Data Communications Company

SMETS1 service

Version: 1.0
Date: 30.07.24

Table of Contents

1. SMETS1 Service

Summary

What is this and why is it important?

As the SMETS1 service scope has evolved over time, it is clear that the complexity has been greater than initially envisaged by all stakeholders, including DESNZ and SECAS. As a consequence, the time and investment required by the DCC to deliver and maintain a high-quality service, support customers to maximise migrations and challenge service providers to ensure performance has also increased, e.g. in improving stability of the FOC solution.

As of 31 March 2024, 12.2 million meters had been migrated (up from 11.3 million on 31 March 2023), enabled by strong DCC performance, with over 99.5% of migrations delivered 'right first time' (RFT).

The SMETS1 service is critical as it allows consumers to switch energy suppliers seamlessly without losing smart functionality and will continue to deliver significant savings to industry, by ensuring that SMETS1 meters do not have to be physically switched out to SMETS2 meters.

RY23/24 activities and costs

We incurred £4.3m of internal costs, which is a variance of £0.7m against the Ofgem baseline. However, in some areas, such as FOC, actual spend is lower than the DCC forecast.

Our focus in RY23/24 has been on maintaining strong performance, migration of remaining meters and ongoing system improvements.

- **Performance:** Our operational performance has remained strong, including prepayment at 99% availability. This is essential to delivering customer and consumer benefit.
- **Migration:** DCC has completed the migration of all meters presented for migration, enabling us to close the IOC, MDS and Npower cohorts. This has avoided high levels of SMETS2 replacement costs for industry, especially as we approach 4G launch through the CH&N programme. Alongside Ofgem and DESNZ, we are continuing to work very closely with those customers who have remaining meters to support them in completing these migrations.
- **System improvement:** Delivering high levels of system performance while maintaining migration capacity has required continued improvement in our systems (including several material contract changes through the year). We have worked closely with our external service providers to manage these changes cost effectively, using existing contractual levers where possible to minimise additional spend.

DCC has continued throughout the year to engage very closely with DESNZ and Ofgem, (including regular Bilateral and Trilateral meetings), and our customers to ensure all parties are aligned on the best route to delivering our shared objectives. This includes raising potential risk to the service and proactive mitigation options.

Future activities and costs

Performance of the Final Operating Capability (FOC) cohort will continue to be a priority for DCC.

September 2024 is the Department's deadline for migrating remaining SMETS1 meters, and we will continue to work closely with energy suppliers to enable them to meet this timeframe.

Government is consulting on the SMETS1 end-of-life strategy in summer 2024. The outcome of this will impact future DCC activities and costs.

1.1. SMETS1 – RY23/24 Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Service Variance by GL

The table below provides a breakdown of incurred and forecasted costs in price control format i.e. mapping costs directly against the price control General Ledger codes (GLs).

Baseline			**RY23/24**	**RY24/25**	**RY25/26**
Total SMETS1		**£m**	**3.610**	**2.300**	**-**
Payroll costs	PR	£m	2.958	1.660	-
Non-payroll costs	NP	£m	0.053	0.054	-
Recruitment	RC	£m	0.013	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	0.586	0.586	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total SMETS1		**£m**	**4.337**	**3.472**	**1.531**
Payroll costs	PR	£m	1.473	0.856	0.899
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	2.305	2.065	0.632
Internal services	IS	£m	0.558	0.551	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total SMETS1		**£m**	**0.727**	**1.172**	**1.531**
Payroll costs	PR	£m	-1.485	-0.804	**0.899**
Non-payroll costs	NP	£m	-0.053	-0.054	-

Recruitment	RC	£m	-0.013	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**1.719**	**1.479**	**0.632**
Internal services	IS	£m	**0.558**	**0.551**	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Service Variance by Sub-Team

The table below shows the payroll variance by sub-team within the SMETS1 Service.

Baseline		**RY23/24**	**RY24/25**	**RY25/26**
SMETS1 Payroll Costs	**£m**	**2.958**	**1.660**	**-**
Commercial and Regulation	£m	0.157	0.157	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	0.686	0.665	-
Security	£m	-	-	-
Service Delivery	£m	2.116	0.838	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
SMETS1 Payroll Costs	**£m**	**1.473**	**0.856**	**0.899**
Commercial and Regulation	£m	0.123	0.190	0.167
Design and Assurance	£m	0.029	0.044	0.029
Finance	£m	-	-	-
Operations	£m	0.074	0.111	0.185
Security	£m	0.043	0.148	0.139
Service Delivery	£m	0.961	0.350	0.368
Testing	£m	0.243	0.013	0.012
Variance		**RY23/24**	**RY24/25**	**RY25/26**
SMETS1 Payroll Costs	**£m**	**-1.485**	**-0.804**	**0.899**
Commercial and Regulation	£m	-0.033	0.033	**0.167**
Design and Assurance	£m	0.029	0.044	0.029
Finance	£m	-	-	-
Operations	£m	-0.611	-0.554	**0.185**
Security	£m	0.043	0.148	0.139
Service Delivery	£m	-1.155	-0.489	**0.368**
Testing	£m	**0.243**	0.013	0.012

1.1.2. External Costs

We incur External Costs on specified subset of our service providers and explain material contract variations (known as change or project requests – CRs or PRs), which are greater than £1m.

We have six material CRs and PRs for RY23/24.

1.2. Purpose, Scope, and Structure

SMETS1 meters were the first smart meter technology deployed at scale to homes across the UK. SMETS1 meters were initially connected to supplier-run meter networks with no interoperability. The main drawback of the approach suppliers took to rolling out SMETS1 meters is that when a consumer changes energy supplier, these meters may lose smart functionality. This issue had the potential to prevent customers and suppliers from achieving the benefits of smart metering, and also served as a barrier to switching, and therefore competition.

When the DCC was created, government initiated a programme to integrate SMETS1 meters into the DCC service so that they could be operated in 'smart' mode and maintain their smart functionality when switching supplier.

The technical solution (Initial Enrolment Project Feasibility Report, IEPFR or the "Feasibility Report") was consulted on in 2016 with two key options:

1. A Direct to Meter (D2M) solution whereby the DCC effectively communicates with the SMETS1 meter via new software developed specifically for the purpose (IP4).
2. A solution that would integrate the existing market framework (Smart Meter Systems Operators (SMSOs)) (IP5b) into the DCC ecosystem.

Option 2 was considered lower risk as the existing market framework was already operational and had been tested. In May 2017, DCC consulted on a delivery plan for option 2 ("LC13" plan), which was approved by the Government in October 2017.

Due to the large number of devices installed across the UK, the SMETS1 Programme was broken down into blocks (cohorts) and managed independently. SMETS1 meters were migrated from supplier networks to the DCC SMETS1 service in three cohorts with each release delivering a capability for a different type of meter installed by energy suppliers: the Initial Operating Cohort (IOC), Middle Operating Cohort (MOC) and Final Operating Cohort (FOC).

At the time of writing, migration from IOC has ended; migration from MOC and FOC is ongoing and currently scheduled to close at the end of 2024.

Although government's current plans are to close the remaining cohorts by the end of 2024, the consequence of selecting the option 2 design for the programme is that DCC will be operating legacy infrastructure on an enduring basis. This will continue to present technological challenges, which DCC will be required to address. Similarly, SMETS1 devices have a finite lifetime and government is planning to consult over summer 2024 on its end-of-life strategy, which will inevitably have an impact on DCC's activities and therefore costs.

1.2.1. Scope

Activities in the SMETS1 cost centre fall into three cost categories:

- **Internal DCC costs** – the costs of DCC's operational in-life activities. These are a combination of resource and non-resource costs.
- **External Service Provider costs that are not Fundamental Service Capability** – in MOC and FOC, these include Morrisons Data Services, British Gas and Npower. These are classified as internal costs for the purposes of the Price Control. These are non-resource costs.
- **Fundamental Service Capability costs** – in MOC and FOC these are the costs of the SMSOs, [redacted] and [redacted] respectively. These are External Costs as set out in section 1.7 below.

In RY23/24 SMETS1 activities were split into two key areas: In-life Operations and the continuation of migration and enrolment, as below.

In-life Operations

As part of RY22/23 Business Planning, SMETS1 became part of in-life operations, restructuring into three workstreams: Maximising Migrations, FOC Stabilisation and Device Swap-Out).

The sections below describe the purpose of each workstream and their key activities.

Maximising Migrations

The Maximising Migrations workstream aims to deliver significant benefits to our customers by addressing the risk that a significant number of SMETS1 meters will not be migrated without further action and regulatory change, resulting in SMETS2 swap outs and delays to active migrations. In RY22/23, the team unblocked 800,000 meters through the Maximising Migrations service with a budget of £1m. This saved industry up to £280m through avoiding the costs of replacing these meters with SMETS2+ meters.

At the time of the original SMETS1 business case, DCC agreed the strategy with DESNZ to focus on the DMCs with the largest volume of meters that could be migrated as quickly as possible. In FY23/24, with a Maximising Migration Budget of £700k, the DCC unblocked approximately 18,000 additional devices though partial migration, 1,500 devices through a solution to deregister the PPMID, and circa 25,000 additionally migrated devices through continuing to attempt migration to a regulatory exclusion with inherited Active Installations. Against the Business Case cost to Swap to SMETS2 this is a benefit to industry of circa £16.7m for this workstream.

The acceleration of these initiatives also provides the opportunity for closure of the Requesting Party contracts. The Contracts for FOC [redacted] and MOC MDS cost DCC approximately [redacted] per month each combined, meaning their closure represents a net saving for DCC (which ultimately benefits our customers) when compared to running all Cohorts until the SMETS1 Backstop (the DESNZ-set date by when Service Users must fulfil their active migration obligations). Had DCC not adopted this approach it would have imposed significant additional costs on customers.

Maximising Migrations initiatives for RY23/24 have been:

- GT01 pt2 (Secure): Migration of the GSME in the Secure Cohort where there are repeated GT01 failures seen upon Migration
- Partial Migration (All Cohorts): Partial Migration of the EMSE & CH where the GSME has repeatedly failed Upgrade
- Deregister Dormant PPMID: Regulatory changes to allow DCC to deregister Dormant PPMID Devices to enable further migrations for a given cohort
- Removal of Certs prior to Migration: Removal of required administrative checks prior to migration to allow for further migration attempts and increased migration success/exclusion
- Consultations to close All SMETS1 Requesting Parties: Regulatory consultations to implement unblocking and Exclusion initiatives with the agreement of industry and DESNZ. This was achieved for the MOC MDS and FOC Npower cohorts in FY23/24
- Service Closure of the Requesting Party: Delivery of the plan to track all closure activities with the Requesting Party, ensuring an auditable process to confirm DCC has met its obligations
- Reporting Improvement Project: The DCC's pre-migration and exclusion reporting processes were excessively resource-intensive, manual, and error-prone, preventing accurate reporting on unmanageable installation volumes, leading to potential delays and additional industry costs. The Maximising Migration workstream delivered the reporting improvement project to address these issues. Enhancements were made to the SDMR to ensure it was fit for purpose, eliminated manual processes, and accurately reported exclusions. Since implementation, the burden of manual processes and exclusion reporting has significantly reduced, leading to more accurate, faster, and reliable reporting.
- [redacted] SMSO: FOC [redacted] is a small cohort. Implementation of a Migration solution was previously de-coupled from FOC ([redacted]) and FOC ([redacted] in 2020. Under Maximising Migrations in RY23/24, DCC explored solution options for a Migration service for FOC ([redacted]) and discussed these matters with the Department for Energy Security and Net Zero (the Department).

These changes require Operational, Architectural and Regulatory SMEs with Domain knowledge to be consistently available to meet DCC's ambitions.

Final Operating Capability (FOC) Stabilisation Service

As detailed in last year's Price Control submission, there have been technical challenges with the aspects of the FOC cohort and it was accepted FOC migration behaves differently to earlier cohorts.

