

Ry2019/20 – External Costs

2019/20 Price Control supplementary document

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Contents

1. DCC External Costs RY19/20.....	2
2. DCC’s Procurement and Contract Management Strategy.....	2
2.1 Procurements and Maximising Service Value throughout Negotiations	3
2.2 Contract Management – Maximising Value on an Enduring Basis	4
3. A Breakdown of the External Costs for RY19/20.....	6
3.1 Release 2.0	10
3.2 November 2019 SEC Release	17
3.3 Self-Service Interface	19
3.4 Testing Services	20

1. DCC External Costs RY19/20

External Costs form part of our allowed revenue. They are the costs incurred by our Fundamental Service Providers (FSPs), including those that support our core SMETS2 activities as well as the provision of our more recent services under the SMETS1 and Switching Programmes. All FSPs that were appointed to support the delivery of our core data and communication services for smart metering were sourced on a competitive basis by government. They comprise the data service provider (DSP), **CGI**, and the two communication service providers (CSPs), **Arqiva** and **Telefonica**. More recently, over the course of the past 18 months, DCC has procured services to support the SMETS1 and Switching programmes. In procuring these services, DCC has sought to source them in the most economic and efficient manner to ensure that we continue to offer value for money and good quality service for our customers.

Section 2 describes the processes and procedures we adopt and follow to maximise the commercial outcomes in the interest of our customers. More specifically, it sets out the different trade-offs we consider during contract negotiations together with an overview of how we contract manage our service providers to ensure performance and service delivery is secured throughout the terms of the contract.

Section 3 lays out a summary of all the external costs that were incurred together with a detailed view of all material external Change Request (CR) and Project Request (PR) costs that were incurred in RY19/20. These costs are grouped by the activity or programme that the CR/PR is linked to. It should be noted that all external costs in relation to the SMETS1 and Switching Programmes, including the procurement of new FSPs as well as costs associated to change requests and project requests, are set out in other sections of our submission. These sections provide a consolidated view and justification of all costs that were incurred against the respective Programmes.

2. DCC's Procurement and Contract Management Strategy

DCC delivers its services by procuring and contracting with external service providers. Generally, these services include technology solutions, consultancy, recruitment and auditing. For the avoidance of doubt, the sections below cover external costs incurred by our FSPs. Over the course of RY19/20, the costs associated with the delivery of these services accounted for approximately 72% of our total costs. The recent introduction of new services, SMETS1 and the Faster Switching's Centralised Registration Service has seen our supply chain network grow significantly to a total of 38 external service providers at the end of RY19/20.

As part of the process of delivering services in an environment that is subject to change, DCC has to agree contractual variations with its providers – change requests (CRs) and project requests (PRs). Approximately 230 CRs and 154 PRs have been progressed over the course of the RY19/20. We also observe a significant increase in procurement activity compared to previous years – in total 67 procurements were completed during RY19/20 compared to 26 procurements in RY18/19.

This level of change i.e. in terms of CRs/PRs is an increase on previous years (400%) and this is due to more providers being used and programmes of activity exiting the design and build stages and entering the service provision phase where many assumptions that existed at the time the contracts were awarded have now changed. The level of increase is partially explained by the introduction of the new service providers for SMETS1 and Switching as well as the iterative and agile approach that was adopted for SMETS1, which meant that the scope of the Programme was re-adjusted throughout with an immediate impact to delivery timescales as a direct result.

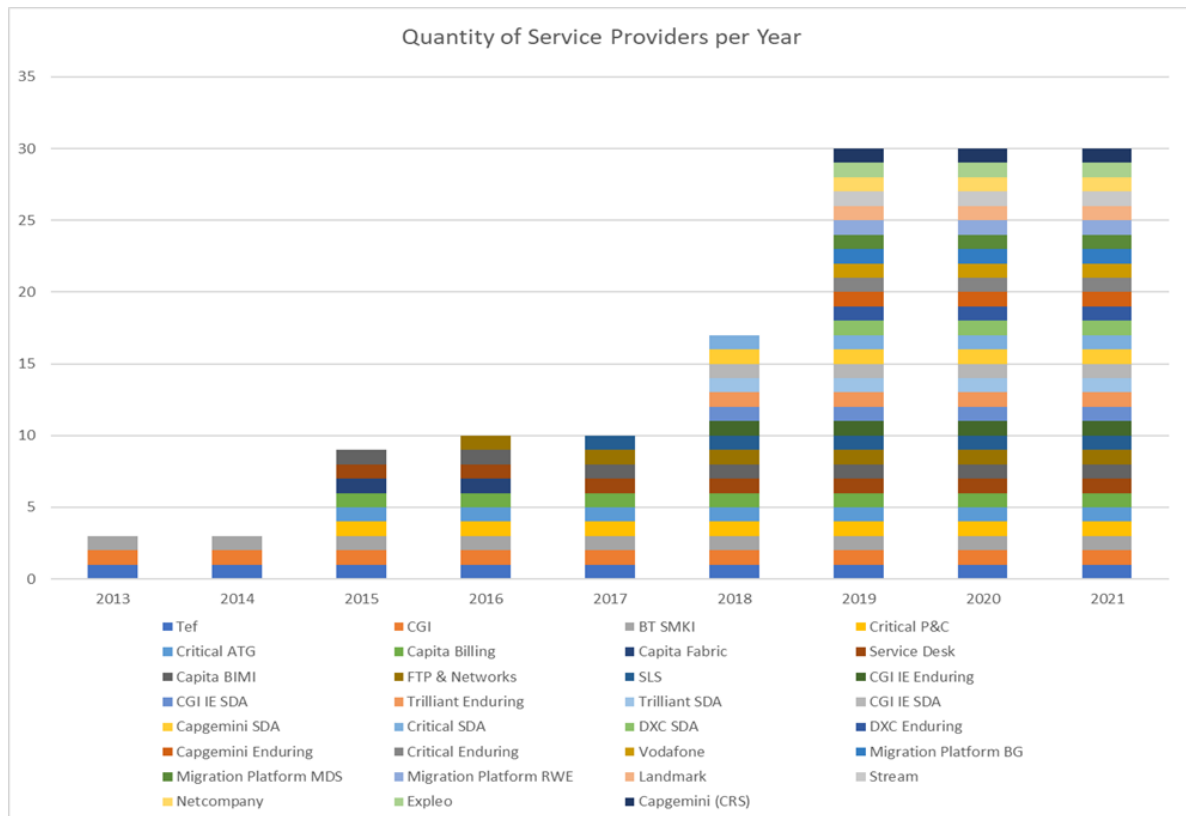


Figure 1: DCC’s evolving supply chain network

DCC is very mindful that the costs we incur to develop, test and run the smart metering system are borne by our customers. We are therefore fully cognisant of our duty to identify and realise efficiencies across all parts of the business on a continuing basis whilst simultaneously maintaining steady progress against our programmes and quality of service.

