirement 2.3.2, Service Availability Metrics

For the Business Process Views in Figure 2: Service Availability Table, please refer to the notes provided against Requirement 2.1.1 on page 25 and following.

4.5 Requirement 4

DCC have contractual relations in place with Service Providers for them to provide data within 10 Working Days for the production of the existing Performance Measurement Reporting and commentary within 5 Working days of subsequent request. In order to meet a requested timescale of 10 Working Days, DCC will need to either massively collapse these timescales or move to more real-time reporting to avoid a rush and resource failure at month end. This will require contractual changes with all Service Providers. A CR and PIA have been raised. As an interim measure, DCC will continue to report 25 Working days from month end.

4.6 Requirement 5

The current monthly Performance Measurement Report fulfils the request to provide the breakdown of the number of Category 3, 4 and 5 incidents closed in the period, and the number that achieve the SLA (Target Resolution Time).

DCC considers it appropriate to report the Incidents closed in period instead of opened, as this ensures that all Incidents raised are reported on. Otherwise, if an Incident is raised and not closed in period, it would not appear in a future report. It also means that Incidents raised towards the end of the reporting period and are not resolved but still within SLA are accurately reported on.

With regards to providing an indicator on whether Incidents are meeting the Target Response Time, this would require configuration of reporting tools. This would be complex, as the way Incidents are raised and responded to depends on where the Incident is allocated for action. It would require business process changes for the DCC, and integration with the Service Provider systems. DCC note that this is only one point in the incident lifecycle that is used to ensure incidents are progressing within a multi-Service Provider function.

5 Impact on DCC Systems, Processes and People, FIA

As defined the FIA change included in this document is confined to data already within the DCC TOC, with no expected changes impacting SMETS1 or SMETS2 Service Providers.

5.1 DCC Technical Operations Centre Development and Testing

The full range of activities required to implement the February 2021 parts of these requirements including design, development, testing, and implementation would be performed by DCC in-house contractors and permanent staff.

The DCC Technical Operations Centre development costs for the first release (February 2021) solution to include requirements which only require existing data held in the DCC TOC and no Service Provider Contract changes required include:

- Deliver Data Model algorithms, build report, test, document, update database, update interfaces. and document solution
- Add additional monitoring to support live 'spike' monitoring[14]

5.2 DCC Application Support

There will be a considerable increase in the number of Application Support Full Time Equivalents (FTE) required to support, maintain, and deliver the reporting on a monthly basis. These services will include:

DCC TOC Proactive Monitoring with TOC 24/7 staff	Additional 24/7 monitoring will be used to help with the real time annotation of reports – essentially these staff reduce the FTEs needed to turn around such a large report.
DCC TOC Reporting Staff	Required to support and maintain the TOC system as Business as Usual, building DCC data throughout month and packaging report in 10 day production cycle
DCC TOC Third Line Support	For report requirements; support and query answering, plus maintenance and optimisation
Operations Support	Covers both Service and Incident Management and is centred on the requirement to provide commentary. Investigation will be required to identify whether the performance deterioration is as a result of issues with system, Comms Hubs, Meters, Orchestration or areas entirely outside DCC visibility (actions taken by SEC Parties e.g. Staff being taken off work due to training, system issues with customers etc.)

It should be noted that the current Service Operations team provide and populate the required inputs, and the additional DCC TOC ongoing costs are to produce the report 10 Working Days after month end. This will require additional FTE for proactive monitoring as it is not feasible to produce the report within 10 Working Days unless there is *continual*

[14] Spike monitoring is used where there is something on the system (a spike) which identifies an event that has affected service for one or more users. This is a way to flag that there is a system issue.

reporting monitoring throughout the month. The additional roles are related to the creation of the report due to the large amount of additional reporting required and additional staff to chase internal DCC teams, Service Providers and SEC Parties for commentary where performance has deviated from desired performance levels.

5.3 Security Impact

The solution will be security assured during the implementation phase. This includes reviewing designs, test artefacts and providing consultancy to the implementation and test teams.

5.4 Technical Specifications

No change to DUIS, GBCS, or any other Technical Specification is expected.

5.5 Infrastructure Impact

To meets the requirements stated above will require additional infrastructure, potentially building a new database, while allowing for a new innovative monitoring and alerting solution. These costs will be facilitated by economies of scale, and will be absorbed into TOC running costs.

It should be noted that the solution as proposed should not add noticeable traffic or processing to the Smart Metering System or network.

5.6 Altering Working Practices

In order to release the Current BAU team working on providing the current version of the PMR and thus reduce the requirement to recruit extra Full Time Equivalents (FTE), DCC propose a discussion with the Operations Group on the moving of the publishing deadlines for other Regulatory Reports. This may reduce the requirement for hiring support staff.

5.7 Application Support

Impacts to Service Design, Service Management and other Application Support functions are anticipated, and included in this document.

6 Implementation Approach and Timescales

A key factor in planning and delivering this Modification's implementation and release is that the changes are neither part of the Smart Metering System, nor do they impact any Technical Specifications, such that they can be implemented separate from the now-standard SEC Release dates.

6.1 Modification Development Timescales

The original plan for the Modification development and implementation was agreed with SECAS at the start of the Modification process. The key dates and activities are as shown following.

Task Name	Duration	Start	Finish	Predecessors	Resource Names
Full Impact Assessment, Draft	15 days	Thu 16/07/20	Wed 05/08/20		DCC
Full Impact Assessment, Full	9 days	Thu 06/08/20	Tue 18/08/20	9	DCC
Panel Review Modification Report	0 days	Fri 14/08/20	Fri 14/08/20		SECAS
Modification Report Consultation	16 days	Mon 17/08/20	Tue 08/09/20	11	SECAS
Change Board	0 days	Wed 23/09/20	Wed 23/09/20		SECAS
Authority Decision	26 days	Thu 24/09/20	Thu 29/10/20	13	Ofgem
Implementation	80 days	Fri 30/10/20	Fri 26/02/21		DCC

Figure 3: Current Timelines for Modification, Including FIA Delivery

Once the FIA has been completed, DCC will sit down with SECAS to consult and plan out an approval, development and implementation timeline to achieve a February release. It is understood that Ofgem will use the outputs from April as part of the Price Control Review.

DCC note the significant risk associated with hiring new staff, and the Christmas-New Year period when contract staff are typically furloughed has pushed the potential Implementation period to 80 days.

DCC has not included the CR and PIA timelines in this section.

7 Costs and Charges

This section indicates the total quote for the application development stage for this Modification. Note these costs assume a standalone release of just this SEC Modification without any other Modifications or Change Requests, which is, in this case, truly reflective of what the test costs or programme duration will look like.