- Following delivery of SMETS1 FOC Service against the agreed Minimum Viable Product and Subsequent R2.1 and R2.2 uplifts, DCC has been working to complete the remaining activities with regards to work off, tech refresh, enduring requirements, and ultimately the end-of-life service for SMETS1.

- Starting in early 2022, the SMETS1 FOC had a list of over 150 issues requiring resolution which the team has steadily worked through, both in the previous FY22/23 year, and the current FY23/24. The significant number of issues is one of the key reasons SMETS1 has seen a high number of maintenance releases in the past two years, but the list of issues has not decreased as rapidly as might be expected due to further 'hidden' issues within the system. As fixes have been deployed, on some occasions additional issues have surfaced which were previously masked. As a consequence, the SMETS1 team have deployed over 300 fixes to both maintain the stability of the system as well as improve performance.
- As a result of the war in Ukraine, and the instability within the energy supply market, the Government has implemented a statutory Price Cap which is adjusted on a 3-monthly basis. The need to update all Suppliers' devices at the same time (effectively in a very short timescale of a few hours) was never envisaged when the system was originally scoped.
- This quarterly Price Cap requirement has placed an additional stress on the system, which combined with the ongoing migration of SMETS1 devices from Suppliers' systems onto the DCC eco-system, has presented an ever-increasing burden. At each quarter more devices have been onboarded to the DCC, but the need to update all devices with new tariffs remains. The SMETS1 team have therefore had the additional challenge to increase the capacity of the system to ensure stability is maintained. This has been performed via a number of modifications using the maintenance releases, as well as some infrastructure upgrades performed in conjunction with DCC's third-party Service Providers.
- As in the previous year, given the size, complexity, and challenge in resolving the above issues, Service Delivery have continued to manage a total FOC Stabilisation plan on behalf of DCC Operations. This includes ensuring that there is a Service Delivery team and CTO SMEs in place to control the quality, scope, and pace of Service Provider Delivery.

The FOC Stabilisation Team has worked against existing design, a backlog of operational issues and production incidents to deliver improved functionality in the FOC cohort against the following areas:

1) Operational Maintenance Releases

As in previous SMETS1 Cohorts, DCC has performed a series of monthly operational Maintenance Releases (MR) post Go Live for the FOC Cohort including Defect Fixes and Low Complexity Changes. MRs are integral to our infrastructure as they provide a control mechanism for the deployment of defect fixes and enhancements into the Production system. In Dec 23, an MR had to be backed out of production due to an incorrect software version being used and developed against, this had to go through an additional round of testing and was redeployed into Production in Jan 24 MR window, which incurred additional testing costs.

These have followed the standard 2 week SIT A and UIT A Release Process for maintenance release through to the production System with Testing Support from the relevant service providers.

Maintenance Releases were carried out in April 23 to December 23 also January 24 and April 24. A summary of the main changes performed by the SMETS1 FOC team during the year is given below:

Changes specific to the testing and deployment support for the various Maintenance Releases throughout the year:

PR7618 & CEN093: April, May, June Maintenance Releases.
PR7713 & CEN103: August & September Maintenance Releases.
PR7272 & PR7795: November & December Maintenance Releases
PR7862 & CEN108: January Maintenance Release (Dec MR redeployment)

We also incurred cost during RY23/24 for proactively paying for the first Maintenance Release of the next financial year:

PR7898: April 2024 Maintenance Release

Required licences for the use of handheld terminals also utilised during test execution were extended for the entirety of the FY 23/34:

PR7624: HHT (handheld terminals) Licences.

Owing to the complexity to triage and prioritise issues in the FOC Cohort for Maintenance Releases, this process has been managed by the FOC Stabilisation Service Team.

2) Operational Capacity Improvements

To continue to scale and increase the operational capacity of the SMETS1 solution to meet industry demand, DCC has continued to make operational capacity improvements to the SMETS1 estate. Changes in this area were either deployed by existing High or Low Maintenance windows by DCC and included:

- CR4964: ActiveMQ Impact Assessment
- PR7596: Log Reductions
- PR7599: SRV Retries Configuration
- PR7580: Push Window Changes
- PR7523: Vodafone Retries
- PR7517: E21 Messages
- PR7546: BG Alert Notifications.
- PR7784: Adaptations for SEAL.BROKER limitations.
- CR5188: Active: Active Gamma Link.

(Note that the latter item is ongoing into RY24/25).

Furthermore, given changes to current market conditions, DCCs capacity improvements have also helped to cater for the increased focus on Price Cap events, which were unforeseen and for which the original technical design and commercial agreements in place for SMETS1 did not originally account for.

3) Device Recovery exercise

During the migration of SMETS1 FOC devices from Suppliers' own systems (SMSO) into the DCC eco-system (S1SP) not all devices completed their migration process successfully on the first attempt. Standard procedure is for devices failing migration to be rolled back to their previous state, ready for a re-attempt at a future date. On rare occasions it was found possible for the rollback process to also fail, effectively leaving a device in limbo – neither on the DCC estate or returned to the Supplier's.

Although the rollback failures were confirmed as being caused by a number of defects, the root causes were swiftly identified, and a fix deployed in each case as part of the Maintenance Release schedule to prevent any recurrence.

A device recovery exercise was devised and performed on three occasions to attempt the re-establishment of communications with these devices in limbo, thus avoiding the need for site attendance and swap out. The development of a recovery script was further complicated by the fact the majority of the devices impacted were also experiencing the expiry of a key security certificate which required detailed manipulation to regain control. Due to the sensitive nature of the solution, consultation and approval was first obtained from Industry via the SSC (Security Sub-Committee).

The first 3 cohorts of device recovery enrolled 1,780 installations, estimated to avoid £1,335,000 in swap out costs.

Changes relating to the device recovery exercise:

- PR7457: Device Recovery (main change covering development of script for Cohorts 1, 2 & 3, as well as execution for Cohort 1 PoC).
- PR7776: Device Recovery (main execution for Cohort 2).
- PR7875: Device Recovery (main execution for Cohort 3).

The following change has also been funded out of excess funds for the FY 23/24 and is being used to extract key data from the Production logs. This will be used to inform the recovery of the script for a final Cohort 4, currently expected to be run circa October 2024, once BG have completed their migrations.

- PR7881: Log Retrieval (for Device Recovery)

4) Enduring Certificate Rotation

As part of the security certificates embedded within the FOC estate there are a couple which will expire in late 2025 / early 2026. These require a rotation to a new value which will be valid for another 5 years, as well as a new BAU mechanism to be put in place which will both monitor and maintain the keys correctly for the foreseeable future.

Change CR4819 commenced during FY 23/24 to provide a solution to the need to rotate the keys for the entire FOC estate. This change was technically complex, costly and with an extended time to delivery. DCC has therefore sought an alternative which is both cheaper and faster to deliver.

A Proof of Concept was initiated under PR7909 to investigate the possible use of existing system scripts, with some amendments. This completed successfully at the end of the current reporting year and change PR7963 has now been incepted in FY 24/25, for delivery circa Q2 2025.

5) Payments for Legacy Work

During the previous reporting year, the Opt In/Opt Out (OIOO) piece of work was implemented in part to the Production system, but in a switched off state. The intention was for subsequent components to be deployed in later releases before the mechanism as a whole was to be switched on.

The final Business Case for the OIOO solution was never ratified by BEIS and as a result the piece of work was cancelled in an incomplete state. Some minor work was undertaken to remove the code already deployed and a retrospective payment had to be made to the Service Provider to cover to the initial work undertaken in the previous year:

- PR7342: OIOO (retrospective work provided by CGI).

Device Swap Out

Device Swap Out allows for swapping a SMETS1 meter for another SMETS1 meter in certain circumstances. This is a SEC obligation established as part of the SMETS1 mandate. DESNZ confirmed in writing that this service benefits consumers and must be delivered where there is demand. DCC Legal reviewed and agreed that DCC must provide this service to avoid potential damages or liabilities.

The principal energy suppliers responsible for installing meters within the IOC and MOC releases elected not to require a device swap out service. However, one of the principal suppliers within FOC confirmed they need this service. DESNZ indicated that there is a positive business case for DCC providing this service.

The SMETS1 Device Swap Out aimed to fulfil DCC's SEC obligation by delivering the following:

- Detailed Design: Full Change Delivery Model (CDM) and Cross Functional Design Authority (CFDA) wrap to ensure detailed business, system, and operational requirements are met without unduly impacting the existing SMETS1 solution.
- Technical Changes: Loading of prerequisite data, Self Service Interface (SSI) engineering PIN retrieval, SRV processing, International Mobile Subscriber Identity (IMSI) status changes, and reuse of the 6.21 SRV.
- Regulatory Consultations: Formal confirmation of demand for the service, regulatory changes to remove DCC obligation where there is no demand, and SEC Subsidiary Document (SSD) updates to align with the technical/regulatory landscape.
- Solution Testing: B-Stream testing of data load migration and SMETS1 Service Provider (S1SP) solution implementation to confirm DCC has delivered a compliant solution suitable for industry use.
- Hypercare: Post-Go-Live support to industry and DCC operations to ensure the solution meets DCC license obligations and complies with the SEC.

Following a successful proof of concept conducted by the main supplier and approved by CFDA in RY22/23, DCC maintained the project team in RY23/24 to continue progressing the plans to deliver this capability.

However, in July 2023, the Single Service User for whom DCC was delivering this service formally declared they were no longer interested in a Device Swap Out solution. Consequently, DCC halted the project. By this point in FY23/24, DCC had completed the detailed design and PIT testing and was partway through SIT test preparations and building a feature switch. The decision to stop the project required removing code branches from supplier environments to eliminate unwanted device swap out code and revert to the baseline code branch.

In RY23/24, DCC committed £2.9 million on external supplier costs (CR/PRs) for the Device Swap Out project.

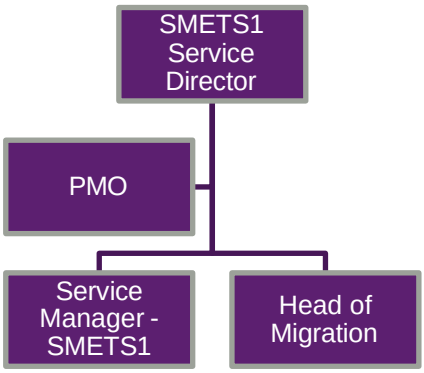
Migration and Enrolment

In 2023, DESNZ extended the Transition and Migration Approach Document (TMAD) until December 2024. This had the effect of extending DCC's duties to migrate eligible SMETS1 devices onto our system until at least December 2024. The TMAD extension happened after we forecast costs for RY23/24 in our Price Control submission in RY22/23 – in short, the effect of extending TMAD was to extend the costs incurred on the MOC and FOC cohorts, without any baseline. These costs show as variances in External Services and Internal Services and are explained below.

1.2.2. Service Structure

The figure below shows how the service was organised during RY23/24, and the key roles within each sub-team.

Figure 1: SMETS1 Service Structure



It should be noted that the sub-team structure above reflects the core resources of the in-life operational team. These resources are supported across DCC by a range of sub-teams who are deployed across the service as below.