Over the years, DCC has built up an extensive level of knowledge and expertise around the management of external service providers. The experience that we have built has already allowed us to realise significant cost savings through long-term efficiencies across several areas, ranging from consolidating test facilities to the re-financing of external set-up costs, as well as through continuously introducing improvements to our internal systems and processes. As we have grown and matured over the years, improvements have been made to support and realise efficiencies and savings across the business. More specifically, our commercial efforts on the procurement of SMETS1 services have yielded contracted negotiated savings of £450m.

In response to Ofgem’s feedback last year, and in recognition of the high proportion of these costs, in the following sections, we provide evidence on how we manage our service providers in terms of the processes and procedures we adopt during procurement, negotiation as well as during operation.

2.1 Procurements and Maximising Service Value throughout Negotiations

Over the years, we have built up an extensive level of knowledge and expertise around the procurement of external service providers. Building on the use of the robust processes that we have embedded within our internal procurement and negotiation strategies we are committed to further enhance our commercial and technical leverage with the ultimate purpose of providing value-for-money for our customers.

Given the recent increase in volume of commercial activities, the commercial team carefully maintains a contract register to ensure that all procurement activities are efficiently planned, appropriately resourced and subject to the relevant controls and assessments.

During the procurement phase of any new goods and services, DCC works very closely with internal stakeholders to identify the necessary specifications, so that the relevant terms and conditions are established and incorporated within the respective procurement contracts. Examples of how we apply scrutiny on an ongoing basis to bring down costs and drive value during the procurement phase of a new service include the use of cost of failure' clauses, adaptability clauses and use of retention accounts with release of monies tied to delivery of milestones.

An additional key step that we introduced in our procurement process over the course of the past 18 months, to maximise the value for money we get from our service providers, is the use of 'black hat' sessions prior to contract signature. These sessions test the robustness of the contractual, financial and operational elements of the arrangements we intend to procure. In doing so, we ensure that the key risks and issues are being shared with and made aware to all stakeholders before signing any agreement. This allows for risks to be mitigated before the contractual arrangements are completed. Where a stakeholder is of the view that the proposed contractual arrangements involve a disproportionate level of risk to the company and its customers, or are not fit for purpose, then the 'black hat' session will offer the opportunity to stakeholders to exercise a right of veto.

In practice, 'black hat' sessions involve:

- A presentation that shows the current status of the negotiations and the key risks and issues – including trade-offs in negotiating a lower price – that the team feels the stakeholders need to be aware of and that they are being asked to accept;
- A meeting with the stakeholders (usually the Business Sponsor and Exco and key project team members that can provide additional context to the presentation); and
- The opportunity for stakeholders to challenge certain areas and/or introduce changes to the agreement.

2.2 Contract Management – Maximising Value on an Enduring Basis

DCC's supply chain network consists of 14 strategic external service providers (Tier 1) that comprise the greatest part of DCC's procurement, both in technical and knowledge value as well as cost i.e. 98%. The remaining 2% of the total financial volume is taken up by a set of smaller external service providers.

DCC has dedicated Supplier Relationship Managers (SRMs) that help manage the strategic relationships with suppliers and where relevant address performance issues. Tier 1 suppliers are managed separately by the wider commercial team and consequently several areas within the wider business. To supplement and strengthen the relationships with our suppliers, we have put in place a robust governance structure that consists of monthly bilateral service provider meetings together with quarterly executive reviews as well as annual reviews.

One of the areas in which DCC has recently stepped up its efforts involves the adoption of a data driven approach to help manage and improve the performance of its supply chain. DCC is keen to keep track of how its supply chain is performing across the year, so that corrective action can be taken where needed to ensure maximum performance is achieved. The use and implementation of Supplier Relationship Management dashboards has been an integral part to that.

We continually strive to improve our processes. Over the last few months, we have changed how we manage CRs and PRs. We have revisited our documentation and have produced and rolled out an updated Supplier Contract Change policy to ensure that we have optimal standards and controls in place to support the efficient management of CRs and PRs.

Measuring Service Providers' Performance – Supplier Dashboards

The performance of our external service providers is measured against several high-level performance areas (Key Performance Indicators (KPI)), each of them broken down into a more granular set of sub-KPIs. All sub-KPIs are data-driven and 'smart' in that they are Specific, Measurable, Achievable, Relevant and Time-Oriented. The following table sets out how the monthly rating for each supplier is calculated.

KPI Performance Area	Sub-KPI	% weighting applied in deriving overall Monthly Rating
Programmes	Programme Delivery (100%)	25%
Operational Delivery	Service Delivery (70%)	25%
	Service Quality (30%)	
Commercial	Compliance with Contractual Obligations (50%)	20%
	Turnaround of Change Control Requirements (50%)	
Relationship	Health of Relationship (100%)	15%
Operational Performance Regime	Achievement of OPR metrics (100%)	15%
		100%

Table 1: Methodology for calculating rating

Our suppliers' performance is reported through the use of dashboards, which are shared in advance of the monthly service reviews/quarterly business reviews. The achievement in each KPI performance Area is assessed with a Red-Amber-Green (RAG) rating in the monthly external service provider's dashboard. Metrics that underpin the individual KPI RAG ratings are then summated to a single RAG rating for the month in the external service provider's dashboard. Where performance has been rated as red for three months or amber for sixth consecutive months a performance recovery plan process is triggered, resulting in a Get to Green Plan being provided by the supplier.

> Green
'Satisfactory Performance'
<p>Meaning the External Service Provider has met or exceeded DCC expectations and delivered a professional service within agreed timescales and quality standards.</p> <p><u>The defined Target Service Level has been met</u></p>
Amber
'Improvement Required'
<p>Meaning that issues arose during the year, remediation plans or other required actions were agreed with the External Service Provider and delivered.</p> <p><u>The defined Minimum Service Level has been met</u></p>
Red
'Unsatisfactory Performance'
<p>Meaning that issues requiring action by the External Service Provider were identified but not addressed.</p> <p><u>The defined Minimum Service Level has not been met.</u></p>

Table 2: KPI RAG rating

[REDACTED]

Figure 2: Supplier Review dashboard

External service providers' final end-of-year ratings are heavily influenced by these monthly RAG ratings.