7.1 Design, Build, and Testing Cost Impact

The development and testing will not follow the PIT, SIT, and UIT pattern associated with a "conventional" SEC Release, and will not require the testing services of the System Integrator or Communication Services Provider (CSP). Changes will be confined to the DCC TOC environment, but will be fully tested as part of a DCC TOC release cycle.

7.2 Infrastructure and Software

The requirements will require additional licences for the DCC Reporting platform at £27,500 per year.

7.3 Applications Support

This refers to keeping the application maintained and running. It is quoted as a one year cost for the first year only.

7.4 February 2021 Solution Delivery Activities and Costs

£	Design, Test and Implement	App. Support (One Year)	Total
Phase Total, (25 Working days)	210,000	725,500	935,500
Phase Total, (10 Working days)	210,000	845,500	1,055,500

Note Design, Test and Implement are unchanged for all the Working Day delivery options.

The Application Support FTE totals are as follows.

Requirement 4	Application Support FTE
10 Working Day	10
20 Working Day	9
25 Working Day	8

Note that not all FTEs are at the same annual rate.

7.5 Potential August 2021 Solution Delivery Activities and Costs

Costs for the subsequent release correctly considered as being released in August 2021 will be provided as the Change Requests and PIAs are returned by Service Providers. There will also be an element of DCC TOC development and test costs, as well as further application impacts. These will be covered in the separate PIA document [5].

Appendix A: Glossary

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

.Acronym	Definition
CH, Comms Hub	Communication Hub
CHF	Communications Hub Function
CoS	Change of Supplier
CPM	Code Performance Measure
CSP	Communications Service Provider
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
ESME	Electricity Smart Metering Equipment
FIA	Full Impact Assessment
FTE	Full Time Equivalent (Employee)
GBCS	Great Britain Companion Specification
GPF	Gas Proxy Function
GSME	Gas Smart Metering Equipment
HAN	Home Area Network
IHD	In Home Display
I&C	Installation and Configuration
KPI	Key Performance Indicators
MoO	Mode of Operation
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
OMR	Operational Metrics Review
OPSG	Operations Sub-Group
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
PMA	Performance Methodology Approach
PMM	Performance Measurement Methodology
PMR	Performance Measurement Report
PPMID	PrePayment Meter user Interface Device
ROM	Rough Order of Magnitude (cost)
RSVP	Rate, Speed, Volume, Payload, a measure of performance of SRVs
RTT	Round Trip Time
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SLA	Service Level Agreement
SMETS	Smart Metering Equipment Technical Specification
SMKI	Smart Metering Key Infrastructure
SP	Service Provider
SR	Service Request
SRV	Service Request Variant
SSI	Self Service Interface
S1SP	SMETS1 Service Provider
TOC	Technical Operations Centre
TRT	Target Response Time
TTO	Transition to Operations
UIT	User Integration Testing

Appendix B: Supporting Information

OPSG OMR Report Final.pdf

SEC Modification Proposal, SECMP0122, multiple Change Requests

Operational Metrics

Preliminary Impact Assessment (PIA), "August 2021 Release"

Version:	**0.3**
Date:	**4th September, 2020**
Author:	**DCC**
Classification:	**DCC Public**

Data Communications Company

Contents

1 Document History

1.1 Revision History

Revision Date	Revision	Summary of Changes
04/09/2020	0.3	Initial draft version, internal DCC review

1.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP122 Business Requirements v1.2 (draft6)	SECAS	24/07/2020
2	MP122 Preliminary Assessment Request	SECAS	14/05/2020
3	OPSG OMR Report Final	OPSG	12/05/2020`
4	MP122 DCC Preliminary Assessment v0.5	DCC	25/06/2020
5	SECMP0122 FIA February 2021 Release	DCC	03/09/2020

References are shown in this format, [1].

2 About this Document

The Proposer for this Modification is Gemma Slaney from Western Power Distribution. The original proposal was submitted on 24th March 2020.

As part of the process of developing a solution for this Modification, two tranches of work were identified:

1. Where the data is identified as being already available to the DCC Technical Operations Centre (TOC), working within the constraints of the current solution should involve no commercial change to the DCC Solution, although there will be a direct impact on support and maintenance. This is referred to as the "February 2021 Release". Document [5] contains the Full Impact Assessment for this functionality.

2. Where further "external data" has been identified, it has been separated out with individual DCC Change Requests sent to the relevant Service Providers, as identified in the solution analysis. These data requests are highlighted in this document, and are considered as PIAs with a ROM cost assessed for each requirement. If the Working Group decides it wants to go ahead with this external data and associated development, it will be sent out for a FIA.

Note that these additional external data requests will also require contractual negotiations between the DCC and the impacted Service Providers, which is expected to take at least six months to complete. These changes have been grouped into an arbitrary August 2021 release for ease of reference, although detailed planning will be required if DCC is given the go ahead to include this data.

The label "August 2021 Release" is an arbitrary one. This Modification will be implemented on the TOC Systems, and as such is totally independent of the Smart Metering System SEC Releases.

The context, Business Requirements, specific measures and indicators, and supporting material are included in document [5] to avoid duplication.

3 Impact on DCC Systems, Processes and People, PIA

As defined above, this section contains summary information about Change Requests related to this Modification where "external data" currently held by Service Providers will be required to fulfil requirements. Full details are covered in a separate document [5].

Service Providers haven been asked to produce a Rough Order of Magnitude cost (ROM) to provide this data, as well as a cost to produce the FIA. The ROM describes indicative costs to implement the 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 price is likely to result in a variation.

3.1 Changes Requests for External Data and Contractual Change

The following table shows the DCC Change Requests (CR) raised to meet based on the requirements referenced in document [5]. Where multiple Service Providers are impacted by a CR, the total are shown in brackets.