Table 1: Description of SMETS1 Functional Sub-Teams

RY23/24 Sub-teams	RY22/23 Sub-teams	Description
Commercial and Regulation	Commercial and Regulation	Commercial The purpose of this team in threefold: (i) to drive better supplier performance and accommodate changes to the Service Providers' contracts for any of the capability releases, (ii) to drive and lead on procurements and negotiations with current and new Service Providers for any of the capability releases, and (iii) to complete and review contract signatures for Service Providers' contracts for any of the capability releases. Regulation The purpose of this team is threefold: (i) to provide support to the team on any regulatory matters, (ii) to run consultations as required for other SEC designated documents and (iii) to identify requirements and dependencies for go-live governance including internal DCC governance and external governance.
Finance	Finance	Budgets, forecasts, and tracks actual spend, as well as supports on business cases. As for the rest if the business, the SMETS1 service is

RY23/24 Sub-teams	RY22/23 Sub-teams	Description
		also benefiting from the finance transformation programme (including the work on business accuracy).
Operations	Operations	To manage the SMETS1 Service on an ongoing basis, the SMETS1 Operations team's primary focus is to support the migration activity, manage supplier relations (particularly for FOC stabilisation), and establish an Early Life Support in time for the first capability release. This will involve business acceptance and operational acceptance testing to ensure that the service can be handed over to operational teams within the DCC and remaining non-functional processes and activities have been verified as being fit-for-purpose.
Security	Security	The primary purpose of the SMETS1 Security team is to produce and finalise the Security Architecture and Risk Assessment for each of the service's capability releases. This includes security assessing and assuring the integration of all SMETS1 service providers and components.
Service Delivery and Design and Assurance (CTO)	Service Delivery	The overall purpose of this team is to deliver the system changes for SMETS1 on behalf of DCC operations in accordance with DCC's Licence Conditions, liaising with internal and external stakeholders to ensure all end-to-end components are in place to enable the safe and efficient migration of meters. The SMETS1 service introduced new components to DCC's core infrastructure. While this is designed to be 'seamless' to end-customers there is greater complexity in terms of data flows, security, and physical Device Model combinations. Within the Service Delivery team, the SMETS1 CTO team's primary focus is to continue to deliver an ongoing high-level technical design and provide assurance of supplier detailed technical design.
Testing	Testing	The SMETS1 Test Services and Assurance Team will oversee multiple testing stages for the three different capability releases, including: Pre-integration Test (PIT), System Integration Testing (SIT), Migration SIT, and User Integration Testing (UIT).

1.3. Variance Overview

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e. mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll and Recruitment are discussed within the next section.

Table 2: Cost centre variance by GL

	Total SMETS1		RY23/24	RY24/25	RY25/26
Total Baseline	**Total SMETS1**	**£m**	**3.610**	**2.300**	**-**
Total Incurred	**Total SMETS1**	**£m**	**4.337**	**3.472**	**1.531**
Total Variance	**Total SMETS1**	**£m**	**0.727**	**1.172**	**1.531**

	Payroll costs	PR	£m	-1.485	-0.804	0.899
	Non-payroll costs	NP	£m	-0.053	-0.054	-
	Recruitment	RC	£m	-0.013	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	1.719	1.479	0.632
	Internal services	IS	£m	0.558	0.551	-
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

The overall Payroll Costs variance in RY23/24 is negative, with incurred costs of £1.473m relative to a baseline of £2.958m.

Table 3: Service variance by sub-team

Variance		RY23/24	RY24/25	RY25/26
SMETS1 Payroll Costs	**£m**	**-1.485**	**-0.804**	**0.899**
Commercial and Regulation	£m	-0.033	0.033	0.167
Design and Assurance	£m	0.029	0.044	0.029
Finance	£m	-	-	-
Operations	£m	-0.611	-0.554	0.185
Security	£m	0.043	0.148	0.139
Service Delivery	£m	-1.155	-0.489	0.368
Testing	£m	0.243	0.013	0.012

Variance by Sub-Team

Throughout the three-year reporting period, only one sub-team was variant against Ofgem's baseline - Testing in RY23/24. The reasons for this variance are set out below.

1.4. Drivers for Variance – Resource

1.4.1. Commercial and Regulation

The Commercial and Regulation team's support for the SMETS1 programme is forecast to result in a £0.167m variance in RY25/26 due to ongoing assignment of roles and a zero baseline due to disallowances imposed last year. It is not variant in RY23/24 or RY24/25.

1.4.2. Operations

The Operations team's support for the SMETS1 programme is forecast to result in a £0.185m variance in RY25/26 due to ongoing assignment of roles and a zero baseline due to disallowances imposed last year. It is not variant in RY23/24 or RY24/25.

1.4.3. Testing

When the SMETS1 programme was devised, it was assumed that all SMETS1 migrations would complete at the end of December 2020, and that DCC's testing and other functions would cease to be needed. However, because industry's migration rate has been much slower than government anticipated, it has had to keep the cohorts open much longer than planned. Because the cohorts have been kept open and TMAD extended several times, DCC has had to maintain its operational teams to support test activities. As DCC is delivering testing in response to a SEC mandate, and the Department has determined that keeping the cohorts open is more economic and efficient than closing them and replacing the meters, we do not anticipate any disallowances across the SMETS1 cost centre.

The SMETS1 Testing team oversees multiple testing stages for the various uplifts completed in RY23/24 (3.1, 3.2 and 3.3), as set out in more detail below. The £243k of resource costs incurred during RY23/24 were not included in last year's forecast because TMAD had not been extended when the Annual Business Plan numbers were finalised.

Activities driving change in resource in RY23/24

In RY23/24, the Testing team had the following resources assigned to the various SMETS1 in-life projects:

- Test Manager - 0.33 FTE
- Test Lead 2 - 0.50 FTE
- Test Analyst 2 - 0.50 FTE

The key activities for the team included the following for the three uplifts that went live in RY23/24:

- Scoping of testing for the programme/Release.
- Assurance of Test Artefacts (Test plan, Heatmap, Test Traceability Matrix, Test completion Report).
- Witnessing/Static assurance of a subset of tests (PIT/SIT).
- Liaising with Governance (TAG/DCC) regarding path to live for approvals.
- Attend daily programme stand ups and external weekly calls with Suppliers.
- Review and approve test material received by Suppliers.
- Lease with Design and Operations to ensure test requirements have been achieved.
- Lease with Programme team to ensure test plans are accurately captured, dependencies identified and linked and included in Programme plan.

Testing resources are not variant in either RY24/25 or RY25/26. However, if further TMAD changes are made, DCC may incur further costs in these two years.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

During RY23/24, there was a £2.278m variance for non-resource costs, mainly driven by the SMETS1 Requesting Party - [redacted] within the FOC cohort.

Table 4: Material variance for SMETS1 non-resources internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement Type
Migration Testing	ES	£m	-	-	0.154	[redacted]
SMETS1 - [redacted]	ES	£m	0.196	-	-	
SMETS1 Requesting Party - [redacted]	ES	£m	1.295	1.911	0.478	
S1MRS & SDMR	IS	£m	0.558	0.551	-	

1.5.2. External Services

1.5.2.1. Migration Testing

As in prior years, DCC is forecasting ongoing spend to maintain MDUST functionality to monitor and report on SMETS1 meter migrations. Maintaining MDUST is a regulatory requirement. We are forecasting costs of £0.154m in both RY24/25 and RY25/26 – a significant decrease relative to the incurred costs of £0.384m in RY23/24. In RY24/25 there is a baseline of £0.476m but in RY25/26 there is a zero baseline. Consequently, despite the forecast being the same in both years, all expenditure in RY25/26 appears as a variance.

1.5.2.2. SMETS1 – [redacted]

Driver for Procurement

[redacted] is one of the incumbent Smart Metering System Operators (SMSOs) in FOC. As such, DCC had to contract with them to create and operate a Requesting Party capability to allow migration of meters from their systems to DCC's SMETS1 solution. On 1 January 2022, with the liquidation of [redacted], the Requesting Party contract with [redacted] was novated to [redacted].

With TMAD being extended by the Department until at least 31 December 2024, the obligation to migrate eligible devices from Npower's SMSO network into the DCC's system was extended, with costs continuing in RY23/24.

In RY23/24, E.ON pulled out of the migration process without providing notice to DCC. As a result, DCC and [redacted] were in dispute over the remaining costs to be paid to [redacted] for the services provided up to the closure of the cohort in March 2023 (when [redacted] withdrew). The Parties agreed to a full and final settlement of all claims and issues between them arising under and/or otherwise in connection with (a) Pass-Through Expenses in respect of dormant SIMs for the period March 2021 to February 2023, (b) [redacted] dated 4 January 2023 in respect of costs incurred pursuant to [redacted], (c) Milestone 7 and (d) [redacted]'s incurred costs during Q4 2022 and Q1 2023, also referred to as the '[redacted] costs'.

Securing Value for Money

The [redacted] cohort closed in March 23 when [redacted] withdrew the service early. The terms of the contract meant that milestone payments were outstanding, and they submitted a final settlement of £ [redacted]m.

Through successful negotiations it was agreed that due to [redacted] pulling out of the migration programme they would waiver the Milestone 7 payment, the SIMS payments and provide discount on the Q4 payments, agreeing a settlement of [redacted]m: a [redacted]% reduction on the original settlement submitted.

1.5.2.3. SMETS1 Requesting Party – [redacted]

Driver for Procurement

[redacted] is one of the incumbent SMSOs in the Final Operating Capability (FOC) cohort. As such, DCC had to contract with them to create and operate a Requesting Party capability to facilitate migration of meters from their systems to DCC's SMETS1 solution.

Securing Value for Money

DCC incurred costs in RY23/24 of £1.3m to finalise the migration of smart meters within the [redacted] part of the FOC cohort. The costs were at the prevailing contractual rates.

1.5.3. Internal Services

1.5.3.1. S1MRS & SDMR

Driver for the Procurement

As with the other SMETS1 costs described above, for as long as TMAD is in place and DCC has a duty to migrate and enrol SMETS1 meters, it also has a duty under the SEC to provide detailed reporting on its migration performance.

DCC's OPR incentive regime has a range of measures that are weighted by meter generation. Without detailed reporting analytics we would be unable to comply with a range of binding obligations in the SEC and Licence.

The SMETS1 Migration Reporting System (S1MRS) and SMETS1 Dormant Meter Repository Tool (SDMR) were created to monitor SMETS1 Migrations and Migration Device User System Test (MDUST). The costs of providing S1MRS and SDMR are recurring costs that relate to the hosting of the services in the Capita Data Centre and provided to DCC by Capita as managed services under the ongoing Apps and Hosting Contract.

Securing Value for Money

Ofgem will be aware that several tools are provided by Capita under the Apps and Hosting contract, including S1MRS, SDMR and MDUST - all of which are required until the end of the SMETS1 Migration.

As the SMETS1 Service has continued into RY23/24, DCC has continued to be obligated to provide S1MRS and SDMR services under the Apps and Hosting contract that was extended in RY22/23. The rationale for extending the contract is set out in last year's Price Control submission. As none of the terms and conditions nor costs of the service have changed, and given Ofgem allowed the expenditure last year, we believe that we continue to have evidence that the expenditure is economic and efficient.

1.6. External Costs

The sections below describe the material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1 million in RY23/24 in the SMETS1 cost centre. As in prior years, we explain the background, drivers, scope and how we secured value for money.

In the following section we explain our costs incurred across each of our DCO service providers: [redacted] and Capita.

Table 5: CRs and PRs that had material variance in RY23/24

Unique ID	Programme	Title
CR4864|CGI IE	SMETS1 migrations	SMETS 1 - CGI Requesting Party extension
CR4634|CGI	SMETS1	Tech Refresh - [redacted] Identity Management (IDM) Software Upgrade
CR4563|CGI	SMETS1	HSM Upgrade Implementation
PR7508|CGI	SMETS1 - Testing	CGI SI - System Regression as a Service
PR7538|CGI	SMETS1 - Testing	June'23 SIT Execution Cover (CR4844)
PR7810|CGI	SMETS1	June '24 SEC System Release SIT Preparation Activities & Systems Integration and Operations Board Attendance (SIOB)

1.6.1. CR4864 – CGI IE – Enhanced Migration Support Service (S1SP), Requesting Party Service, SMSO Migration Service, SMSO Production Support Services and SMSO Service (including Production Environments) – Extension from 1st January 2023 until 31st March 2024

Drivers for Change

The purpose of CR4864 was to continue with DCC's migration capability in line with DCC requirements and obligations. These are services previously provided under CGI IE CAN040 (CR4631) to ensure the continuation of SMETS1 migrations in the IOC, FOC and MOC cohorts.