[REDACTED]

Figure 3: Example of quadrant in Annual Service Report

Supplier Contract Change Policy

DCC has been commissioned to build and deliver a critical national infrastructure network. Delivering against an agreed and acceptable cost and timescale means that the DCC's ability to manage change in a disciplined, controlled, standardised and predictable way is an essential attribute. Failure to deliver change efficiently and effectively may lead to increased costs, missed deadlines and reputational damage.

In order to mitigate these risks and ensure that CRs and PRs are being managed in the most efficient way cross-functionally, DCC has set out standards and clear guidance that define the levels of controls that are required throughout the end-to-end (E2E) process for each contract change. Those standards are described in the Supplier Contract Change Policy¹, which was implemented in Q1, 2020. The policy's overall aim is to remove any inefficiencies in the existing E2E Change Process, increase the cross-functional focus and improve the quality of CRs/PRs, which in turn will reduce cycle times for completing CR/PR changes and therefore decrease costs.

3. A Breakdown of the External Costs for RY19/20

Over the course of RY19/20, DCC has incurred a total of **£351.353m** in external costs. The increase in costs compared to last year is largely driven by activities in the following areas:

Programmes	(£m)
SMETS2	280.308
SMETS1	62.357
Switching	8.745

Table 3: Cost Breakdown of Programmes

External costs for both the SMETS1 Programme and the Switching Programme are excluded from this section but instead described in other parts of this submission. The baseline SMETS2 external costs variances are mainly driven by change request and project requests that support:

- Extended cover for testing and fixes on the R2.0 Programme;
- The delivery of the November 2019 SEC release; and
- Enhancements to Testing Services and the Self-Service Interface and Remedy systems.

DCC Change Request and Project Request Process

DCC manages large volumes of complex contractual and solution-based changes. The DCC therefore has a Change Management process to ensure effective and efficient management of change. This process is owned, operated and managed by the DCC Portfolio Office. The process covers changes to

¹ See Supporting Evidence documentation 'Supplier Contract Change Policy'.

the latest DCC design baseline, contractual and SEC-obligation changes and changes to any systems or products that are either in development or that have already been delivered.

The figure below provides a high-level summary of the DCC Change Management process:

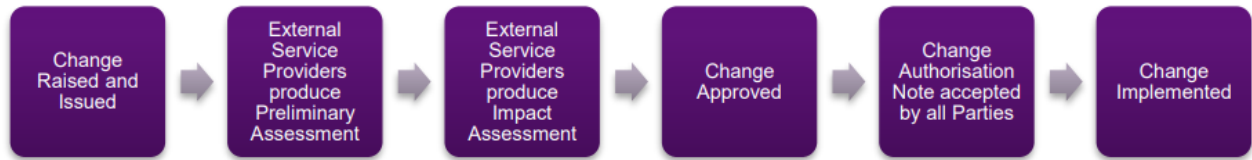


Figure 3: The DCC Change Management Process

Change Requested (CR) and Issued: When DCC recognises, or is advised of, a change requirement to one of the External Service Provider contracts, a change is raised and DCC issues a change to the FSPs.

Produce Preliminary Assessment (PA): In response to the change issued by DCC, the External Service Provider produces a PA. This is the basis for the due diligence process between the two parties, in which they assess in detail the required scope and the value for money. Note that a PA is not always required and for some changes this stage is bypassed.

Produce Impact Assessment (IA): When negotiations have progressed, the External Service Provider issues an Impact Assessment. The IA, by example of DSP, includes:

- General – details of the proposed Contract Change (including the reason for the Contract Change and any specifications or requirements specified by the DCC).
- Impacts on the Smart Metering Programme.
- Additional Services (if the Change Request relates to Additional Services).
- Impact on Services and Agreement.
- Charges Adjustment.
- Implementation of the Change.
- Compliance with Mandatory Requirements, Optional Requirements.
- Any other information deemed relevant to the Change Request.

Change Approved: The Impact Assessment can go through multiple iterations until both parties agree all details of the change. When both parties agree on all details of the Impact Assessment, the Final Impact Assessment is issued, and the change is approved.

Change Authorisation Note (CAN): This leads to the issue of the Change Authorisation Note which is the legal document that leads to a contract change between DCC and the External Service Provider. A Change Request may have multiple Change Authorisation Notes as different levels of funding are released for different stages and statements of work.

Change Implemented: When the CAN has been signed, the change can be implemented.

A Project Request follows a different process. It does not have a PA and the contractual vehicle used is a Statements of Work. However, fundamentally it begins with DCC initiating a new scope of work and the supplier submitting a bid for DCC to review.

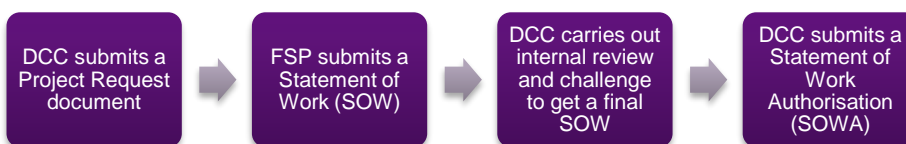


Figure 4: Project Request process

Project Request (PR): A standard template drafted by DCC which includes the background of and reason for the request (the drivers of work), the risks associated with not carrying out the work, as well as a list of requirements.

Statement of Work (SOW): A SOW is very similar to a typical proposal or response to a competitive RFP. It contains the FSP's understanding of the requirements, a proposed resource profile, approach to completing the work as well as the price.

Statement of Work Authorization (SOWA): A standard format which is signed by both parties and acts as a contractual agreement.

The timescales for submission of Change Management products for each stage of the process above are underpinned by the terms outlined within the External Service Provider contracts. The change process has continued to support the implementation of critical change, both technical and contractual. Many urgent and high priority changes have been progressed from Impact Assessment to Implementation in accordance with the required timeframes.

DCC deploys several different vehicles for covering cost, as the discussions for due diligence can stretch for several months in some cases. One mentioned in this document is a type of commercial cover in the form of Letters of Instruction (LOIs).

Summary of the RY19/20 External Costs

The following sections lay out all material external costs incurred in RY19/20. Within each section of the respective CRs/PRs variances are justified in the following structure:

- Drivers and scope to the CR;
- Securing Value for Money; and
- Adherence to change process

Where applicable, we will elaborate on the various options that were considered to determine the scope of a CR/PR. It should be noted however that in most cases, in particular Programmes such as R2.0, the different options in terms of scope have already been previously consulted on with industry as well as with the different FSPs.