CR	Service Providers (#)	Description	Req. Ref	Requirement Details
1418	DSP (1)	Throughput of Alerts	2.1.2, 2.2.8	DCC require the following requirement is to be assessed to enrich TOC data and a PIA produced: [A] - DSP shall identify the throughput of all Alerts at the following points: Received by Comms Hub/Devices (where this can be logged), Received by CSP/S1SP/ DCO, Passed to the DSP, Received by the DSP, Passed to Service User and the Service User handshake received confirming receipt (inline with the current work on Power Outage alerts). [B] - Pursuant to Requirement A, the DSP shall provide data to TOC at intervals of 15 minutes.
1420	All SPs (13)	Incident reporting to support revised PMR	2.5	DCC require the following requirement is to be assessed to support the revised Performance Measurement Reporting (PMR) and a PIA produced: [A] All Incidents logged in Remedy shall be reported by Category, with statistics identifying number of Incidents per Category, the number that met the Target Initial Response Time and the number that met the Target Resolution Time, broken down by Resolver Group where the resolver is DCC, DSP, CSP, S1SP, DCO or other Service Providers. [B] Pursuant to [A], the reporting shall be provided to support the revised PMR within 1, 2, 3, 5 Working Day of Month End (rather than current 5 Working Days).
1421	DSP, CSP North (2)	SRV 11.1 (Update Firmware)	2.1.1, 2.2.6	Service Request Variant (SRV) 11.1 is used to send Firmware updates to meters. This SRV can be sent to set up the schedule on multiple meters. DCC need to track the success of this SRV through all components. DCC require the following requirements is to be assessed and a PIA produced: [A] (SMETS2+) - DCC require data to be able to link SRV 11.1 to the component messages and targeted Device responses sent and received within CSP systems to identify whether the Firmware Image has been successfully applied to the Device(s). [B] Pursuant to [A], the Service Providers shall provide data to the TOC on a daily basis identifying throughput.

1423	DSP, CSPs	Comms Hub Firmware Image Data	2.1.1, 2.2.7	DCC require the following requirement be assessed to enrich TOC data and a PIA produced: Messages to upgrade Comms Hub Firmware Images are invisible to DCC as they are sent directly on CSP and S1SP networks. DCC need to report on attempts and success of the download of Comms Hub Firmware Images. The Service Provider shall provide data to the Technical Operations Centre (TOC) on a daily basis identifying throughput.
1429	CSPs (2)	Additional CSP Reporting to validate 90 Day No SMWAN Incidents	2.2.2	As a result of the changes being made to support SEC Mod 122 (see attached Business Requirements - specifically 2.2.2 Install and Commission: "Measure daily total volume of Install and Commission versus Install and Leave"), DCC are required to measure the daily total volume of Install and Commission versus Install and Leave. This shall include a category for any Comms Hubs awaiting a decision that are still within the 90 Day investigation period for Install and Leave. DCC can report on Communications Hub Status Update – No WAN SRV 8.14.2's seen in the system and can then compare this to Remedy Data to link to Incidents raised by DSP as a result of 8.14.2's. DCC's process for this will rely on matching data from 2 different data sources so that DCC can use this to validate our own reporting. [A] The Service Provider shall provide data relating to 90 Day Install No SMWAN Incidents that they have received (including but not limited to Incident ID, Category, submit date, GUID, MPxN and Diagnostics Results, Exception/Exclusion Information). [B] The Service Provider shall provide data relating to 90 Day Install No SMWAN Incidents that have been closed (including but not limited to Incident ID, Category, submit date, GUID, MPxN and Diagnostics Results, Exception/Exclusion Information). [C] Pursuant to [A] and [B], the Service Providers shall provide data to the TOC on a daily basis.
1430	All SPs (13)	PMR reduced timescales	2.4	DCC require the following requirement is to be assessed to support the revised PMR timelines and a PIA produced: [A] All existing reports provided to support the DCC Performance Measures Report which include ESI-101, ESI-102 and the Service Provider Monthly Performance Measurements Report are to be provided to DCC on Working Day 2 following Month End. For clarity, this is to be the initial submission. [B] If a final submission is applicable, the Service Provider shall provide DCC with an uplifted set of reports which include ESI-101, ESI-102 and the Service Provider Monthly Performance Measurements Report by Working Day 5 following Month End. [C] Relevant to ESI-101, ESI-102 and the Service Provider Monthly Performance Measurements Report, on request from the DCC the Service Provider shall provide DCC with supporting commentary for any events that impact meeting the SLAs contained within these reports as events occur and are investigated throughout the month on request from the DCC within 2 Working Days. [D] Relevant to the reports identified in this CR, the Service Provider shall provide commentary as events occur and are investigated throughout the month on request from the DCC within 2 Working Days.
1438	CSP N and S1SPs (11)	Throughput of Alerts	2.1.2, 2.2.8	DCC require the following requirement to be assessed to enrich TOC data and a PIA produced: [A] The Service Provider shall identify the throughput of all Alerts at the following points: Received by Comms Hub/Devices (where this can be logged), Received by CSP/S1SP/ DCO, Passed to the DSP [B] The Service Provider shall provide reporting to DCC identifying receipt of an alert from HAN Devices, the Communications Hub (where this is available) shall record the date and time [C] Pursuant to [A], the Service Provider shall provide data to the TOC at intervals of 15 minutes.

1440	DSP & S1SPs (5)	SRV 11.1 (Update Firmware)	2.1.1, 2.2.6	Service Request Variant (SRV) 11.1 is used to send Firmware updates to meters. This SRV can be sent to set up the schedule on multiple meters. DCC need to track the success of this SRV through all components. DCC require the following requirements is to be assessed and a PIA produced: [A] (SMETS1) DCC require data to be able to link SRV 11.1 to targeted Devices (including Comms Hubs) within the SMETS1 estate. [B] The SMETS1 Service Provider shall report the success or failure and round trip time of the upload of Firmware Image to individual Devices (including Comms Hubs) . [C] The SMETS1 Service Provider shall report the success or failure and round trip time of the activation of a Firmware Image to individual Devices (including Comms Hubs). [D] Pursuant to [A], [B], and [C], the Service Providers shall provide data to the TOC on a daily basis identifying throughput.

3.2 Solution Notes

It should be noted that as part of their PIAs, most Service Providers distribute solution notes, as well as a comprehensive RAID in some cases, but these have not been included for simplicity at this stage.

The following highlights, points and concerns have been raised by Service Providers and DCC regarding these requirements. Investigation of these is ongoing, or will be covered in the FIA phase.

CR	Notes
All	It should be noted that one Service Provider, DXC, is fully committed to the SMETS1 rollout, and could only produce a ROM and FIA production cost estimates at this time. They do not believe they would be available to start any further work or complete a FIA until their SMETS1 commitments are complete.
1418	Identified impacts on internal DSP components, including the CSP SMWAN gateways, SMETS1 SMWAN gateway, transforms, and ESI reporting. Will require DSP SIT testing.
1420	As DCC is using data already in the TOC, the impact is limited to reducing the delivery timescales from 25 to 10 days and manual workarounds from the Service providers.
1421, 1423, 1440	All these CRs are Smart Metering System dependent, and will have system changes associated with them. This will entail PIT, SIT, and UIT, with the latter two testing phases not included in this PIA. In addition, planning for this work would be required to align with SEC Releases. The solution for CR1421 forms the basis for CR1423 and CR1440. There is a significant overlap with SECMP0007 with these CRs, and if that SEC Modification was progressed, these changes would be redundant. Whether SECMP0007 or these Change Requests are used for progressing the requirements, TOC development and reporting requirements would be covered by the DCC estimates stated following.
1430	Two Service Providers have indicated that draft performance monitoring reporting for 'ESI-101',and 'ESI-102' can only be provided on the 7th Working Day following measurement period end. Although the CR requests a timescale reduction, these