Scope of Change

The extension of production services provided previously under CGI IE CAN040 (CR4631) are as follows:

- Enhanced Migration Support Service (S1SP) – Monitoring of migration and triage of issues for IOC, MOC and FOC SMETS1 migrations.
- Requesting Party Service (including labour and environments):
  - Provision of IE RPS production environments including Hardware Security Models (HSMs); and
  - the Requesting Party Service (as previously agreed in CGI IE CAN040 – CR4631).
- Smart Meter System Operator (SMSO) Migration Service:
  - SMSO services needed to migrate meters;
  - Firmware Upgrade / Device Configuration support; and
  - Eligible Product Combination List (EPCL) updates where necessary.
- SMSO Production Support Services – Provisions of analytical support for examining remaining un-migrated meters on production e.g. ad hoc queries, investigation of migration failure categories including input to DCC reports/attendance at meetings, support for decision regarding eventual abandonment of un-migratable meters.
- SMSO Service – Provision of the SMSO production service including the SMSO production environments.

Some amendments were requested to the scope differing from those in CGI IE CAN040 (CR4631) to deliver cost savings. These were:

- The Analytical support will be provided by the SMSO service team rather than dedicated resources. Where CGI needs to identify additional, more knowledgeable, staff to respond to any complex support requests the response time may be longer than that that has been provided under CR4631; and
- The HSM support will be 'standard' support as opposed to 'premium' support given premium support is no longer required.

Securing Value for Money

The initial price for CR4864 – Extension from 1st January 2023 until 31st March 2024 (with the option to terminate on or after 31st March 2023) was calculated to be £[redacted] by CGI IE. The activity was originally planned to cover a 12-month period between January 2023 and December 2023. However, there was an opportunity to extend these services beyond the end of December 2023 at a monthly cost of £[redacted].

As the SMETS1 migrations within the IOC cohort were not complete, the decision was made to extend the services for a further 3 months under CR4864 to the end of March 2024. This was considered value for money as DCC secured an extension at static rates, realising a reduction in real terms. The labour charges were agreed to remain unchanged for the full duration of the CR at £[redacted] per month, the infrastructure charges remained unchanged at £[redacted] per month and the SMSO service charge remained unchanged at £[redacted] per month. DCC became responsible for the SMSO service charge following the final supplier exiting the SMSO service at the end of August 2022. Previously this charge was covered by customers.

The services as provided under CR4864 had to be in place until The Secretary of State approved the Decommissioning timetable. As the date was not known at the point of agreeing the duration of CR4864, it was deemed critical to ensure termination rights were agreed. The termination charges are listed below:

Table 6: Termination Charges of CR4864

Detail	Total Price (Ex VAT) *
Labour Cost	[redacted]
Total Infrastructure Costs	
Total Charges (excluding finance)	

DCC concluded on a proposal to end Migrations and stop the process in respect of the IOC cohort on 5 April 2023. On 28 April 2023, DCC wrote to the Secretary of State recommending the Requesting Party (RP) for the IOC cohort

be decommissioned on 28 May 2023. The Secretary of State approved the proposed RP Decommissioning Timetable on 17 May 2023. The service stopped on 31 May 2023.

Therefore, the actual charges incurred for CR4864 (including the termination charges) are:

Table 7: Actual charges incurred for CR4864

Detail	Total Price (Ex VAT) *
Labour Cost	[redacted]
Total Infrastructure Costs	
SMSO Service Charge	
Total Charges (excluding finance)	

This resulted in an actual saving of **65.7%** versus the full Final Impact Assessment (FIA). We achieved this through executing our termination rights to end the service early.

However, a breakdown of the costs is provided in the tables below (FIA v1.0 versus FIA v2.0).

Table 8: Initial vs Final Price of CR4864 (detailed breakdown)

Detail	Price initial (£)	Price final (£)
Labour cost	[redacted]	
Infrastructure charges		
SMSO service charge		
Total Charges		

Table 9: Initial vs Final Price of CR4864

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.6.2. CR4634 – CGI - SMETS1 Tech Refresh - [redacted] Identity Management (IDM) Software Upgrade

Drivers for Change

The reason for the change in CGICAN233-CR4634 is to upgrade the [redacted] suite of software products used in CGI ("DSP") solution as listed below.

Table 10: Software products used in CGI ("DSP") solution

Product	Description	Current Version	End of Vendor Support (EoVS) Date	Target Version
IdentityGuard (This is inclusive of [redacted] IdentityGuard Self-Service Module v13)	[redacted] IDG management service is used to manage users and security credentials	v11 v12	v11 EOVS v12 10/2023	v13
GetAccess	Authenticates users and provides single sign on using secure two-factor credentials and the user's role	v8.1	v8.1 10/2021	v9.2
Security Manager	[redacted] Security Manager technology is used to issue x509 certificates to DCC End Users for access into SSI/SSMI.	v8.1	v8.1 To be announced	v10

The Third-Party Software as listed above and its associated servers for [redacted], User Issuing Certificate and Root Certificate Authority are used across the DSP Solution and only the upgraded versions will remain supported by the relevant vendor. All the software comprising the [redacted] Software Suite and the associated servers must be upgraded around the same time due to interdependencies between the software versions used – as older versions of one software may not be compatible with newer versions of another software.

Scope of the Change

This Change covers [redacted] Identity Management (IDM) Software Upgrade which includes version upgrade i.e., decommissioning of legacy [redacted] suite of software products used in the DSP solution and installation of upgraded IdentityGuard, GetAccess and Security Manager and the associated servers for processing [redacted], User Issuing Certificate and Root Certificate Authority. The purpose of this upgrade is to ensure to ensure that any End of Vendor Support issues for the Identity Management (IDM) functionality of the DSP solution, currently delivered by the [redacted] suite of software products, are managed appropriately to ensure that all software components used within the DCC Systems remain subject to ongoing Vendor Support throughout the duration of the current Term of the Agreement. To enable the upgrades with near zero impact to DCC Service Users and not put them at any additional risk from security flaws, CGI proposed to build the upgrades alongside the existing software, to manage testing and then use a migrated approach to bring the upgrade online. This approach to 'build alongside' existing infrastructure as mentioned below will also minimise the risk, avoid outages and disruption to the Services.

- IdentityGuard (IDG) Refresh Approach- The approach to [redacted] Identity Management (IDM) upgrade is to build new environments alongside all of the existing environments for Dev/Test, SIT-B, UIT-B, SIT-A/UIT-A, and Production. The IDG user directory and user data will be backed-up and restored from the existing IDG server to the new server. The cutover will involve re-pointing the servers in DNS (Domain Name System) to the new servers. The existing IDG servers will be decommissioned once the new service has been proven to provide all the functionality of the existing IDM solution.
- GetAccess Refresh Approach- The approach to the [redacted] IDM upgrade is to build new environments alongside all the existing environments for Dev/Test, SIT-B, UIT-B. SIT-A/UIT-A and Production. The GetAccess user directory and user data will be backed up and restored from the existing GetAccess server to

the new server. The cutover will involve re-pointing the servers in DNS to the new servers. The existing GetAccess servers will be decommissioned once the new service has been proven to provide all the functionality of the existing IDM solution.

- Security Manager Refresh Approach- The approach to the [redacted] IDM upgrade is to build new environments alongside all the existing environments for Dev/Test, SIT-B, UIT-B, SIT-A/UIT-A and Production. The Certificate Authority (CA) user directory and postgres database will be backed up and restored from the existing CA server to the new server. The cutover will involve re-pointing the servers in DNS to the new servers. The existing CA servers will be decommissioned once the new CA has been proven to provide all the functionality of the existing IDM solution.

To enable the IDM upgrade, the following product components as referenced above also require a version upgrade:

- [redacted] servers in scope of this change are virtual servers and are currently operating [redacted] is a central repository of User Credential and User Access Control lists for users in the DCC Ecosystem. To support the new version of the [redacted] suite, the required target versions are [redacted] This upgrade will enable vendor support through to the end of current contract.
- [redacted] -The [redacted] of the servers that currently operate or utilise the [redacted] Software suite are currently [redacted] servers in scope of this OS upgrade are virtual servers. To support the new version of the [redacted] suite, the required target is [redacted]. This operating system will remain in vendor support through to the end of the current contract period.
- CA Servers- The current physical Certificate Authority Servers became end of vendor support in December 2021, these will be replaced with newly procured hardware. The Certificate Authority solution will not be re-architected, instead a like for like replacement will be implemented.

Securing Value for Money

Our negotiations with CGI and subsequent scope revisions have delivered:

1) Consistent monthly service cost. CGI has committed to keep the monthly Fixed Operational Charge (FOC) unchanged following a like for like upgrade i.e., [redacted] per month as mentioned in Table 3 below.
2) Labour efficiency by utilising other teams to provide post migration support costs (reduction of circa [redacted]). This also resulted in reduction of travel expenses and ALM License costs (test tool used by Contractor and other integrated parties. Charges are defined within Schedule 2.7 of the Agreement).
3) Re-use of existing Tech refresh hardware procurement which has enough capacity to support the migration, resulted in reduced Infrastructure 'standard costs' and third-party vendor costs, following reduction in labour costs of [redacted] for Infrastructure Service/Operations.

The tables below show how we have achieved value for money.

Table 11: Value for Money under CR4634

Detail	Price initial (£)	Price final (£)	Variance (between initial & final)	Additional Comments
Setup Labour Cost	[redacted]			Reduction in Labour charges due to 1) Revised labour profile (change in duration of support) 2) Labour efficiency by utilising existing team for Early Life Support Services and by using latest version of software which

Detail	Price initial (£)	Price final (£)	Variance (between initial & final)	Additional Comments
	[redacted]			requires generic support and therefore avoiding more expensive 'extensive external vendor roles (Senior roles)
Setup Expenses (Travel and daily expenses)				Reduction of Travel expenses due to revised Labour profile
ALM Licences				Reduction in license charge due to revised Labour profile
Infrastructure 'Standard Cost' Items				Reduction due to- 1) Incorrect standard rates provided in version 1 which were corrected in the later versions 2) Migration server no longer required since the Tech Refresh hardware had enough capacity, therefore allowing alternate options
Third Party Charges				Reduction in Third Party charges due to removal of Migration Server related procurements, since the Tech refresh hardware had enough capacity to support during parallel run
Third Party: Contingency				Reduction in Third Party contingency due to removal of Migration Server related procurements as per above
Risk Contingency				Risk Contingency was not included in the original price but added in the final version for Contractor to ensure accuracy of third party product technical specifications and their vendor documented version compatibility with other, interacting products required for the Contractor solution
Working Capital Charge				Increase in Working Capital Charges due to revised project timeline (i.e., extended milestone dates since the project commenced from November instead of June 2022)

Detail	Price initial (£)	Price final (£)	Variance (between initial & final)	Additional Comments
Infrastructure Service/Operations (including contingency on 3rd party items)	[redacted]			Removal of charges as they are no longer required due to utilisation of existing infrastructure procured
Total Charges				

Table 12: Initial vs Final Price of CR4634

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

Table 13: Service Charges under CR4634

Charge Type	Existing Service Charges	New Service Charges
Fixed Operational Charges	[redacted]	

Supplier Value for Money Statement from CAN or SoW

The Contractor has committed to ongoing investment in driving value for money for DCC. The following summarises how this investment is delivered through this change (Extract from FIA v5.1 (Section 6.3):

6.3.1 PIT Phase

Primarily, savings in the implementation phase will be seen through reducing the overall price of vendor support by using the latest versions of software – avoiding more expensive 'extended vendor support' requirements in the future, as generic support will be provided for the products rather than tailor-made/extended support agreements.

6.3.2 SIT Phase

Where possible, the scope of SIT has been geared towards use of existing automated scripts as is evident from test volumes in 3.4.6. Manual testing will only be used where automation cannot be used or there is no economic benefit in use of automation.

In the case of this CR4634, there is only a low level of automation possible due to the nature of the testing required. System regression is entirely automated, but the rest of the testing is manual, as the type of testing has not been completed in recent years and therefore has not been automated.

6.3.3 UIT Phase

In order to provide better value to DCC the extent of UIT testing has purposely been kept to a minimum on the basis that the SSI/SSMI functionality will have been principally tested as part of SIT testing and therefore to save DCC money it has not been deemed necessary to repeat much of this functional testing in UIT.