We also note that the structure of costs is complicated by the multiple layers of financing which have taken place over the last several years. A cost table for each of the material CRs/PRs has been included in the **RIGs Supplementary Schedules**. These tables will assist the reader to link back the narrative in this document to the RIGs. The tables are sorted by FSP in tabs named '**presentation tables**'; we recommend that the reader print out this Appendix or place it on a second screen to read side by side with the content in this document. This approach yields a clearer narrative, while still allowing the reader easy cross-reference to the detailed finances. Please note that the cost justifications in this document do not include financing costs, and therefore may deviate from the final costs in the RIGs tables.

The tables below provide a summary of all material CRs and PRs that are included in this year's submission, separated into the groups of activity identified above. Note they are listed in the order within the document and in a way that builds on information contained in previous CRs. As noted in the introduction to this section of the submission, please note that all external costs in relation to the SMETS1 and Switching Programme are set out in their respective sections in this submission.

Material CRs	Description	Service Providers Affected	Driver
R2.0			
CR1046	CR1046 covers the inclusion of additional scope for DIT for R2.0. This additional testing is required to ensure that the DIT phase covers all test requirements sufficiently. More specifically, CR1046 covers the DIT for DBCHs from MM1 with NXP 868 meters.	CSP (N) CSP (C) CSP (S)	BEIS/DCC – LC13 plan R2.0
CR1079	Covers R2.0 Dual Band testing activities with non-NXP Sub-GHz meters supplied to be supplied by Meter Manufacturer 2 (MM2), from the 1st of March 2019 until 31st August 2019 or end of DBDIT. This Change Request also covers any further testing of the DB communications Hubs with NXP based meters (from MM1) from the 1st of March until the end of DB DIT.	CSP (N) CSP (C) CSP (S)	BEIS/DCC – LC13 plan R2.0
CR1057	CR1057 introduces the first CH Firmware Maintenance Releases after the go-live of R2.0. It incorporates the latest version of the Release 1.3 (R1.3) code firmware as well as the latest variants to GBCS.	CSP (N)	BEIS/DCC – LC13 plan R2.0
PR1153	DCC raised PR1153 to provide cover for the variable tasks that require fixing prior to the restarting of DIT for DBCHs	CSP (C) CSP (S)	BEIS/DCC – LC13 plan R2.0
PR1089	R2.0 Dual Band DIT with MM2 and DIT Phase Completion	DSP	BEIS/DCC – LC13 plan R2.0
November 2019 SEC Release			
CR1138	Covers the changes required to support the November 2019 SEC Release. CR1138 provides a release wrapper for a range of CRs, covering post PIT e.g. SIT and UIT phases of the Release and System Integration.	DSP	SEC Mods
Self-Service Interface			
PR1079	PR1079 covers improvements to DCC's SSI, allowing our customers to have an improved digital experience and increase their uptake of the SSI.	DSP	DCC
Testing Services			
CR1287	CR1287 is a SEC-led initiative that relates to the continued provision of Testing Services in line with Section H14 of the SEC.	DSP	SEC

Table 4: Summary of all External Cost variances by activity

The table above summarises the material external costs justified in this document.

3.1 Release 2.0

Since go-live three years ago, the roll-out of SMETS2 meters has progressed steadily with over 5m meters installed on our network as of the end of the regulatory year. Since go-live, DCC has built on this capability through incremental systems upgrades with Release 2.0 (R2.0) being the latest change to date. R2.0 encompasses a system update to the network which paved the way for the roll-out of Dual Band Communication Hubs (DBCHs) – a solution which helps overcome problems of getting a strong smart meter signal in some buildings, such as blocks of flats or where walls are very thick. This is a problem in an estimated 25% of homes, hence the deployment of DBCH is considered critical to achieve the government's overall coverage targets.

Over the course of RY17/18, the initial design for DBCH was funded through PR023. The development and GBCS upgrades of DBCHs were funded by CR184 and CR194. All three CRs were covered as part of the RY17/18 price control submission. Whilst these CRs were covered and signed off in RY17/18, some payments for these changes continued to be financed during RY18/19. None of these payments represented any additional commitments. During RY18/19, the R2.0 Programme transitioned into the different testing phases i.e. DIT, SIT and eventually UIT for service users. The commercial cover for these testing phases were CR253 and CR274; both were justified as part of RY18/19 price control submission.

Multiple streams of testing for the various Comms Hub units were produced by the two CSPs. As a result, the different testing phases were progressed in parallel. Due to the limited availability of some Dual Band devices, testing phases had to be extended into RY19/20, beyond the timescales that were envisaged under CR253 and CR274. CR1046 and CR1079 complement CR253/274 to cover the extended scope and delayed testing timescales. A detailed justification of CR1046 and CR1079 is set out below. Most of the additional work undertaken in RY19/20, over and above the Fixed Price work up to the end of CR253/274, was undertaken on a time basis and is verified retrospectively, in the same way as in RY18/19. The work was authorized in advance by the issue of Purchase Orders for cover, subject to the approval of the DCC Board. This therefore means that a different challenge methodology was applied as would be the case for CRs that have a fixed agreed price in advance. DCC has addressed this as a programme of work rather than as discrete CRs/PRs, although specific CRs and PRs were raised for specific elements of the extension.

Financing of CANs

A feature of R2.0 involves the financing of CANs, in particular for CSP(N), Arqiva. This is used where the cost of a change is either partially, or in full, subject to third party external financing. DCC and its FSPs have set up facilities to undertake 'sale of receivables' financing at rates that provide better value for customers. In order to draw down on these facilities DCC and the FSP have to provide physical evidence of a payment milestone linked to a contractual milestone and a corresponding Milestone Achievement Certificate. These payment milestones have also to be explicitly listed in a Financing Addendum to the Contract. This is often done in a specific 'Financing CAN'. DCC aims to finance additional charges as soon as possible after incurring them to take advantage of the financing facility and to avoid or minimise working capital charges from FSP's.

Taking these requirements into account, DCC has agreed and signed various 'Financing CANs' which have been put in place specifically to facilitate finance drawdown. This has included interim payment for CRs which were in the process of being agreed to cover extensions to the testing of Release 2.0. Finance CANs do not therefore represent commitment to new spend, they are merely a mechanism for rescheduling the payment of interim sums for CRs that are themselves negotiated. When the final IA for a CR is agreed the CAN for that CR reconciles the finally agreed value with any interim financed payment already paid and then includes milestone payment(s) for any balance. In the summary below we set out the Prime CRs and, where applicable, the CAN that agreed the final value alongside the Financing CANs that have been used to make interim payments for that work.