	timelines cannot be reduced from 7 Business Days following measurement period end because TRT's of some of the transactions itself takes up to 48 hours. This coupled with further reporting server processing and authored report generation will take at least this much time. One Service Provider has indicated the following reports must remain at 10th Business Day following measurement period end: a) SLMR reporting b) Operational effective report: Capacity and availability report c) Service failure report d) Quarterly summary report e) Annual summary report Multiple Service Providers indicated for Requirement-C, reverting any requests or questions or commentary on the service performance measurement package across the month can be attempted to be closed within 2 Working Days, but the time taken will be dependent on nature of queries raised, and the level of analysis required, and this delivery time cannot be guaranteed.
CR1438	This will require minor changes to the SMETS1 system, with consequential PIT, SIT, and UIT. Secure will provide S1SP's service audit trail (SAT) to TOC periodically over with the following time-points: • T1 When alert condition was triggered in device • T2 When alert was sent by CH and received by SMSO • T4 When alert condition was notified to IP5B • T5 When alert was delivered by IP5B to DSP One SP believes they cannot provide data for alerts received by CHF. Data for CSP South and Central is already visible to the DSP.

CR1440	The following design notes based on DSP interactions have been provided. For the S1SPs to provide Firmware Tracking for Firmware Distribution to ESME/GSME/PPMID and Comms Hubs, the proposed solution will align very closely to the CR1421 (SECMP0007) solution described above (differences in red): o DSP tracking and notification to Service Users (new DCC Alerts at various stages of distribution: CSP -> Comms Hub -> ESME/GSME/PPMID) o New S1SP to DSP API or S1SP Alert for S1SPs to notify success/failure of distribution to the Comms Hub o New S1SP to DSP API or S1SP Alerts from the S1SP to notify success/failure of distribution over the HAN to the end device (if relevant and available) o Existing Activation Responses/Alerts complete the tracking process o All of the above to be logged by DSP and sent to TOC on a regular basis as part of the Service Audit Trail (SAT). This CR relies on CR1421 (or the implementation of SECMP0007), so the DSP change is a delta increment on top of CR1421. For S1SPs however, this is a completely new, standalone change. There is a dependency on firmware distribution statuses provided by the S1SPs and three new S1SP alerts, and design work will be required to ensure S1SP systems or new status values are provided to convey the statuses accurately. It should be noted that even if SECMP0007 goes ahead, the S1SP elements of this CR will still be required. Note that one SMETS1 Service Provider recommended 11.3 tracking, but this would not match the required solution. This would be reviewed in the FIA stage. There are instances where the reporting mechanism will only be available where those devices actually provide those alerts, i.e. they have the necessary functionality, are configured accordingly and communicating successfully. For example, IOC/MDS PPMID devices do not support the capability of returning an acknowledgement upon receipt of a firmware image during the distribution and/or activation of a new image; as a result, for PPMIDs the proposed reporting mechanism will only report the distribution status to the Comms Hub. Any similar exclusions will be determined during the design phase.

4 Impact on DCC Systems, Processes and People

As defined the changes included in this document are confined to changing the DCC TOC systems and the provision of external data with changes impacting both the SMETS1 and SMETS2 Service Providers.

4.1 DCC Technical Operations Centre Development and Testing

The full range of activities required to implement the August 2021 external data elements of the SECMP0122 requirements including design, development, testing, and implementation would be performed by DCC in-house contractors and permanent staff.

The DCC Technical Operations Centre development costs for this release:

- Deliver Data Model algorithms, build report, test, document, update database, update interfaces. and document solution

It is expected that the same team used to deliver the February 2021 release will move on to this development work.

4.2 DCC Application Support

There will be a considerable increase in the number of Full Time Equivalents (FTE) required to support, maintain, and deliver the reporting on a monthly basis. Is not part of the PIA, but will be expanded upon if approval for any of the CRs is given.

4.3 DCC Contractual Negotiation

If the go ahead is given to proceed to FIA for any of the external data changes, DCC staff will need to carry out contractual negotiations with the impacted Service Providers part of the process

4.4 Security Impact

The solution will be security assured during the implementation phase. This includes reviewing designs, test artefacts and providing consultancy to the implementation and test teams.

4.5 Technical Specifications

No change to DUIS, GBCS, or any other Technical Specification is expected for changes limited to the TOC. However Change Requests such as CR1421, 1423, and 1440 will require changes to the Smart Metering System, and consequent changes to DUIS, DUGIDS, GBCS, and potentially other Technical Specifications are anticipated.

4.6 Infrastructure Impact

To meets the requirements stated above may require additional infrastructure, potentially building a new database, while allowing for a new innovative monitoring and alerting solution. These costs will be facilitated by economies of scale, and will be absorbed into TOC running costs.

It should be noted that the solution as proposed should not add noticeable traffic or processing to the Smart Metering System or network.

4.7 DCC Development and Testing Costs

Initial high level analysis suggests that the development, test, and implementation costs and durations associated with the "external" data requirements will be very similar to those based on data already held in the DCC TOC.

4.8 Service Provider Application Support

Impacts to Service Design, Service Management and other Application Support functions are anticipated, and it is expected that further Service Provider staffing will be required to support some of the PIA changes listed in this Modification. Where these costs have been identified as manual efforts to review or check data returns, they have been included in the Costs section below, unlike typical SEC Modifications.

These costs will be refined as part of the Full Impact Assessment covering external data contractual changes, and will reflect the complexity and other properties of the solution, although they aren't likely to vary greatly from the costs associated with the February 2021 release.

4.9 Contractual Change and Data Provision

At this stage it is difficult to predict the level of complexity, duration, or costs associated with any contractual change with resultant negotiations between DCC and the Service Providers. Clearly some of the requirements impact only one or two Service Providers, while others impact all the SPs.

Data provision may be a slight concern as there are some S1SPs who do not send data to the DCC in any form at this time. A ROM has been included for this figure, and these costs will be more fully evaluated as part of the FIA.

5 Implementation Approach and Timescales

A key factor in planning and delivering this Modification's implementation and release is that some of the changes are not part of the Smart Metering System, nor do they impact any Technical Specifications, such that they can be implemented by the TOC separate from the now-standard SEC Release dates.

Some requirements will require changes to Service Provider's internal systems, which may impact timescales. This will be assessed in the FIA for these changes.