6.3.4 Triage

The expertise found within the Contractor Triage team does not exist anywhere else across the Ecosystem. In turn, Triage is the only resource pot that can deal with a typical technical query as efficiently as possible preventing delays or DCC identifying and sourcing relevant skillset.

In addition to the above, Triage also delivers value by resolving any non-defect issues such as test set up and data configuration and correction in house in turn preventing delays and enabling the testing to progress accordingly. There has been a number of examples of this in previous releases and programmes.

6.3.5 SI Function

A minimal level of SI Leadership has been included which will be supplemented with support from the SI Portfolio team under PR7308

6.3.6 Infrastructure

Introducing additional hardware or software components to the Contractor estate occurs only when required as per the agreed plan, the aim is to reduce and prevent any unnecessary parallel charges during the transition phase. For the legacy hardware or software that is being replaced by what has been procured as part of a change, the Infrastructure Team will decommission any component once authorisation has been provided. Associated Standard Charges will reduce one month after the authorised decommission, third-party charges (licenses, support, renewals) will reduce at the next anniversary date.

1.6.3. CR4563 - CGICAN215 - HSM Upgrade Implementation

Drivers for Change

The reason for the change was to ensure that the network-attached Hardware Security Modules (HSMs), required to run the Data Service Provider (DSP) Services, are replaced with upgraded versions that were fully supported by the relevant vendors. This was necessary as vendor support for the existing version of the network attached HSMs, used by the Contractor to support the DSP Services, ended on 31st December 2022.

Scope of Change

The change covered the upgrade of network-attached HSMs and associated Remote File Servers (RFSs) which are used across the Contractor Solution to provide protection for the DSP Services.

The current HSM architecture is split by security function, with every DSP security function allocated dedicated HSMs. However, following discussions between the Contractor and the DCC security team, it was established that there was scope to share HSMs across different DSP components. This would enable DCC to achieve ongoing Fixed Operational Charge (FOC) savings once the existing HSMs have been removed and replaced from Service.

The upgrade involves:

- Removal of 49 out of 66 existing HSMs which are no longer fully supported by their vendor.
- Introduction of 51 new HSMs that are fully supported by their vendor, to replace the existing HSMs at item 1 and the integration on 36 out of these 51 new HSMs.
- Decommissioning and removal of 10 existing RFSs.
- Introduction of 18 new RFSs to replace the existing RFSs at item 3 and the integration on fourteen (14) of these new RFSs.
- Purchase of 18 licences for other third-party software and hardware that support the above technologies.
- Introduction and integration of the above third-party software and hardware.

The purchase of the new HSMs is not in scope for CR4563 and was agreed under separate Projects:

- PR7274 for the purchase of 45 new HSMs.
- PR7322 for the purchase of 6 new HSMs.

Securing Value for Money

The current HSM architecture (under DSP Solution) is split by security function, with every DSP security function allocated dedicated HSMs. However, following discussions between the DSP and the DCC security team, it was established that there was scope to share HSMs across different DSP components.

DCC achieved savings from procuring less HSMs (reduction from 66 current HSMs to 51 HSMs). By sharing HSMs across separate DSP components, it enables DCC to achieve ongoing FOC savings once the existing HSMs have been decommissioned as mentioned in the table below. Monthly value for FOC savings provided below since the last milestone dates have been revised and currently in discussion between DCC & DSP.

Description	Monthly Value	Fixed Operational Charge Efficiencies
Overall operational efficiencies achieved through reduction of HSMs	[redacted]	Commencing from the date of Achievement of last milestone CR4563.7, until the end of Term of the Agreement (as known at the time of agreeing CGICAN215 i.e., 31st October 2024)
Reduction to Fixed Operational Charge for DCC (since efficiencies shared 50:50 in line with Agreement)		

Procurement savings were achieved under the PR's with which the new HSMs were procured (PR7322 and PR7274) and this CR4563 documents the savings from the reduced FOC.

Further reduction by [redacted]% in total charges for CR4563 was achieved due to

- Reduction in travel expenses by £[redacted]k due to discount provided for the extended project term,
- reduction in third party charges related to Protective monitoring by £[redacted]k
- Working capital charge is calculated for a milestone-based payment and Early Life support (ELS) was initially proposed as fixed fee, moved to T&M billing which reduced the Working Capital cost. However overall Working Capital Cost increased due to extension of the project.
- Due to a change in production deployment phases, the ELS period was minimized resulting in a reduction of total ELS charges by £[redacted]k
- As the HSM upgrade is a 'like for like' replacement, existing Trend Software Licenses were leveraged instead of procuring new licenses.
- Reduction in Infrastructure third party charges due to removal of 6 HSM costs (covered under PR7322 which were inadvertently added and leveraging existing RFS Servers from other DCC programs since the Project timeline was extended. These reductions resulted in additional saving of £[redacted] for the infrastructure third party contingency total charges.

A breakdown of the costs is provided in the tables below.

Table 14: Breakdown of Costs under CR4563

Detail	Price initial (£)	Price final (£)	Comments
Setup Labour Cost	[redacted]		1) There has been an increase in Labour charges by £[redacted]k due to extension in project plan and indexation (v1.0- Mar 22 through Jan-23; v7.0-Aug-22 through Dec-23) 2) £[redacted]k of ELS which was included in the Labour charges (v1.0) to be invoiced on a milestone basis was moved to T&M"
Core DSP Team Setup Expenses - Discounted due to reduced travelling, subject to ongoing review			Extension of total travel expense discount due to change in project plan, resulted in reduced expenses of [redacted]k.
ALM Licences			ALM charges increased due to extension of Project timeline
Infrastructure 'Standard Cost' Items			Standard charges increased due to extension in Project timeline
Infrastructure Third Party			1) Removal of Promon costs (£[redacted]) as these costs would be covered under another CR for Promon 2) Cost of 6 HSM's which were included in v1.0 have been removed as they have been procured under PR7322 (£[redacted]k) 3) Removal of Trend License procurement as these charges will continue under existing FOC
Third Party: Contingency			Reduction in infrastructure contingency for 6 HSM's, since they were procured under PR7322 (as per above)
Working Capital Charge (Exc. Early Life Support & 3rd Party)			Working Capital charges increased due to extension of Project timeline
Early Life Support and expenses (T&M)			1) ELS of £[redacted]k was part of the milestone payment and included in the Labour charges (v1.0). Due to change in production deployment phases, the early life support period was reduced therefore showcasing a reduction in total charges by £[redacted]k (v7.0) 2)Expenses related to ELS support reduced due to reduced ELS period(£ k)
Total Charges			

Table 15: Initial vs Final Price of CR4563

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.6.4. PR7508 - CGI SI - System Regression as a Service

Drivers for Change

System Regression Testing (SRT) is a key component of the testing undertaken by the contractors' System Integration Test (SIT) team for every change to be released into the Production Environment.

Historically, all system changes requiring SIT have included a provision for the effort required to undertake SRT.

The system regression is a daily service provided by a dedicated team in CGI, to ensure value for money and transparency of costs, and eliminate the risk of overcharging. When this service is priced in individual changes, DCC has amended the commercial model for CGI SI SRT services, so that they are managed and funded as a discrete service. PR7508 requests the contractor to consolidate current system regression testing services into one Project with an agreed, fixed, level of Full-Time Equivalent (FTE) resources allocated to the service, to cover all SRT conducted in SIT-A and SIT-B environments.

Scope of Change

The contractor provides SRT as a service, running the SMETS1 and SMETS2 system regression in the SIT-A test environment and the SIT-B test environment every Working Day, operating as a continuous service on both environments simultaneously.

The underlying principle of the SRT service is that it is a fixed-range capacity service, with a stated average minimum monthly test volume. This provides flexibility for the execution in any month to choose the optimum device set configurations and to flex the daily schedule to align with system changes in the environment.

The SRT service maintains a pool of device sets across the SIT environments; and a subset of these device sets is selected for test execution each Working Day. The device set pool provides coverage of the device set configurations that exist in the Production Environment. The pool of devices may be updated as per any agreed device selection process.

The SRT service reports the test execution results to each release that is executing tests within each SIT environment. Each release will continue to take responsibility for presenting to DCC the appropriate SRT results within its reporting regime.

A monthly report and review meeting has been introduced for the SRT service. This service will be terminated once the Test Automation Framework (TAF) solution is up and running and system regression services are migrated to it.

Securing Value for Money

Historically, system regression testing was priced in each individual change that had SIT testing in its scope. Considering that the delivery of the changes could not be precisely coordinated, CGI, in their effort to ensure that they recuperate the costs and margin for the effort of the team delivering the testing, have been overcharging for this service. This became clear when the total of the changes in flight were analysed against the consolidated charge for 5 resources delivering the service.

The consolidated commercial model therefore delivered very significant savings by removing the costs quoted in individual changes and replacing it with the charges for the agreed team of 5 resources in PR7508.

The analysis of the changes which were signed at Impact Assessment stage or known to be issued in RY23/24 at the time of signature of PR7508, demonstrated that the estimated savings from implementing PR7508 are [redacted] for R23/24 alone.

As the volume of changes is expected to continue at similar level, the saving percentage is estimated to continue until the end of the current term of PR7508, which is aligned with the term of DSP Agreement. This is 31st October 2024.

To maximise the value for money and implement the commercial model change correctly, the following steps and processes have been applied for the implementation and governance of PR7508:

- All costs for SRT quoted in signed or unsigned changes, which will be delivered in the term of PR7508, and the way these will be removed from the individual changes or not billed have been listed in the Statement of Work (SOW).
- A monthly reporting process has been agreed and reviews have been held every month to demonstrate the volume of testing.
- CGI provides monthly reports showing the number of tests associated with each change, which is used by DCC Finance to apportion the monthly charge for PR7508 to individual programmes.

A breakdown of the costs is provided in the tables below.

Table 16: Cost Breakdown of PR7508

Detail	Old Commercial Model Price RY23/24 (£)	PR7508 Consolidated Service Model Price RY23/24 final (£)
RY23/24 System Regression Testing Labour (based on changes signed, or in progress at the time of signature of PR7508)	[redacted]	
RY24/25 System Regression Testing Labour up to end of October 2024		
Total Charges		

*Price under the Old Commercial Model for 7 months in RY24/25 has been extrapolated from the value priced in known Changes in RY23/24, with the assumption that the volume of changes would continue at similar levels.

Table 17: Initial vs Final Price of PR7508

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.6.5. PR7538 – CGI DSP – June 2023 SEC System Release - Post-PIT Activities

Drivers for Change

The purpose of PR7538 was to cover the post Pre-Integration Testing (PIT) activities for the June 2023 SEC system release. We have agreed PR7538 is appropriate for a PR rather than a Change Request ("CR") because there would be no enduring changes to the agreement for the provision of data services in relation to the Smart Metering Programme.[1]

Scope of Change

The purpose of this PR is to provide a release wrapper for the CRs listed below, covering post PIT activities e.g. SIT, UIT and Penetration (PEN) testing phases of the release and subsequent System Integration.

[1] The agreement was signed on 9th September 2013 (as amended).

The scope of the June 2023 SEC System Release is listed below:

- MP102b (CR4483) – Power Outage Alerts triggered by an Over-the-air (OTA) firmware upgrade – enduring solution.
- MP125 (CR4425) – Correcting Device Information Electricity Smart Metering Equipment (ESME) Variant, Device Model and Device Manufacturer.
- CR4703 National Grid – Augment recovery scenarios for certificates (Supersedes PR7378).
- CR4427 – Implementation of Additional XML Signing Credentials - enduring Scope (Elements that were not delivered in Nov '22).
- CR4805 – Parse and Correlate for June 23 SEC release.