Material CRs	Description	Service Providers Affected
CR1046	CR1046 covers the inclusion of additional scope for DIT for R2.0. This additional testing is required to ensure that the DIT phase covers all test requirements sufficiently. More specifically, CR1046 covers the DIT for DBCHs from MM1 with NXP 868 meters.	CSP (N) CSP (C) CSP (S)
CR1079	Covers R2.0 Dual Band testing activities with non-NXP Sub-GHz meters supplied to be supplied by Meter Manufacturer 2 (MM2), from the 1st of March 2019 until 31st August 2019 or end of DBDIT. This Change Request also covers any further testing of the DB communications Hubs with NXP based meters (from MM1) from the 1st of March until the end of DB DIT.	CSP (N) CSP (C) CSP (S)
CR1057	CR1057 introduces the first CH Firmware Maintenance Releases after the go-live of R2.0. It incorporates the latest version of the Release 1.3 (R1.3) code firmware as well as the latest variants to GBCS.	CSP (N)
PR1153	DCC raised PR1153 to provide cover for the variable tasks that require fixing prior to the restarting of DIT for DBCHs	CSP (C) CSP (S)
PR1089	R2.0 Dual Band DIT with MM2 and DIT Phase Completion	DSP

Table 5: Summary of R2.0 External Cost variances

ARQ – CR1046 and CR1079 (ARQCAN082 and ARQCAN088)

Drivers and Scope

Both CR1046 and CR1079 complement CR253²/274³ to cover the extended scope and delayed testing timescales. Both CRs are required to complete the Dual Band DIT test phase of the R2.0 programme and respectively cover:

- R2.0 continuation of testing of DBCHs with 868 meters from (CR1046); and
- R.2.0 continuation of testing DBCHs with Sub-GHz meters (CR1079).

The original scope of Device Integration Testing (DIT) for DBCHs requires testing from 2 nominated meter manufacturers (MM), MM1 for NXP 868 meters and MM2 for sub-GHz gas meters. More specifically, the scope of CR1046 requires the delivery of the following items:

- MM1 dual band DIT and associated governance;
- MM1 dual band UAT and associated governance;
- MM1 dual band OCT;
- Path to 'constrained or 'interim' Manufacture' of DBCHs;
- MM1 DB Comms Hubs Live Proving; and
- Path to mass manufacture Dual Band Comms Hubs.

The scope of CR1079 is based on that of CR1046 and encompasses:

- Provision of an agreed and fixed amount of test lab support for the SI-led confidence testing of DBCHs and a SiLabs sub-GHZ meter for MM2;

² Release 2.0 SIT-DIT

³ Release 2.0 SIT-UIT

- MM2 dual band DIT and associated governance;
- MM2 dual band OCT;
- Provision of support of the DBCH DIT defect management process; and
- All activities required to support the path to mass manufacture of DBCHs.

The consequences of not undertaking these changes would mean that R2.0 would be unable to complete DIT for these devices, therefore affecting the overall take-up of DBCHs.

Securing Value for Money

The assessment of cost for the extension of R2.0 activity beyond that covered by the CR253/274 fixed price has had to be done on the basis of effort expended following DCC granting authority to proceed via Purchase Orders. The value of interim and/or financed payments were assessed and agreed and verification was achieved by reference to the overall team size and its deployment. Arqiva provided a summary of the resources that they had deployed during each relevant month and this was confirmed by the DCC project team as being a reasonable estimate.

At the same time of extending the R2.0 activity, DCC also raised CR1057 to cover the upgrade of the system to GBCS version 2.1, which was the latest version issued by BEIS. In practice this meant that the terms of both sets of activities were starting to overlap as the intention was for CR1057 to fix some of the issues that emerged during the testing activities of R2.0. For that reason, and in order to finalise the scope and price of R2.0, DCC negotiated two further CANs at the end of RY19/20: **ARQCAN082** and **ARQCAN092**. ARQCAN082 finalised the scope and price of Release 2.0 taking into account all payments made on interim and financing CANs, covered by the PC submissions for RY 18/19 and this PC submission for RY 19/20. This resulted in a surplus being transferred to ARQCAN092, which agreed a fixed price for the implementation of Release 2.1 under CR1057 which will complete in RY20/21. Whilst no costs were incurred against CR1057 in R19/20, we set out, for completeness, the scope and financial summary of this change below.

[REDACTED]

[REDACTED]

Table 6: Reconciliation of Milestones and Interim Payments

The table below provides a breakdown of the changes that are covered under ARCAN082. It should be noted that CRs1005 and 1034 were justified as part of last year's price control submission.

CR/PR	Title	Comments
CR1005	SIT and DIT Additional Scope	<p>Re-organisation of DIT into three sub-phases and the extension of SMETS2v3 testing until end-September 2018:</p> <ul style="list-style-type: none"> • SMETS2v2 testing • SBCH SMETS2v3 testing • DBCH SMETS2v3 testing <p>CR1005 was justified as part of the RY18/19 Price Control Submission.</p>
CR1034	R2.0 Test Phases and Go-live Date Extension	<p>To cover the extension of R2.0 testing phases, the transition into operations activities and other impacted dependencies, as a result of the delay to the go live date from the 30th of September 2018 to the 29th of October 2018.</p> <p>CR1034 was justified as part of the RY18/19 Price Control Submission.</p>
CR1046	R2.0 Continuation of testing of Dual band Comms Hubs with 868 meters	<p>This CR delivers the Dual Band elements of CR 253 which have been delayed due to lack of availability Comms Hubs. This CR covers work up to the DIT Complete Milestone from 1 Nov 2018.</p>
CR1079	2.0 Continuation of testing of Dual Band Comms Hubs with Sub-GHz meters (supplied by MM2) and DIT completion	<p>The Change Request covers R2.0 Dual Band testing activities with non NXP Sub-GHz meters supplied to be supplied by Meter Manufacturer 2 (MM2), from the 1st of March 2019 until 31st August 2019 or end of DBDIT. This Change Request also covers any further testing of the Dual Band Comms hubs with NXP based meters (from MM1) from the 1st of March until the end of DB DIT</p>

Table 7: Change process for CRs 105, 1034, 1046 and 1079

Adherence to Change Process

The table below sets out the timescales for the change process for this CR.