6 Costs and Charges

The table below details the cost of delivering the changes and Services required to implement the CRs listed above for this Modification. The scope of supply under this PIA includes design, development (build) and testing within a selected TOC environment. Activities out of scope of this cost include Application Support, infrastructure improvements, and Service Provider contract changes. These would be defined as part of the FIA.

Changes such as CR1421, 1423, and 1440 will require changes to the Smart Metering System, and hence will require PIT, SIT and UIT integration testing if these options are selected. SIT and UIT testing is out of scope for a PIA, but PIT testing is included where appropriate.

The Rough Order of Magnitude cost (ROM) shown below describes indicative costs. These prices are 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 price may result in a variation.

Also note that at the time of the release of this PIA, DCC is actively challenging several of the submissions from the Service Providers in terms of omissions, the technical content, costs for implementation, and durations for both producing the FIA and implementation. Costs are shown as a range where a single Service Provider is impacted, or where at least one SP has provided a range.

SP Costs	Cost to Produce FIA	Required Time for FIA (Max)	ROM	Implementation Duration
CR 1418	£8,702	30 days	£300,000 to £450,000	3 Months
CR 1420	£82,000	30 days	£110,000	1 Month
CR 1421	£93,000	50 days	£1,800,000-£2,500,000	12 Months
CR 1423	£135,051	50 days	£2,500,000-£3,500,000	12 Months
CR 1429	£24,965	30 days	£60,000	3 Months
CR 1430	£533,000	50 days	£1,200,000-£2,500,000	6 Months
CR 1438	£220,000	50 days	£1,330,000-£1,480,000	6 Months
CR 1440	£120,000	50 days	£1,450,000-£1,850,000	12 Months

It might be possible to run some of the FIA production and implementation activities in parallel, and to reduce the timescales, but both the costs and durations have been calculated in a standalone format.

DCC costs to support the CR design work as part of the FIA, and the ROM for implemntation have been estimated on the basis that all Change Requests have been authorised to go forwards. Naturally if a limited number of CRs are approved, these costs will be reduced, and these will need to be recalculated based of the magnitude of the work required.

DCC Costs	Cost to Produce FIA	Required Time	ROM
DCC	£65,250	40 days	£642,000

Appendix A: Glossary

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

.Acronym	Definition
CH, Comms Hub	Communication Hub
CHF	Communications Hub Function
CoS	Change of Supplier
CPM	Code Performance Measure
CSP	Communications Service Provider
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
ESME	Electricity Smart Metering Equipment
FIA	Full Impact Assessment
FTE	Full Time Equivalent (Employee)
GBCS	Great Britain Companion Specification
GPF	Gas Proxy Function
GSME	Gas Smart Metering Equipment
HAN	Home Area Network
IHD	In Home Display
IOC	Initial Operating Capability
I&C	Installation and Configuration
KPI	Key Performance Indicators
MDS	Morrison Data Services
MoO	Mode of Operation
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
OMR	Operational Metrics Review
OPSG	Operations Sub-Group
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
PMA	Performance Methodology Approach
PMM	Performance Measurement Methodology
PMR	Performance Measurement Report
PPMID	PrePayment Meter user Interface Device
ROM	Rough Order of Magnitude (cost)
RSVP	Rate, Speed, Volume, Payload, a measure of performance of SRVs
RTT	Round Trip Time
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SLA	Service Level Agreement
SMETS	Smart Metering Equipment Technical Specification
SMKI	Smart Metering Key Infrastructure
SP	Service Provider
SR	Service Request
SRV	Service Request Variant
SSI	Self Service Interface
S1SP	SMETS1 Service Provider
TOC	Technical Operations Centre
TRT	Target Response Time
TTO	Transition to Operations
UIT	User Integration Testing

Appendix B: Supporting Information

OPSG OMR Report Final.pdf

This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.

MP122A 'Operational Metrics'

Annex F

Refinement Consultation responses

About this document

This document contains the full collated responses received to the MP122 Refinement Consultation.

Question 1: Do you agree with the solution put forward?

Question 1			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	Yes	Yes, we agree that the DCC should facilitate the necessary changes to the their system to be able to report on the 5 business requirements.
Utilita	Large Supplier	Yes	We are broadly in support of MP122, we welcome the inclusion of prepayment top-ups to this reporting. We believe it is necessary to see further reporting on pre-payment processes managed through the DCC to highlight robustness of this service. Crucial features for inclusion are: - As mentioned in the working group sessions in June 2020, it would be useful to see how DCC downtime (planned and unplanned) relates to PPM top-ups and the activation of Emergency Credit, to understand the volume of self-disconnections during the times DCC is offline. - A clear understanding of the amount of retries, the average timing to action a service request such as Top-up Devices SR2.2, which is classed as an On Demand. This is to seek improvements to the customer top-up experience and where improvements are needed to ensure swift, reliable top-ups. - SR2.5 to 'Activate Emergency Credit', as part of the prepayment business process to help monitor the effect of DCC's system on self-disconnection. - Timing of DCC generating and sending to the Supplier the Alert codes 0x81AB 'Emergency Credit Activated' and 0x81AA 'Emergency Credit Exhausted' in order to see timely Alerts being sent by DCC/received by the Supplier before a customer self-disconnects.

Question 1			
Respondent	**Category**	**Response**	**Rationale**
EDF	Large Supplier	Yes	We agree that the Performance Measurement Report (PMR) needs to be revised, and that the performance measurements included in this report need to be more reflective of the DCC's actual performance, and the impact that performance has on end consumers. The PMR should move to a more outcome based approach, as ultimately success or failure is most fairly measured based on whether customers and end users can use the system effectively. While we are strongly supportive of the revision of the performance reporting framework, it is clear that further work is required is required to refine the detailed metrics and ensure that they are fit for purpose and meet the overarching business requirements. We note that ad hoc working group meetings have been convened to discuss MP122 further, and we will be participating in these working group meetings. We do not see the value in commenting further on the lower level detail of the solution while this process is ongoing.
Scottish Power	Large Supplier	Yes	We note a finding of the recent Ofgem review of the DCC's Operational Performance Regime: "DCC's customers are best placed to determine what levels of performance they need to see from DCC, according to their business and customer needs." Ofgem further committed to its continued use of the performance measures defined in the SEC as the basis for the OPR, and recognised the work of the SEC Operations Sub-Group in developing these measures. Like Ofgem, we are keen to see the views of the DCC's customers reflected in the metrics applied to its performance measurement.
DCC	Other Respondent	Yes, in principal but with caveats	DCC recognises that Service Users do not find the current reporting framework useful for their assessment of performance and welcome the opportunity to work with Service Users to amend reporting and provide additional value. DCC considers that amending Code Performance Measures and providing additional Performance Indicators agreed in