We required CGI DSP to deliver the following:

- Perform a further integration of the Parse and Correlate software (supplied by Critical Software) as a result of the rectified defect found in the previous release of this software that was integrated as part of PR7465;
- Update the Single Sign on "Interface Type" drop-down screen for "Premise Related Issues" and "Multi-Premise Issues" to include DCC User Interface Specification ("DUIS") v5.2. (This is a requirement for the release to pass through DCC's Operational Acceptance.) Note that this item is expected to be delivered into the Production Environment by the Contractor's Infrastructure team alongside a Low Impact Maintenance Window;
- Update the "DCC Message Failure" SRD with all DUIS versions from DUIS 3 up to and including DUIS 5.2. Note that this item is expected to be delivered into the Production Environment by the Contractor's Infrastructure team alongside a Low Impact Maintenance Window;
- Complete the agreed scope of SIT-B and SIT-A based testing;
- Prepare for, and execute the agreed scope of testing within the UIT environments including Redline Testing and Pre-User Testing Services (UTS) within UIT-B and UIT-A;
- Provision of Test Reports during and at the end of testing to enable demonstration of exit criteria being met and to drive Milestone acceptance;
- Provide appropriate test support within each test phase including triage services and low-level technical support where required;
- Provide Systems Integration services for all DCC Service Providers involved in the release including Release Management and Environments Management;
- Support DCC in transition to operations activities including Business Acceptance Testing, knowledge transfer to BAU services and execution of environment uplifts as part of a co-ordinated deployment event.
- Provision of Early Life Support.

Securing Value for Money

CGI's quotation for the scope of the PR was initially priced at [redacted]. The activity was expected to cover a seven-month period between January 2023 and July 2023.

The scope of work covering June-2023 Post-PIT activities as described in this Statement of Work (SoW) v1.0 included:

- [redacted] days of labour at a cost of £[redacted]
- Expense charges of [redacted]
- 109 Application Lifecycle Management (ALM) licenses over a six-month period totalling [redacted]
- The Working Capital Charges across the nine proposed milestones totalled [redacted]. (This is three times the volume of milestones for a typical Post-PIT release with the sole purpose of reducing the total cost of Working Capital Charges with more frequent milestone payments.)

DCC negotiated reduced expenses charges in 2022 and this continues to save an agreed £ [redacted] per day in Expenses charges from the start of this work in January 2023. At the time of this SoW v1.0 submission, it was not expected travel for the Contractor would change. As such, a £[redacted] saving was factored into the expense charges.

After a significant amount of engagement and challenge from DCC, including dedicated review and feedback sessions, CGI DSP provided an updated Price Breakdown v2.0. This version had a total cost of £[redacted], delivering a £[redacted] or [redacted]% saving against the Price Breakdown v1.0.

In summary, the changes made to this FIA and Price Breakdown version 2.0 for PR7538 included:

- Following the finalisation of the Heatmaps for the June 2023 SEC System Release and DCC challenges to SIT assumptions and resource, updates to test volumetrics tables were made for SIT.
- Following DCC challenges to UIT assumptions and resource and DCC's request to understand which tests are automated and which are manual updates were made to the test volumetrics tables for UIT.
- Reduction in forecast SIT effort and associate expenses and licences due to the updates to test volumetrics.
- DCC proposed adjustments to the payment milestones to reduce working capital charges.
- A reduced Cost Per Test information in the Price Breakdown reflecting the changes to test volumes and SIT effort.

A breakdown of the costs is provided in the tables below (SoW and Price Breakdown v1.0 versus SoW and Price Breakdown v2.0).

Table 18: Cost Breakdown of PR7538

Detail	Price initial (£)	Price final (£)
Labour cost	[redacted]	
Expenses		
ALM licences		
Working capital charge		
Total Charges		

Table 19: Initial vs Final Price of PR7538

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.6.6. PR7810 – CGI – June-24 SEC System Release SIT Preparation Activities & Systems Integration and Operations Board Attendance (SIOB)

Drivers for Change

The purpose of PR7810 was to provide a Release wrapper for June-24 covering the SIT preparation and test execution, UIT test preparation and execution, PIT team and SI Triage team support for integration testing, Systems Integrator co-ordination activities, Systems Integrator Release Management and Environments Management, Transition to Operations (TTO) and June 2024 SEC System Release go live.

Scope of Change

The Post-PIT items listed above covered the functional changes in the Jun-24 SEC System Release, listed below:

CR ref.	CR Title	SIT Team Impacted?	UIT Team Impacted?	AMS Team Impacted?
MP162 (CR4813/ PR7651)	MDR Role Regression testing only as already tested for functionality in SIT	Yes	Yes	Yes

MP178 (CR4837)	Removing DSP validation against the SMI join	No	No	Yes
MP211 (CR4725)	Aligning SMI with the CPL	No	No	Yes
CR4879	Components of Capacity Uplift Associated with Market-wide Half Hourly Settlement (MHHS)	Yes	Yes	No
CR4090	4G Comms Hubs SMWAN Coverage Checker updates to DUIS	Yes	Yes	No

Securing Value for Money

CGI calculated the initial price for PR7810 to be £ [redacted] by CGI DSP. The activity covered a 10-month period between November 2023 and August 2024.

The core work offering covering June-2024 Post-PIT activities as described in this Final Impact Assessment (FIA) v1.0 included [redacted] days of labour at a cost of £[redacted], expense charges of £[redacted] and 50 ALM licenses over the 10 month period at a cost of £[redacted]. There are no Working Capital Charges due to this PR being paid on a Time & Material basis in arrears.

The travel restrictions imposed by UK Government in March 2020 saved an agreed £ [redacted] per day in Expenses charges from the start of this work in November 2023 and is expected to continue for the duration of this PR7810.

DCC negotiated extensively with CGI, challenging its price breakdown, and testing the number of days to be billed against other CRs and PRs. We also held a review and feedback sessions with DCC, CGI DSP provided an updated SoW v2.0 and accompanying Price Breakdown v2.0. This version had a total cost of £ [redacted] delivering a £[redacted] or [redacted]% saving against the SoW v1.0 and Price Breakdown v1.0. In summary, the changes made to this SoW version 2.0 for PR7810 resulted in savings in the following areas:

- Reduction to the effort estimate for the PIT Environments team.
- Reduction to the PIT Design Team effort.
- Update to the SI PPM Level 5 effort to leverage synergies with November 2024 release.

The major savings came from the reduction of the effort estimate for the PIT Environments Team and the reduction of the SI PPM level 5 effort. The combined reduction in effort for the PIT Environments Team were 13 days at a cost of £[redacted] The reduction in effort for the SI PPM role were 39 days at a cost of £ [redacted].

The labour charges in this Price Breakdown v2.0 reduced by [redacted] to [redacted] (down [redacted]%). Expenses reduced by [redacted] to £[redacted] (down [redacted]%). The volume of ALM licenses remained unchanged at 50 licences. The PR rate card discount reduced by £[redacted] to [redacted] (down [redacted]). The PR7810 Contingency charge reduced by [redacted] (down [redacted]%) to £[redacted] The total reductions achieved for the core June-24 Post-PIT activities was a reduction of £ [redacted] (down [redacted]%) with the total charges having reduced from [redacted] to [redacted]

A breakdown of the costs is provided in the tables below (SoW v1.0 versus SoW v2.0).

Table 20: Cost breakdown of PR7810

Detail	Price initial (£)	Price final (£)
Labour cost	[redacted]	
Expenses		
ALM licences		

Sch 7.1 PR rate card discount	[redacted]
PR7810 contingency	
Total Charges	

Table 21: Initial vs Final Price of PR7810

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.7. Dual Control Organisation (DCO)

1.7.1. Introduction

The SMETS1 Dual Control Organisation (DCO) is an application that sits at the heart of SMETS1 security and is fundamental to providing a stable and secure platform for the 11.6 million SMETS1 meters on DCC's network. It is designed to help detect if a SMETS1 Service Provider (S1SP) is compromised and to prevent mass meter attack, using anomaly monitoring and cryptography. It provides Key Management and a 'Detect and Prevent' mirroring service to remove the SMETS1 Service Provider (S1SP) as a single point of compromise for SMETS1 smart meters, enabling a stable and secure platform for the SMETS1 service.

The service is supported by three contracts, and delivered by [redacted] and [redacted]

- [redacted] (DCOa) – providing Service Management functionality as the Application Network Support Organisation (ANSO).
- [redacted] (DCOb) – providing Application Support including support for bespoke DCO application, Commissioning Party (CP) application, Interoperability Checker (IC) and Representative Test Environment (RTE).
- [redacted] (DCOc) – providing Applications and Hosting for the DCO and CP applications.

Due to Ofgem's scrutiny in RY22/23 of DCC's successful actions to urgently replace [redacted] and subsequent correspondence relating to DCC's plans to exit [redacted] from the supply chain, we are including a comprehensive section in this year's Price Control submission as below.

Following the work to transition the hosting services from [redacted] to [redacted] in late summer of 2022, activities in RY23/24 were focussed on finalising a number of CRs to introduce changes which were not possible to include at the time of the initial transition. Furthermore, DCC sought to rebaseline the contracts with [redacted] and [redacted] given the need for both Service providers to work together in order to deliver the Service outcomes DCC required for both DCO Hosting and Service Management.

At the end of 2022, following industry consultation, the end date for SMETS1 migrations and the decommissioning of the Requesting Party Services were moved out to 31 March 2024.[1] During this period DCC needed to make changes to the service, both contractual and resource-related, from the three Service Providers and manage them in our standard manner.

The sections below provide a comprehensive description of the contractual changes in RY23/24 with each of the three DCO service providers.

As Ofgem will know we also initiated work in RY23/24 to [redacted] reprocure the services. Because of the differing contract expiry dates for the three service providers (as per the table below) we have already issued Termination Assistance to [redacted] while we procure its replacement and exit it from the supply chain. In parallel, DCC

[1] It has since been extended again by DESNZ, out to December 2024.

commenced the Business Case work to allow for the reprocurement of all three of the DCO Services. Our plans have received non-objection from DESNZ.

Table 22: Current contract end dates for each of the three Service Provider Contracts

Supplier	Current expiry date	Termination Assistance Period
[redacted] (DCOc)	31 Mar 2024	Maximum of 16 months. Started 1 April 2024
[redacted]	31 Oct 2024	Maximum of 24 months
[redacted] (DCOb)	31 Oct 2024	Maximum of 24 months

The sections below set out the incurred costs in RY23/24 per service provider, and where appropriate, a comparison with RY22/23.

1.7.2. [redacted] (DCOc)

[redacted] continues to provide the hosting for the DCO and CP applications as part of their Hosting Shared Service.

[redacted] Costs for RY23/24

The costs associated with the operation of the DCO Hosting Services, provided by [redacted] fall into two categories of spend, further set-up activities on the back of the Services going live in 2022, and Operational Costs. The set-up costs cover the design, build and test activities prior to the change going into live operations. Further detail on each CR/PR is explained.

The RY23/24 costs of build and run are set out in the table below.

Table 23: Build and run costs of DCOc

Charge Type	Charge £m
Projects costs	[redacted]
Operational / Enduring costs	

Project costs

The overall RY23/24 project costs incurred with [redacted] across DCO activities are as below:

Table 24: Project Costs of DCOc

Project costs	Charge £m
[redacted]	

Project costs	Charge £m
Total	0.674

We explain the main CR and PRs technical refresh activities across the three DCOs in section 1.7.4.