CR	Issue date	PIA	IA	IA approved	CAN signed
CR1046	29/10/2018	15/11/2018	29/03/2019	08/10/2019	12/07/2019
CR1079	08/01/2019	24/01/2019	08/11/2019	-	13/12/2019

Table 8: Change process for CR1046 and CR1079

ARQ – CR1057 (Delivery of R2.1 CH Firmware Maintenance Releases) (ARQCAN092)

Drivers and Scope

CR1057 introduces the first CH Firmware (FW) Maintenance Releases after the go-live of R2.0. It applies to both single and dual band CHs and incorporates the latest version of the Release 1.3 (R1.3)

code firmware as well as the Issue Resolution Proposals (IRP) variants⁴ to GBCS i.e. version 2.1. CR1057 supersedes CRs 278/312 and 1030, which were previously raised with the intent to update the GBCS with the respective IRPs. Not implementing this change would risk that the next FW upgrade to R2.0 CHs becomes non-compliant as it will not include the latest R1.3 code stream.

CR1057 splits Maintenance Release for R2.1 into the following two phases:

- Phase 1 – containing the v1.39 HF2 code merge and R2.0 defect fixes; and
- Phase 2 – containing functionality associated with the IRPs in CRs 278, 312 and 1030, together with production defect fixes.

CR1057 includes the following Communications Hub variants:

- SBCH
- DBCH
- Fylingdales DBCH
- SB ITCH
- DB ITCH

CAN092 introduces new scope and milestones for provision of the scope of work in CR1057, relating to certain R2.0 CH FW Maintenance Releases post R2.0 Go-Live. The table below provides a breakdown of the milestones and associated charges under CR1057.

Milestone	Charge (£) [COLUMN REDACTED]
CaFA42 - Upon signature of ARQCAN092	
C10aCR1057SBa - Pre-Integration Testing Complete MR2.1.1 Single Band	
C10aCR1057DBa - Pre-Integration Testing Complete MR2.1.1 Dual Band	
C10aCR1057SBb - Pre-Integration Testing Complete MR2.1.2 Single Band	
C10aCR1057DBb - Pre-Integration Testing Complete MR2.1.2 Dual Band	
C8aCR1057SBa - System Testing Complete MR2.1.1 Single Band	
C8aCR1057SBb - System Testing Complete MR2.1.2 Single Band	
C8aCR1057DB - System Testing Complete MR2.1.2 Dual Band	
CaFA43 - Update to CHDS	

Table 9: Milestones agreed for CR1057

Whilst ARQCAN092 was signed in RY19/20, the work is expected to complete over the course of RY20/21. Payments in relation to CR1057 will be financed over the course of RY20/21.

Securing Value for Money

The financial summary for CR1057 includes a negotiated discount of £2.3m together with approximately [REDACTED] that was carried forward from R2.0 under ARQCAN082. The final cost of CR1057, excluding the discounts and funds that were carried forward, was circa [REDACTED].

⁴ IRP525, IRP555 and IRP556.

[REDACTED]

Table 10: Financial summary for CR1057

Adherence to Change Process

The table below sets out the timescales for the change process for this CR.

CR/PR	Issue date	PIA received	IA received	IA approved	CAN signed
CR1057	19/11/18	20/09/18	09/08/19	10/03/2020	31/03/2020

Table 11: Change process for CR1057

TEF – CR1046, CR1079 and PR1153 – TEFCAN086 Central and South and TEFCAN073 Central and South)

Drivers and Scope

The drivers and scope of CR1046 and CR1079 for Telefonica are the same as for CR1046 and CR1079 for Arqiva – see section above.

Due to the uncertainty of an immediate outlook date for a fix to the SiLabs – allowing the restart of DIT – DCC and Telefonica had agreed to put CR1079 on temporary hold with MM2. In order to ensure key Telefonica resources and knowledge was not lost from the current teams, DCC raised PR1153 to provide cover for several critical tasks prior to the restarting of DIT for DBCHs. Activities under PR1153 include:

- Delivery of DBCH firmware releases by Telefónica's Communications Hub vendors, WNC and Toshiba;
- Pre-Integration Testing (PIT) of each firmware release;
- Test support for informal Operational Confidence Test (Informal OCT);
- Test support for informal Device Integration Testing (Informal DIT), if required;
- Formal re-entry into Device Integration Testing (DIT); and
- Programme management support for the delivery and will follow the existing project governance, organisation and processes established for the delivery of DBCH by DCC.

Not implementing PR1153 would have resulted in increased costs due to the extended period of DIT testing.

Securing Value for Money

For the avoidance of doubt, there are two CANs for each CR i.e. one for Telefonica Central and one for Telefonica South. In terms of interpreting the amounts and value cited below, a 55%/45% split should be applied between Central/South.

DCC took the approach of agreeing commercial cover in three phases material to this PC submission:

- **TEFCAN068** covered work that started in RY18/19 and covering CR1046 work up to the end of May 2019. The total value of this work was costed at [REDACTED].
- **TEFCAN073** covered work on CR1079 for DIT testing up until DIT with MM1 was suspended at the end of 31st August 2019, value [REDACTED].
- In practice, DIT testing with meters continued throughout the year but with a suspension taking place at the end of August 2019 while fixes were made to enable DIT testing with a second meter type to continue. **PR1153** was established to cover the DIT suspension period. When DIT was restarted, work continued under PR1170 (not covered by this PC submission). Total forecast value [REDACTED].

The total budget cost for the continued work on R2.0 was costed at [REDACTED]. Whilst Telefónica did not offer a large project discount, it should be noted that on average their daily rate, for a workforce that is predominantly made up of external contractors, is lower than other FSPs. DCC has in previous years verified that Telefónica rates provide a standard contract margin over the external cost it incurs. The values of TEFCAN068 and TEFCAN073 were ascertained by reference to the cost of actual resources deployed and verified by the project team, before the milestones were agreed and financed:

- TEFCAN068 was agreed at [REDACTED] following various adjustments;
- TEFCAN073 was agreed at [REDACTED] following challenges and adjustments, but was then subject to a further reduction of £46k which was agreed as a recompense to DCC for additional testing undertaken on a version of software that was subsequently withdrawn by Telefonica giving a revised total of [REDACTED] ; and
- PR1153 was on a T&M basis versus actual time. The agreed total up until the end of the RY19/20 is [REDACTED]. There is a small additional estimated amount of [REDACTED] which will be incurred in RY 20/21.