Question 1			
Respondent	**Category**	**Response**	**Rationale**
			discussion and consultation with industry can result in the provision of data that Service Users may find more transparent and useful in assessing the performance of DCC systems and Service Providers. While DCC recognises the benefit of these amendments there are, in some instances, concerns on whether the requested information is available for reporting, increasing costs associated with contract changes and increasing reporting volume, whether measures identified are targeted at DCC performance, and the decrease in time available to provide reporting. DCC remains supportive of the continued work with industry and to amending Measures and Indicators to provide increasingly useful information, however DCC considers it essential to ensure that measures are targeted at appropriate services and data, and that the time available to implement and PMR allows for quality data to be produced. The increase in reporting and the decrease in time available to produce the PMR presents a challenge. DCC is reliant on the timely provision of data from Service Providers and moving from a 25 working day SLA to a 10 working day SLA will require contractual changes. Data produced is subject to internal review to ensure its accuracy, and the production of narrative explanation also requires analysis and time to provide accurate explanations. Data assurance will sometimes result in requirements for data to be recalculated and resubmitted where issues are identified and so it is important that the time available to produce the PMR allows for this. It should be noted that the addition of new Code Performance Measures and Performance Indicators increases the volume of reported measures, and therefore the impacts on the time required to produce the report. The decrease in time available to produce the report will put the accuracy and quality of the explanation of data at risk. DCC does not consider the 10 working day timeframe to be reasonable and considers the 25 working day timeframe to be more realistic for the production of such a complex report. Due to the volume of data to be provided and the requirement to fully assure that data and provide

Question 1			
Respondent	**Category**	**Response**	**Rationale**
			narrative explanation DCC does not consider that it is possible to report within the 10 working day timeframe. 25 days is required to ensure quality of data and to meet SEC Objective G and ensure accurate and transparent data is provided DCC understands the aim of reporting produced under Code Performance Measures, Performance Measures and suggested Performance Indicators is to provide data to industry on the performance of DCC service provision. Therefore, DCC considers that all reporting measures and Indicators should be calculated to show DCC performance only and DCC be allowed to exclude data where Service User issues negatively impact that data. The measures and data reported should be specific to DCC performance, DCC should not in these measures be asked to report on industry wide performance, as has been suggested in discussion at the working group. The definition of Measures should be updated to make this clear and ensure that Performance Indicators developed in the future are targeted appropriately. DCC is working with industry and SECAS to develop Code Performance Measures to ensure that the final metrics agreed are fit for purpose. The development of additional Performance Indicators overtime should therefore not be required, unless those Indicators are to report on any emerging issues. Though it is unclear whether Indicators could be developed in the manner described in the draft legal text and implemented in a timely manner to allow those Indicators to be reported while those issues persist. Allowing DCC to continue engagement with Service Users to develop Ad Hoc reporting will allow for swifter reporting as desired by industry. There is currently a requirement for DCC to consult on any amendments to the Performance Measures Methodology (PMM). The draft legal text requires DCC to seek approval from the SEC Panel (13.6b) and obtain SEC Panel approval (13.6c) for any changes. Since DCC holds data and contracts under which data is provided, DCC does not

Question 1			
Respondent	**Category**	**Response**	**Rationale**
			consider that the Panel should have approval powers in the production of the PMM. However, DCC will continue to welcome and consider thoroughly Panel and industry comments on any consultation.

Question 2: Will there be any impact on your organisation to implement MP122?

Question 2			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	No	Not based on what is being proposed once this is implemented. This should not impact us directly.
Utilita	Large Supplier	Yes, this is likely to have a positive impact on the organisation	Improved reporting from DCC will create more transparency between DCC and Industry
EDF	Large Supplier	No	We do not believe that there will be any direct impacts as a result of the implementation of MP122.
Scottish Power	Large Supplier	No	We expect the implementation of these proposals, and their subsequent manifestation in the OPR, to provide positive benefits to Users by focusing DCC's attention on the areas that matter most to its customers.
DCC	Other Respondent	Yes	The solution put forward increases the volume of reporting (in both statistical information and narrative explanation) DCC will be required to produce, and the decreased time allowed to provide the report puts further strain on its production. Furthermore, the decrease in time from 25 working days to 10 working days to produce each report will require changes to Service Provider contracts and will result in additional cost. Contractual changes will be required to amend the data provided by Service Providers which will result in additional costs and delays. The decrease in time available and the increase in measures will require additional people resources to be allocated to the production of data, including manual work to review and quality assure data and produce narrative explanation.

Question 2			
Respondent	**Category**	**Response**	**Rationale**
			The changes suggested will require amendments to the Performance Measures Methodology (PMM) document, including the required industry consultation process. Updates to the PMM will require analysis as to the most appropriate way of calculating performance measures based on the information available to DCC and will require the development of data warehousing and code to allow automation. When Performance Indicators are amended in the future further contract changes may be required and an updated PMM will need to go through the consultation process. Where changes to increase the number of Indicators without removing others are made, this may require additional people resources to complete report production. There will be a cost associated to produce the required data warehousing and code, and an increase in permanent FTE to work produce the report and narrative.

Question 3: Will your organisation incur any costs in implementing MP122?

Question 3			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	No	Not directly although we would look to automate any outputs and use it for numerous works that, at this time, are unquantifiable.
Utilita	Large Supplier	No, there is no extra cost for Utilita in implementing MP122 apart from the unclear final costs associated with this Mod and its implementation, i.e. costs that are incurred by DCC and eventually passed on to suppliers.	
EDF	Large Supplier	No	We do not believe that there will be any direct cost impacts as a result of the implementation of MP122.
Scottish Power	Large Supplier	No	-

Question 3			
Respondent	**Category**	**Response**	**Rationale**
DCC	Other Respondent	Yes	DCC estimated these costs in the preliminary assessment as £340,000 for Design, Build and Test and a further £51,190 for a Full Impact Assessment. However, discussion in working groups has progressed the final solution and requirement for reporting. Any contractual changes required will result in additional costs and will take time to negotiate. The production of new reporting processes and code will require resources to develop and time to complete the PMM consultation process. The increase in reporting volume and decrease in time allowed to produce the report may require additional people resources required on an ongoing basis. DCC has been directed not to complete an impact assessment on this modification at this stage. However, based on the evolution of the modification and discussions at the working group, DCC may expect costs of at least £500K to produce the data warehousing and code to meet the new requirements, in addition to the cost of contractual changes and increasing people resources required.

Question 4: Do you believe that MP122 would better facilitate the General SEC Objectives?