Operational / Enduring Charges RY23/24

The further breakdown of the [redacted]m Operational Charges is set out in the table below:

Table 25: Operational charges of DCOc

Charge Type	Charge £m
Primary DCO / CP Hosting	[redacted]
Secondary DCO / CP Hosting	
Updates to the Service related to CIVET for CR4908 & CR4907	
Updates to the Service related to the introduction of Ticket Management between [redacted]	
Annual Indexation at 8.7%	
Various smaller changes	
Total	

- DCO & CP Hosting: As with RY22/23, [redacted] charge DCC monthly for the provision of the DCO & CP Services in the primary data centre and also those in the secondary data centre. These core Operational Charges combined to [redacted], compared to [redacted]m incurred in RY22/23, noting these charges were only charged for the final 9 months of the period.
- CR4908 & CR4907: These Contract Changes, which were included in CAN048 with [redacted] were to add the following:
  - CR4907: setup of QRadar and Yum servers, restriping of Spring Park Hardware Security Modules (HSMs) and documentation of Striping for Cody Park HSMs.
  - CR4908: setup backup services for two hundred forty-four (244) servers across Cody Park and Spring Park, increase in server Virtual Central Processing Unit (VCPU) Gitlab upgrades, removal of disk space on Virtual Machines (VMs) for Smart Meter Key Infrastructure (SMKI), addition of 215GB to VMs for SMKI.
- Indexation: As per the provisions under the contract, the parties agree to the application of indexation at a rate of [redacted]% on Operational Charges, which were agreed in November 2023.
- CR5085 / CAN046: The Contract Change was to introduce ticket logging between [redacted] to aid the resolution of incidents. The one-off, milestone value of this Change was £ [redacted]
- There were a number of smaller Contract Changes which together amounted to an uplift in the Operational Charges of [redacted]k.

Operational / Enduring Charges RY22/23 and RY23/24 Comparison

The table below compares the Enduring Charges between RY22/23 and RY23/24:

Table 26: Enduring changes of DCOc

Charge Type	RY22-23 Charge £m	RY23/24 Charge £m	% Variance
Operational / Enduring Costs	[redacted]		
Primary DCO / CP Hosting			
Secondary DCO / CP Hosting			
CIVET			
Annual Indexation			
Various smaller changes including ticket management			

Although we are providing comparisons between the two reporting years, we would emphasise that a direct comparison to the RY22/23 was dominated by the Fixed Charges of the service, which were only for part of the year.

Securing Value for Money

Ensuring that the charges for the hosting of the DCO and CP solution constitute value for money is a continuous task. In-line with DCC's Corporate Objective to realise cost savings across all contracts, the subject is regularly broached in collaborative forums with the supplier. As a result of this, DCC have achieved a cost reduction and there are also additional prospective savings which could be made in the future.

Following the recent review of the DCO and CP costs, there was a joint assessment of all Change Requests relating to the solution. A specific item was identified which had been delivered but had not been billed. In the interest of cooperative working and maintaining our professional relationship, it was agreed between DCC and the supplier that the Change would be closed. DCC will not see any cost whatsoever for this; the supplier has absorbed the costs within the account. The result of this exercise was a cost reduction of approximately £ [redacted]k in one-off charges.

There is also an ongoing, in-flight initiative to 'streamline' the asset profile relating to DCO and CP. This has been kicked off with the supplier, beginning with an audit of the assets stored in each of the Data Centres. By doing so, it has become apparent that there are several items which are stored but are currently powered down. Each of these items, be it a Hardware Security Module (HSM), Network Switch, Router etc., continue to incur an expense to DCC. Initial estimates suggest that the cost reduction will be approximately [redacted]k per contract year.

1.7.3. [redacted] (DCOb)

[redacted] continues to provide the Application Support Service for the DCO and CP applications.

[redacted] Costs for RY23/24

The costs associated with the operation of the DCO Application Support Services, provided by [redacted] fall into two categories of spend, further set-up activities on the back of the Services going live in 2022 and Operational Costs. The set-up costs cover the design, build and test activities prior to the change going into live operations.

The RY23/24 costs of build and run are set out in the table below.

Table 27: Build and run costs of DCOb

Charge Type	Charge £m
Project costs	[redacted]

Charge Type	Charge £m
Operational / Enduring Costs	[redacted]

Taking each of these in turn, further details on the respective spend in each of the categories is set out below:

Project costs

The overall RY23/24 costs incurred with [redacted] across activities below:

Table 28: Project costs of DCOb

Type of Cost: [redacted]	Charge £m
[redacted]	

Operational / Enduring Charges RY23/24 in detail

The further breakdown of the £[redacted]m Operational Charges is set out in the table below:

Table 29: Operational charges of DCOb

Charge Type	Charge £m
Core DCO charges	[redacted]
Core CP charges	
Load Injectors and other changes	
Total	

- Core DCO and CP charges: These core Operational Charges for DCO and CP combined of £[redacted] compared to [redacted] incurred in RY22/23.
- Core Interoperability charges: To assist the Citizens Advice Bureau (CAB) in the development of the consumer-facing Interoperability Checker Service in accordance with the SEC, the DCC is required to provide a working, improved API that delivers valid data to the developers. This was agreed in 2020 and the support from [redacted] is still required until the end of the contract.

- Support for MDUST: Various PR's have been raised for [redacted] to provide support for MDUST FOC for [redacted] service only in UIT. While there is no functional impact on DCO or CP, [redacted] are required to support the MDUST test service. Support needs to be in place to deal with any issues that may arise during the MDUST testing activities carried out during this period. This support cost was not expected for as long as it has, with the change being commissioned on a quarterly basis, which then gets renewed.
- Load Injector charges and other changes: These charges consist of expenses for an event which [redacted] have travelled to and the monthly Load injector charge under PR7190 which was used to commission the developed of the injectors in 01/07/2022.

Operational / Enduring Charges RY22/23 and RY23/24 Comparison

The table below compares the Enduring Charges between RY22/23 and RY23/24:

Table 30: Enduring Charges of DCOb

Charge Type	RY22-23 Charge £m	RY23/24 Charge £m	% Variance
Core DCO charges	[redacted]		
Core CP charges			
Load Injectors and other changes			
Total			

As per the above, the Enduring charges remained broadly the same between the two RYs, however noting that indexation would be included in RY23/24.

Securing Value for Money

As noted above, value for money is evident from the flat nature of charges, despite inflationary pressures. As one of DCC's key suppliers, to illustrate this point [redacted] remains committed in providing an efficient level of support service to MDUST through specialised support. Their service to the DCC and our MDUST test partners uses only a single software engineer, despite the need to cover two large and different systems (DCO and CP) and does not include management effort or infrastructure costs, which would be common with the provision of a service.

Additionally, [redacted] where possible when estimated effort to cover attendance and preparation of meetings and workshops with the DCC and [redacted] they have excluded those costs and created savings for DCC.

1.7.4. [redacted] (DCOa)

[redacted] continues to provide the Application Network Support Organisation (ANSO) or Service Management Service

[redacted] Costs for RY23/24

The costs associated with the operation of the DCO Service Management Services, provided by [redacted] fall into two categories of spend, further set-up activities on the back of the Services going live in 2022 and Operational Costs. The set-up costs cover the design, build and test activities prior to the change going into live operations.

The RY23/24 costs of build and run are set out in the table below.

Table 31: Build and Run costs of DCOa

Charge Type	Charge £m
Project costs	[redacted]
Operational / Enduring costs	

Project costs

The overall RY23/24 costs incurred with [redacted] across activities below:

Table 32: Project Costs of DCOa

Type of Cost: [redacted]	Charge £m
[redacted]	

We explain the main CR and PRs technical refresh activities across the three DCOs in section 1.4.

Operational / Enduring Charges RY23/24 in detail

The further breakdown of the £13.842m Operational Charges is set out in the table below:

Table 33: Operational Charges of DCOa

Charge Type	Charge £m
Core DCO charges	[redacted]
Core CP charges	
Other smaller changes	

Charge Type	Charge £m
Total	[redacted]

- Core DCO and CP charges: These core Operational Charges for DCO and CP combined of [redacted]m compared to £[redacted]m incurred in RY22/23, noting these charges included [redacted] hosting charges which stopped once the hosting provision was live and operational with [redacted]
- Support for MDUST: The original timeframe for the MDUST service was from November 2019 to end October 2020, however this has been extended until 30 June 2024 for [redacted] to provide test support in the UIT environments, with another change request out to support till end of September 2024 due to delay linked to migrations with [redacted]
- Updating CIVET design documents: These costs relate to updating design documents which were necessary when moving from [redacted] and with the re-baselining of their Agreement.
- Other changes: These include various changes and relief notices due to external factors, which meant [redacted] could not meet their contractual obligations and sought to extend project timelines, resulting in additional costs for DCC.

Operational / Enduring Charges RY22/23 and RY23/24 Comparison

The table below compares the Enduring Charges between RY22/23 and RY23/24:

Table 34: Enduring Charges of DCOa

Charge Type	RY22-23 Charge £m	RY23/24 Charge £m	% Variance
Operational / Enduring Costs	[redacted]		
Core DCO charges			
Core CP charges			
Other Changes			

The main increases are accounted for by the application of indexation for the period. Part of the DCO / CP Charges include both fixed and variable elements.

It is clear from the other charges set out in the above table that CIVET charges dropped off significantly, which is expected due to the transition from [redacted] to [redacted] taking place in in RY22-23.

Securing Value for Money

In order to keep resource costs to an optimal level, [redacted] has sought to mutualised resources across the DCC project portfolio of work. [redacted] has also achieved cost optimisation through the use, where possible of utilising offshore resources.

1.7.5. Project and Change Requests

DCC has a SEC licence requirement to run the DCC IT Eco System on supported code. Choosing not to upgrade any of these DCO components would've put the network and platform at risk, particularly, the key risk was if DCC had been notified by the UK Cyber Security centre of a zero-day event on any of the unsupported code, vendors and service providers would not be in position to support the resolution, this would result in having to take the platform down with the consequential loss of communications to the 12m plus SMETS1 Legacy devices.

1.7.5.1. DCO [redacted] replacement [redacted] (CR4439, PR7754)

[redacted] is an application used within DCO. The application was due to become end of life and therefore become unsupported. Therefore, DCC needed to upgrade to [redacted] It is a DCC Licence obligation to ensure all systems and software remain supported Continued operation of this software poses extended security, regulatory and other potential technical risks to DCC.

Table 35: Costs of [redacted] Upgrade

[redacted] Upgrade (CR4439, PR7754)	23/24 (£m)
[redacted]	

Consistent with our approach for material External Costs, PR7754 are both [redacted] greater than £1m and have been included here with a full description, rather than in Section 1.7.

[redacted] costs were required to cover installation and configuration of VMs, procurement of HSM licenses and support from [redacted] - all required for the [redacted] Replacement project.

Drivers for Change

DCC are wanting to move towards Java 17 for the Dual Control Organisation (DCO), due to the previous versions going end-of-life and also for the improved functionality that this brings. Moving to Java 17 has a consequence for the current application server software used in the DCO Solution which is [redacted], which unfortunately will not support this higher software version of Java and as a consequence will need to be replaced by different software product. Any replacement to [redacted] would ideally also be Open-Source Software, due to its widespread supportability and price point.

As part of this instruction, The DCC's requirement is for any Open-Source Software to have an active and robust support community, and to take advantage of improved features like better development mode and ahead of time compilation to native binaries using GraalVM. As such to allow the DCO to have a more robust support model, the DCC is seeking to move away from [redacted].

Scope of the Change

Originally DCC embarked on this change route through CR4439 back in August 2021, which included support from the two main impacted Service Providers:

- [redacted] as the provider of the DCO Application who would be responsible for the development and early-stage testing; and
- [redacted], as the DCO Application and Network Service Operator for activities and regulatory testing, in addition to early life support.

In order to allow the DCC more time to decide on their release strategy. Some elements were removed from the scope and allowed the change to move from a Change Request (CR) to a Project Request (PR), with a final CR being required to effect these changes into the respective agreement of both service providers, in terms of DCC Requirements (Schedule 2.1) and Contractor Solution (Schedule 4.1).

DCC raised PR7754 back in the summer of 2023 to cover the following phases of work:

Service Provider	Phase 1	Phase 2
[redacted]	• Delivery of the DCO Application (using [redacted] & Java 17), Codesafe code, tools, design and • Test documentation to [redacted] and DCC	• Provide support to [redacted] UITB-2 activities, including support for performance testing activities, configuration migration activities, triage activities, bugfixes activities, improvement activities. • Support to Regulatory Testing in SIT/UIT. • Early Life Support.
[redacted]	• Conduct PIT testing	• Conduct activities in UITB-2 activities, including support for performance testing activities, configuration migration activities, triage activities, bugfixes activities, improvement activities. • Conduct Regulatory Testing in SIT/UIT. • Provide Early Life Support.