In aggregate the final amount covered under this Price Control submission for the RY19/20 is therefore [REDACTED], which is [REDACTED] less than budgeted for.

Adherence to Change Process

The table below sets out the timescales for the change process for this CR.

CR	Issue date	PIA	IA	IA approved	CAN signed
CR1046	29/10/2018	15/11/2018	29/03/2019	08/10/2019	12/07/2019
CR1079	08/01/2019	24/01/2019	08/11/2019	-	13/12/2019

Table 12: Change process for CR1046 and CR1079

DSP – PR1089 (R2.0 Dual Band DIT with MM2 and DIT Phase Completion)

Drivers and Scope

Some elements of previously planned DIT scope for R2.0 were delayed due to the lack of availability of Dual Band Comms Hubs (DBCH) meters. CR1046 was raised to provide cover for the additional Dual Band DIT test scope for Meter Manufacturer 1 (MM1) for NXP based sub GHz meters. PR1089 foresees a further extension to the DIT DBCH testing for:

- R2.0 Dual Band testing activities with non NXP sub GHz meters supplied by Meter Manufacturer 2 (MM2), from the 1st April 2019 until 30th November 2019 or end of DBCH DIT Phase; and
- Any further testing of the DBCH communications Hubs with NXP based meters (from MM1) from the 1st March until the end of DBCH DIT.

Securing Value for Money

DCC challenged the resource profile that was provided by CGI under PR1089 by questioning the suitability of the profiles for the type of work that was required. Examples of the resource challenges included volume of man days required of a specific role, whether a role was required, and evaluations of resource against comparable PR's / CR's. Following challenge from DCC in respect of SOW v1.0, CGI submitted a second SOW (v1.1) which was estimated a slightly higher price than SOW v1.0. The reason for this being was an increase in DIT resource (man days) to accommodate expected test volumes. Whilst the expected increase in activity increased the overall price, it should be noted that savings were realized through the removal and replacement of more senior resource by resource at a less expensive day rate. Further consideration ultimately led to a third SOW version SOW v1.2, reducing the final cost by approx. [REDACTED] by halving a man day resource requirement for a particular profile.

A breakdown of the total setup charges (Time & Materials) per SOW version is as follows:

[REDACTED]

Table 13: Set-up charges per SOW

Adherence to Change Process

The table below sets out the timescales for the change process for this PR.

CR/PR	Issue date	Impact confirmation	SOW V1.0	SOW V1.1	SOW V1.2	SOW approved	SOWA signed
PR1089	26/04/2019	08/05/2019	13/05/2019	28/05/2019	10/06/2019	19/07/2019	21/08/2019

Table 14: Change process for PR1089

3.2 November 2019 SEC Release

DSP – CR1138 (November 2019 SEC System Release)

Drivers and Scope

CR1138 provides a release wrapper for a range of CRs, covering post PIT e.g. SIT and UIT phases of the Release and System Integration. The proposed scope of the November 2019 release is as follows:

CR #	SECMOD ref	CR Title
CR229	SECMP0023	Correct units of measure for uncontrolled Gas Flow Rate
CR243	SECMP0025	Electricity network party access to load switching information
CR292	N/A	Amendments to anomaly detection attributes
CR305	SECMP0039	Comms Hubs returns notifications
CR1022	SECMOD060	Retention of CH's in Pending state in SSI
CR1055	N/A	Suppression of duplicate power outage alerts
CR1056	N/A	I&C Retry Config
CR1066 Part 1	SECMP0062 Part 1	Traffic Management - Alert Storm protection

Table 15: November SEC Release

This CR accommodates the changes that were required for the November 2019 SEC release. Failure to deliver a SEC System Release in November 2019 would have increased the backlog of change to be delivered in future release slots, delaying other mandatory change.

Securing Value for Money

Upon receipt of the indicative pricing, CR1138 was priced at a ROM cost of between [REDACTED] to [REDACTED].

[REDACTED]

Table 16: Indicative price range for CR1138

A Final Impact Assessment (FIA) was issued subsequently, providing a split between labour and set-up costs for each individual CR. The total cost of the November 2019 release was costed at circa [REDACTED] of which approximately [REDACTED] labor costs and approximately [REDACTED] set-up costs.

[REDACTED]

Table 17: Finance table 1

DCC challenged the resource profile that was provided to ensure the profile was suitable for the scope of works that were required. In total, DCC raised 22 points challenging the individual elements of the FIA. In accordance with standard checks, the concerns and challenges that were raised were around the provided volume of man days required for a specific role, whether a role was required, as well as an assessment against resource levels for comparable CRs/PR's. More specifically and by means of example, the challenges against CGI's FIA included requests for additional breakdown of labour costs, greater clarity and transparency around how some costs aligned to individual CRs as well as confirmation that there were no cross-over charge uncertain areas.

In addition to DCC's feedback on the FIA, a second version of CR1138 was re-issued to accommodate the following changes:

- Extension of the SIT period;
- Changes to the execution dates of UIT;
- Greater detail on the UIT scope which is now based on discussions with DCC Testing Services and documented in the November 19. This scope, together with improved automation of the regression testing within UIT, has led to a reduction in charges since FIA v1.0; and
- Postponement of Go Live date from 7 to 24 November 2019.

A second version of the FIA was issued in response to updated CR1138 and reflected in part the challenges that DCC had raised in response to the first version of the FIA. A breakdown of the costs and reductions is provided in the table below.

[REDACTED]

Table 18: Finance table 2

Notwithstanding that only a 0.02% saving had been achieved overall – which was mainly due to the increased scope to CR1138 – it should be noted that significant savings had been realised as a result of the challenges that were raised in response to the first FIA. For example, as a direct result of this, a 49% saving was achieved on CR1138 labour UIT Release Costs. The table below provides a breakdown of the final costs, as approved, for CR1138. Set-up costs remained unchanged.

[REDACTED]

Table 19: Finance table 3

Adherence to Change Process

The table below sets out the timescales for the change process for this CR.