Question 4			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	Yes	Yes, we agree that this will better facilitate SEC Objectives (b) and (g) as identified in the Modification Report.
Utilita	Large Supplier	Yes	This will better facilitate SEC Objective (b) and (g) providing clarity in reporting from DCC.
EDF	Large Supplier	Yes	We agree with the Proposer that MP122 will facilitate SEC Objective (b) as it will provide a clear statement of the level of service that the DCC's Users are receiving and whether these are compliant with the DCC's obligations in its licence. We also agree MP122 will facilitate SEC Objective (g) by providing relevant and accurate reporting that is reflective of DCC performance and the impact that performance has on energy consumers.
Scottish Power	Large Supplier	Yes	We think the implementation of these proposals would better facilitate achievement of objective (a): i.e. the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain.
DCC	Other Respondent	Yes, where measures are targeted appropriately and where time available allows the	DCC considers that the aim of the modifications has been to enhance SEC Objective G - to facilitate the efficient and transparent administration and implementation of this Code. However, this will only be met where the required reporting is specific to DCC performance and does not include Service User issues, and where DCC is not asked to report on industry wide performance.

Question 4			
Respondent	**Category**	**Response**	**Rationale**
		production of quality data	Furthermore, the decreased timeframe available to produce the PMR puts data quality and narrative accuracy at risk, and therefore increases the risk that inaccurate information is presented.

Question 5: Noting the costs and benefits of this modification, do you believe MP122 should be approved?

Question 5			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	Yes	The reporting identified is needed as per the Ofgem works and the OPRs highlighted. This will give us a far greater view of the issues being faced.
Utilita	Large Supplier	Yes	We believe this a worthwhile modification and needs to be prioritised for Implementation date of February 2021. Together with the New OPR we believe both these reporting measures work well together.
EDF	Large Supplier	Yes	We agree that MP122 should be approved, subject to a satisfactory outcome being achieved through the working group discussions.
Scottish Power	Large Supplier	Yes	We note the costs for implementing this Modification, as reported by the DCC, are rather high; however, on balance, the benefits we expect to accrue to Users from this implementation should outweigh these costs.
DCC	Other Respondent	Unclear	DCC wants to provide industry with data that they will find increasingly transparent and useful in assessing the performance of DCC systems and Service Providers. As directed by the Change Board an Impact Assessment is yet to be produced while the finer detail of Performance Measures and Indicators are discussed and agreed, it is therefore difficult to make a judgement as to whether the cost involved is outweighed by the benefit to Service Users. However, if measures reported are specific to DCC performance, where time available allows for quality data to be reported, and where these measures provide data that is more useful for Service Users the modification should provide a benefit to them.

Question 6: How long from the point of approval would your organisation need to implement MP122?

Question 6			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	Not known	As no direct changes are applicable to us in our organisation, there should be no lead time needed for any implementation.
Utilita	Large Supplier	Not applicable	DCC implements MP122
EDF	Large Supplier	N/A	We do not require any lead time to be able to implement MP122.
Scottish Power	Large Supplier	No lead time required	DCC impacts only
DCC	Other Respondent	>9 months for all Measures and Indicators	DCC recognises that the February 2021 implementation date is important for the Authority and Service Users. Discussions in the Working Group continue to widen the scope of measures and the direction of data sources. It will be important that the scope of changes and measures does not expand to such an extent that delivery in desired timescales is not plausible. It may be necessary to separate measures out into those required for implementation by February 2021 and those that can be implemented at a later date. The continued discussions at the working group on Code Performance Measures and Performance Indicators, how they should be calculated, what data to utilise and the timeline for reporting, provides uncertainty on final requirements. It is therefore difficult to establish how long this modification is likely to take to implement. Where contractual changes are required to produce data under new or amended Performance Measures, DCC can expect there to be a lead time of at least six months for those contract changes to be agreed and implemented, plus additional time required to amend systems to host and supply information. Any contract changes for the provision of

Question 6			
Respondent	**Category**	**Response**	**Rationale**
			data will need to mirror the agreed PMM (or part of it). The PMM also requires development and industry consultation and so a >9-month implementation period may not be unreasonable. DCC is required to undertake consultation with industry on any changes to the PMM, and there is always uncertainty on responses received ant therefore the time required to finalise the methodology to be used in the production of the PMR. SEC Panel approval of the PMM, and the availability of data for producing data production methodology may also offer the potential for delay to implementation.

Question 7: Do you agree with the proposed implementation approach?

Question 7			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	Yes	We agree with the approach defined in the Modification Report.
Utilita	Large Supplier	Yes, we agree with the proposed implementation approach	We believe it is critical to work towards implementation for Feb 2021, in order these changes align with the new OPR from the 1st April 2021
EDF	Large Supplier	Yes	We agree with the proposed implementation approach, noting that this change needs to be in place on a timely basis to support Ofgem's revision of the DCC's Operational Performance Regime.
Scottish Power	Large Supplier	Yes	-
DCC	Other Respondent	Broadly supportive but with concerns on scope and volume of change	Previous assessments on the time required to implement the required changes to the PMM and PMR were based on the working groups aim for there to be no contractual changes required for the provision of data. It has now become clear that contractual changes will be required for the provision of additional data and for data to be supplied if the 10 working day time frame is enforced. Contractual negotiations can be expected to take 6 months before data provision is established and so the current timeline for approving the modification and implementation of the changes is not feasible. The timeline to begin the reporting of Performance Indicators will be tied to the final agreement of those Indicators. Only once these indicators have been approved can DCC begin the work required to update the PMM, enter contractual negations with service providers and produce the necessary data warehousing and code to produce the data.

Question 8: Do you agree that the legal text will deliver MP122?

Question 8			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	Yes	We do.
Utilita	Large Supplier	Yes	-
EDF	Large Supplier	No	We have the following minor comments on the draft legal text: • For Code Performance Measure 5 (page 3) 'which the DCC is responsible for resolving that are resolved' should read 'which the DCC is responsible for resolving and that are resolved'. • For Code Performance Measure 6A (page 4) 'each of the Business Process' should read 'each of the Business Processes' • For Code Performance Measure 6B (page 4) 'each of the Business Process' should read 'each of the Business Processes' • For Code Performance Measure 6B (page 4) 'delivered in response the schedule' should read 'delivered in response to the schedule' • H13.1A and H13.1B – we understand that the contents of the table in these sections are subject to the discussions by the Working Group; we cannot determine if this legal text is correct until those discussions have successfully concluded.
Scottish Power	Large Supplier	Yes	No issues identified at this time
DCC	Other Respondent	Yes, in principal but with caveats	DCC considers that changes to Code Performance Measures and Performance Indicators will only provide additional clarity for service users on DCC service provision where Service User issues can be excluded from reported data.

Question 8			
Respondent	**Category**	**Response**	**Rationale**
			DCC does not agree with the reduced timeframe to produce the PMR as outlined in other answers to this consultation. DCC does not agree that SEC Panel need to approve the PMM before its implementation as outlined in other answers to this consultation.