CR/PR	Issue date	IA	PIA	FIA V1.0	FIA V1.1	FIA V1.2	CAN approved	CAN signed
CR1138	25/04/2019	08/05/2019	09/05/2019	05/07/2019	10/09/2019	19/09/2019	02/10/2019	21/10/2019

Table 20: Change process for CR1138

3.3 Self-Service Interface

DSP – PR1079 (Self-Service Interface / Remedy Enhancement)

Drivers and Scope

PR1079 was driven by DCC’s strategy to improve the digital experience for our Customers allowing them to increase the uptake of the Self Service (SSI) and as such improve the efficiency and effectiveness of the service by DCC’s internal operations. More specifically, PR1079 seeks to:

- Introduce improvements to develop a more flexible delivery capability, including:
 - Streamlining governance processes;
 - Ongoing customer alignment and engagement to support and enhance improvements to both the SSI and Remedy;
 - Flex the size and profile of team with seven- and nine-weeks’ notice for respectively Remedy and the SSI; and
 - Establishing a joint SSI – Remedy (DSMS) design and development team.
- Identify and evaluate improvements to SSI and Remedy (DSMS), including on areas such as:
 - Effort and technical feasibility;
 - Customer and DCC benefits;
 - SEC compliance options;
 - Security implications or constraints;
 - Testing requirements; and
 - Priority, delivery and release timescales.

Originally, PR069 provided commercial cover for the DSP to deliver services to the SSI/Remedy enhancement programme until August 2018. Due to the actual burn rate of this cover being slower than envisaged, the commercial cover ran until December 2018. PR1039 subsequently provided cover from December 2018 until the end of March 2019. Finally, PR1079 provides the commercial cover that is required to implement the delivery of the programme, now estimated to conclude over a period of 12 months between April 2019 and March 2020.

Securing Value for Money

The initial SOW submitted by the DSP costed the scope of the work under PR1079 at [REDACTED] or [REDACTED] per month. DCC challenged the price based on the concern that the DSP had priced the PR to fit the approved budget and not sought to price efficiently. In direct response, the DSP lowered the monthly cost to [REDACTED], delivering a net saving for the entire work of [REDACTED]. Following concerns that the total value of this PR would be utilized too quickly throughout the year, DCC made it clear to the DSP that the negotiated value should be considered as the maximum amount that would be spent on the scope of this work. Whilst the DSP was initially very reluctant to engage on this basis, due to the agile nature of the work, DCC made it clear that it was not willing to sign off this value without controls on the spend being in place subsequently securing the discount. The table below provides a breakdown of the costs.

[REDACTED]

Table 21: Finance table 4

SOW initial price (IA) (£m)	Final negotiated SOW Price (£m)	Negotiated Difference (%)
[REDACTED]	[REDACTED]	-20.05

Table 22: SOW IA

Monthly milestones were added to PR1079 to enable payments to be financed. The PR1079 milestones were achieved by the production and agreement of monthly trackers and summary billing reports for the preceding month, produced by DSP and provided to the DCC by the 10th working day in the prevailing month. The monthly trackers and summary billing report include the effort expended (including name and role type) and, where relevant, materials procured. Monthly trackers were reviewed, challenged and agreed with DCC. PR1079 payments were financed in respectively August and June 2019, and March 2020.

Final incurred costs against PR1079 were [REDACTED], representing savings of approximately £0.3m and £0.9m against respectively the forecasted and original value of the SOW.

Adherence to Change Process

The table below sets out the timescales for the change process for this PR.

Change / Project Request	Issue date	SOW received	SOWA signed
PR1079	15/03/2019	12/04/2019	19/08/2019

Table 23: Change process for PR1079

3.4 Testing Services

DSP – CR1287 (Establishment of Enduring UIT Testing)

Drivers and Scope

CR1287 is a SEC-led initiative that relates to the continued provision of Testing Services in line with Section H14 of the SEC. This section supports the regulatory framework underpinning Test Participants to support User Integration Testing (UIT) across SMETS1 and SMETS2, Production Support Testing (PST), for SMETS2 and Systems Integration (SI) Release Management.

The scope of CR1287 is defined as follows and extends across UIT-A and UIT-B Test Environments, covering the period 1st April 2019 to 31st March 2020:

- Management of overarching UIT Testing Services;
- Monthly Service Review reporting;
- Test Analyst Support for Test Participants (TPs) and CSPs;
- Data Setup and Management for Test Participants;
- Defect Management and Triage, noting that for other SPs the DSP SI provides a coordination and reporting service;
- UIT Reporting;
- SI Release Management Co-ordination and support across the UIT-A, UIT-B, SIT-A and Production environments;
- Licensing for HP ALM use;
- Service Testing for new releases and devices already in, or approved to go into production;
- Setting up the tools and Service Testing for SMKI Recovery Testing;

- Participation in site visits, as agreed between DSP and DCC;
- Production Support Testing (PST).

Securing Value for Money

The scope of work for this CR1287 transitioned from March 2019 under CR279⁵, which sought to introduce and establish an Enduring UIT Testing Service. Under CR279, the scope of works covered User Integration Testing (UIT) and Production Support Testing (PST) at a combined value of [REDACTED] for the Regulatory Year.

Negotiations took place throughout the year from 01/04/2019 until the FIA was agreed and approved on 25/03/2020. Only one FIA was produced by CGI which reflected the final output of the discussions. The total charges (fixed price) was agreed at [REDACTED] broken down as follows:

[REDACTED]

Table 24: Finance table 5

The labour costs for CR1287 can be broken as follows:

- Enduring UIT Testing Services – a total cost of [REDACTED] and 8,993 man days with a weighted average day rate of [REDACTED].
- Production Support Testing (PST) – a total cost of [REDACTED] and 2,619 man days with a weighted average day rate of [REDACTED].
- Systems Integration (SI) Release Management – a total cost of [REDACTED] and 918 man days with a weighted average day rate of [REDACTED].

The resource profile provided by the Service Provider was challenged and questioned throughout to ensure the profile was suitable for the scope of works. The objective being a cost reduction. Examples of the resource challenges included volume of man days required of a specific role, whether a role was required, and evaluations of resource against comparable PR's / CR's.

The effective cost reduced from [REDACTED] per month in 2018/19 to [REDACTED] per month during April 2019 to June 2019. This represents a reduction of 19.7%. The Cost of services reduced further during July 2019 to October 2019 to [REDACTED], representing a reduction of 29.8% versus the effective cost of per month in 2018/19. Between November 2019 and March 2020 inclusive, the cost of services was adjusted to account for agreed inflation rate. The monthly cost became [REDACTED] for this 5-month period, an increase of 2.2%.

Adherence to Change Process

The table below sets out the timescales for the change process for this PR.

CR/PR	Issue date	Impact confirmation	PIA received	FIA received	FIA approved	CAN signed
CR1287	29/01/2020	05/02/2020	N/A	17/02/2020	25/03/2020	31/03/2020

Table 25: Change process for PR1287

⁵ CR279 was covered as part of RY18/19 price control submission.