Question 9: Do you believe there will be any impacts on or benefits to consumers if MP122 is implemented?

Question 9			
Respondent	**Category**	**Response**	**Rationale**
OVO Energy	Large Supplier	No	We do not believe there will be any direct impacts or benefits to consumers if this Mod is implemented although it will assist in overall improvements to the Service due to the nature of the reports being generated. As such, those benefits are had to quantify at this stage.
Utilita	Large Supplier	Yes	We believe there is an indirect benefit for consumers as more awareness and clarity will be provided around DCC issues, such as downtime of DCC's systems. In improving the reporting, we believe this will highlight the usability of prepayment for enrolled SMETS1 meters and SMETS2 meters.
EDF	Large Supplier	Yes	Introducing new reports will not directly benefit consumers. However, the revised performance reporting should provide a better view of the DCC's actual performance in relation to key business processes which directly impact on the consumer experience of smart metering. Improved reporting should lead to easier and earlier identification of issues that are impacting the service consumers receive, and trigger resolution actions to improve that performance and the consumer experience.
Scottish Power	Large Supplier	Yes	We expect consumers to benefit from the upstream efficiencies that will manifest from these changes.
DCC	Other Respondent	Yes, but with clarifications / changes	DCC considers that the change to reporting can benefit Service Users in providing additional clarity on DCC performance, but only where Measures are fully understood and reporting can be completed robustly, either through data currently held by DCC or data provision by Service Providers. It is important to ensure that Measures directly report DCC

Question 9			
Respondent	**Category**	**Response**	**Rationale**
			service provision and not be adversely impacted by the performance of Service Users since this will not provide clarity to Service Users. The amendments to performance measures may be beneficial to consumers where changes and improvements can be implemented to improve performance.

Question 10: Please provide any further comments you may have

Question 10		
Respondent	**Category**	**Comments**
OVO Energy	Large Supplier	We are aware of the series of outstanding Action points and the potential delays that may be incurred due to the Contractual elements DCC needs to factor in being able to meet some of the requirements defined for this Mod. At this time, those outstanding items should not impact the question posed in this consultation and hinder it's progression accordingly.
Utilita	Large Supplier	No further comments
EDF	Large Supplier	-
Scottish Power	Large Supplier	N/A
DCC	Other Respondent	DCC understands the desire to reduce the time available to produce the PMR from 25 working days to 10 working days, including that this would provide more timely data for Service Users when reviewing Performance Measures. However, it should be noted that this will result in contractual changes with Service Providers and increased industry cost. The current 25 working day timeframe allows the data to be thoroughly reviewed for accuracy before publication, and so ensures data provided to industry is robust for the assessment of DCC performance. A reduction in this timeline risks data quality and is at odds to the requirements of this modification. Furthermore, the narrative around the data reported takes time to compile and requires the collection of data from several sources. A reduction in this timeline risks narrative quality and is at odds to the requirements of this modification. DCC does not want to produce data without a narrative explanation (as suggested by the working group) which puts reported data in to context for the reader; producing a report without narrative will not allow the reader to understand the complexities of the data provided and is at odds to the requirements of this modification. Where contracts can be changed to allow the quicker provision of data from Service Providers DCC still consider the 10 working day timeline to produce the PMR as insufficient to produce a robust report; DCC considers that the 25 working day time

Question 10		
Respondent	**Category**	**Comments**
		period should remain. The length and expense required to change contracts to deliver a shortening of the 25 working day to 10 working day should be factored in to the SEC release date. All performance measures should be developed to accurately record the delivery of DCC services/performance, and not be impacted by Service User issues. DCC should not be asked to report performance measures where Service User issues have negatively impacted the overall performance and should be allowed to exclude such data from its reporting. Including Service User data, where that User performance results in overall poorer performance, does not meet the requirements of the modification in that it does not report on DCC performance levels, including this data reports on combined DCC and Service User performance. If DCC is asked to publish anonymised Service User data that request should only be made and fulfilled where it is not possible to identify individual service users; DCC should be provided the option not to publish this type of data where it feels individual service users could be identified. Observations / comments on changes to Code Performance measures: • CPM 1-3 will require contract change for the provision of data to meet reduced timescale from Service Providers. Desire to change the methodology to include all messages (rather than test messages only) will result in contract changes and could result in Service Providers needing to amend their systems, which may not be possible • CPM 4 will require contract change to provide exception data to meet reduced timescales from Service Providers • CPM 5 - 5a will require contract change for the provision of data to meet reduced timescales from Service Providers • CPM 6 – 6b will require contract change for the provision of data to meet reduced timescales from Service Providers, • CPM 6c - DCC does not know the content of 5.1 and therefore cannot measure the performance of create schedule since the frequency is unknown

Question 10		
Respondent	**Category**	**Comments**
		• CMP 6d – cannot be reported on until successful implementation of SEC MOD 7 and should therefore not be included in this modification. The production of the PMR to report on Performance Measures is tied to the development, consultation and agreement of the PMM. The PMM sets out the methodology by which DCC calculates data for inclusion in the PMR. The methodology can only use data available to DCC either from DCC systems or provided by Service Providers. The suggested SEC legal text appears to require SEC Panel approval of the PMM and DCC considers that this could hinder the production of amended PMM and therefore PMR. DCC is currently required to consult with industry on any amendments to the PMM and seek feedback before finalising any methodology. DCC does not consider it appropriate for SEC Panel to have final approval of the PMM, and that such requirements may result in negative impacts for the provision of data where it results in additional complexity and delay to PMM implementation. The draft legal text allows the SEC Panel to establish and review new Performance Indicators. DCC understands the desire for additional information and will work with industry to report on DCC performance as they may find beneficial. DCC considers that any Performance Indicators developed should be targeted at DCC performance and exclude and negative impact caused by Service Users. It should also be noted that the inclusion of this new set of Performance Indicators represents increasing work required to produce the PMR, while the modification also seeks to reduce the time available for its production. Performance Indicators may also result in the need for contractual changes and development of the PMM. DCC is engaging with the Working Group to agree Performance Measures and so there should not be a requirement for additional Performance Indicators over time unless those Indicators are targeted at arising issues. Though it is unclear whether Indicators could be developed in the manner described in the draft legal text and implemented in a timely manner to allow those Indicators to be reported while those issues persist. Allowing DCC to continue engagement with Service Users to develop Ad Hoc reporting will allow for swifter reporting as desired by industry.

Question 10		
Respondent	**Category**	**Comments**
		DCC would like the definition of any Performance Measures and Indicators to make clear that they should relate specifically to DCC performance.