A subsequent and final phase (3) would via a CR cover of the operational support of these changes. Given the time required to deliver the work under the PR and the term end dates for both [redacted], a CR has not able to be raised.

Additionally, [redacted] will also cover the following under PR7754 – upgrades to the Hardware Security Module (HSM) Firmware & Security World software.

[redacted] - Securing Value for Money – Phase 1

Through DCC's efforts a 37 per cent cost reduction/avoidance was achieved in several ways:

- Resourcing model.
- Migration model.
- Configuration manager.

We take each of these in turn below.

Resourcing Model

Early in the conversations for this change (before the first submission from [redacted]) the DCC challenged [redacted] on how they could provide value for money in their resourcing model. [redacted] suggested that the project costs could be reduced by sharing the resources from the ongoing SMETS1 enduring team. This allowed a cost reduction due to mitigation of onboarding new staff and additional ramp-up, training and knowledge-transfer activities, as set out below. The table below just details the baseline labour charges and does include labour charges for Migration or removal of configuration management.

Table 36: Baseline Labour Cost [redacted] (Phase 1)

Labour Cost – baseline Using new staff	Labour Cost – baseline Sharing with enduring team	Difference (%)
[redacted]		

Subsequently, once DCC received the initial pricing for CR4439 we challenged [redacted] on the structure of the teams across the four work packages, which resulted in [redacted] removing senior engineers in the later work packages. DCC also challenged [redacted] on their use of two teams working on this project concurrently. [redacted] demonstrated that this reduced the overall length of the project and lowered costs. The reduction in cost for the four main work packages between the initial price in CR4439 and the final price in PR7754 was £[redacted] In addition, the Azure expenses

reduced by [redacted] due to shortening of the project. The reduction from the above Labour cost of [redacted] to the start price in the below table of £[redacted] is the removal of the support phase of the project which was moved to V2 of this PR.

Table 37: [redacted] Team Structures

Work Package	CR4439 Original team structure	PR7754 Final team structure
WP0 – Mobilisation	[redacted]	
WP1 – Release 01		
WP2 – Release 02		
WP3 - Release 03		
WP4 – Release 04		
Total		

Migration Model

DCC chose not to adopt the migration upgrade option as it believed that the SMETS1 migrations will not be required when this project reaches completion. This resulted in a cost avoidance saving of £ [redacted].

Configuration Manager

DCC decided upon the removal of the configuration manager, as this will lead to a maintenance cost reduction and overall operational improvement.

The estimation of the cost savings this produces is 12-man days a year in [redacted] resources and approximately £[redacted] reduction per year in Critical maintenance cost, once the upgrade is complete. These cost savings are not contracted but can be used in the negotiations of the re-procurement of the [redacted] and [redacted] of the DCO environment.

In summary for Phase 1, the DCC were able to secure the below levels of efficiency / value for money on this piece of work (which excludes the [redacted] savings made prior to the Initial Price):

Table 38: Savings in Labour Costs [redacted]

Detail	Price initial (£)	Price final (£)
Labour Costs – Baseline	[redacted]	
Labour Costs – Migration *		
Labour Costs – Removal of Configuration Manager		
Azure Expenses		
Total Charges		

*DCC decided not to adopt the migration upgrade option

**Final price excluding the migration upgrade option.

Table 39: Initial price vs Final Price [redacted] (Phase 1)

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

[redacted] – Securing Value for Money – Phase 2

Under Phase 2 the Statement of Work (SoW) submitted by [redacted] provided further savings to DCC through cost avoidance, the scope and therefore associated charges for Phase 2 were for a correspondingly smaller piece of work.

The challenge was made early on to [redacted] in terms of how they would continue to provide further savings for DCC. The strategy DCC followed for this SoW involved retaining the engineers from Phase 1 as they are already familiar with the change so will be retained for the support phase (Phase 2).

This approach significantly reduces the cost of additional ramp-up, training and knowledge-transfer. By eliminating the additional costs associated with ramp-up, training and knowledge transfer that would be required for a completely new support team, we estimate that the overall savings would exceed 12% of the price of Phase 2, amounting to approximately £[redacted] This estimate assumes a two-week effort for every new engineer in the support team.

The support team conducted a number of proactive investigations to anticipate potential issues in Production, therefore avoiding outages and limiting the impact of incidents that could damage DCC's reputation. This strategic thinking positively influenced final pricing for PR7754 Phase 2. By focusing on both cost efficiency and technical excellence, [redacted] ensured that DCC received the best possible support service, providing true value for money.

Furthermore,[redacted] negotiated a discount from [redacted] which was directly passed on in full to the DCC. This [redacted]% discount on the purchase of the HSM hardware and software, represents a saving to [redacted].

In summary for Phase 2 the DCC were able to secure the below levels of efficiency / value for money on this piece of work:

Table 40: Savings in [redacted] Phase 2

Initial SoW price (£)	Final SoW Price (£)	Difference (%)
[redacted]	[redacted]	[redacted]

[redacted] – Securing Value for Money

Prior to the receipt of the initial Impact Assessment, DCC challenged Capgemini on how they could provide value for money in their resourcing / delivery model. To address this, the Contractor was able to apply resource mutualisation across the portfolio of projects they deliver to DCC, in order to provide an optimal price for DCC and provided a discounted rate on the resources. The level of mutualisation achieved depends on the timeline of the projects being delivered and visibility of upcoming work, so it is not possible to provide a specific value against it. However, for this CR the Contractor has applied resource mutualisation, with the following roles being mutualised:

- Project Manager.
- Hosting Engineer.
- Network Engineer.
- Security SME.
- Platform Engineer.
- PMO.
- Security Manager.
- Acceptance to Run Consultant.

Following these discussions [redacted] submitted their impact assessment with a charge of [redacted], which we are using as the baseline price for this change, but noting the savings from mutualising of resources were already factored in.

DCC took the decision to move the change from a CR to a PR, which allowed the DCC to further review the scope and seek to remove the effort related to providing Continuous Implementation / Continuous Delivery (CI/CD) as well as removing some of the licences relating to CI/CD. As part of these discussions / negotiations further reductions were made to the level of resources being put forward by [redacted].

Below is listed the savings achieved by these efforts.

Table 41: Savings in [redacted] resourcing

Detail	Price initial (£) CR4439	SoW Price (£) PR7754 – Phase 1 & 2
Resource	[redacted]	
Licences		
Total Charges		

Furthermore, revisions to the level of support needed from other third-party suppliers (to cover aspects such as penetration testing) and expenses meant the final price for the PR was £ [redacted].

Overall, the movement from a CR to a PR has enabled the DCC to realise the following savings.

Table 42: Total Charges Capgemini Resources

Detail	Price initial (£) CR4439	SoW Price (£) PR7754 – Phase 1 & 2
Resource *	[redacted]	
Licences / Expenses		
Total Charges		

* These resource costs are after mutualisation, which means the initial charge would have been higher.

Table 43: Initial vs Final Price ([redacted])

Initial IA price (£)	Final SOW Price (£)	Difference (%)
[redacted]	[redacted]	[redacted]

1.7.5.2. DCO [redacted] upgrade (PR7749, CR5121, CR5037)

[redacted] is the OS DCC uses for DCO application. [redacted] comes with both "Full Support" and "Maintenance Support (one or more Phases)" followed by an "Extended Life Phase". Current version [redacted] used in the DCO application is coming to EOL (Extended Life Phase) in June 2024. In order to ensure DCC meet their licence obligations, DCC needs to upgrade to the latest [redacted] before June 24. As upgrading the [redacted] version from existing to the target cannot be achieved through in-situ upgrade, parallel sets of servers will need to be stood up and service migrated from old to new servers. This will be carried out by upgrading database layer, application layer and tooling services used to manage and maintain applications.

DCC Required [redacted] to build servers with the [redacted] in order to implement the upgrade. All environments needed to be upgraded, and tested in parallel before the migration took place. [redacted] upgraded the PIT environment, carried out a full regression suite of testing and supported wider testing. [redacted] built, tested and delivered go-live of all new servers and environments across DCO, CP, PKI.

The table below shows the DCO [redacted] upgrade costs for RY23/24

Table 44: DCO [redacted] Upgrade Costs

DCO [redacted] upgrade (PR7749, CR5121, CR5037)	23/24 (£m)
[redacted]	[redacted]

DCO [redacted] upgrade (PR7749, CR5121, CR5037)	23/24 (£m)
[redacted]	[redacted]
Total	

1.7.5.3. DCO/CP JVM Upgrade (CR4950, PR7695)

As a result of Oracle Java in the DCO Application (in use on the Virtual Machines or JVMs) not being patched since 2020, it failed a recent Penetration Test and as such the vulnerability needed to be rectified. The rectification of this could have entailed either applying the latest patch or replacing the current JVM to address the security vulnerability. Service Providers were therefore requested to impact assess both of these options, which were:

- Upgrade to the latest update / patch of Java v8 on JVMs, which will be available at the time of project start (the latest version was Java 8 update 361 (8u361).
- Upgrade to an alternative development framework (OpenJDK) component which would require a proof of concept (PoC) phase to be carried out, ahead of a full implementation.

The Service Providers considered and shared their respective costs, plans and any other costs that DCC would be liable for (such as licencing charges) as well as the benefits of each option. The best value for money option was option B – Upgrade to OpenJDK. A proof of concept was carried out after which [redacted] completed the upgrades with testing support from other service providers.

The table below shows the DCO/CP JVM upgrade costs for RY23/24.

Table 45: DCO/CP JVM upgrade costs for RY23/24

DCO/CP JVM Upgrade (CR4950, PR7695)	23/24 (£m)
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

1.7.5.4. SQL Stage 1 + 2 (PR7598, CR4966, PR7611)

The DCO application is highly transactional and relies on an in-memory database architecture to process millions of transactions. The databases supporting the DCO application are developed on a number of MySQL cluster and database replication technologies on a base Oracle MySQL v5.7 build and includes specific sub version releases of InnoDB and NDB. The upgrade was to the latest version at time of commencement of the project. As [redacted] are the providers of the DCO application code, their involvement was required to run validation, compatibility, and performance checks in their development environments. Primarily [redacted] upgraded the PIT environment, ran regression tests and provided technical support for [redacted] upgraded the DCO Development MySQL version in [redacted] produced a technical runbook for the upgrade and a full suite of testing.

The upgrade project was split into two stages.

- Stage 1: DCO Dev environment upgrade and test.
- Stage 2: All other DCO environments upgrade and test (UITB2, SITB, UITB, SITA, UITA, PRODA, PRODB).

[redacted] procured, tested and backed up 32 new servers and decommissioned the old ones.

The table below shows the SQL Stage 1 + 2 costs for RY23/24.

[redacted]

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

1.7.5.5. Network Switch (CR5035, PR7601)

There were two sets of switches used for the DCO, CP and PKI environments that were nearing end of life and therefore needed to be upgraded to remain supported by vendors and to ensure DCC was not vulnerable to security breaches as a result of running older, unsupported versions.

- The Cisco 2960 switches have a EOL of Oct23 for software releases.
- The Cisco 3850 switches have a EOL of Oct23 for security patches.

This project required:

1. [redacted] to procure the switches, physically install, host the replaced these devices and provide any run costs associated with the new devices.
2. [redacted] to rack and install, patch the switches, host and test of said devices. Provide any run costs associated with the new devices. A quote to decommission x 8 switches was in scope for this.

The table below shows the Network Switch costs for RY23/24.

Table 47: Network Switch Costs

Network Switch (CR5035, PR7601)	23/24 (£m)
[redacted]	[redacted]
[redacted]	[redacted]
Total	[redacted]

1.7.5.6. Mirantis upgrade (PR7667, PR7594 CR4952 PR7595)

The Mirantis software used in the management environments required an update because the version deployed became end of life. This update is required to ensure stability of the platform and to introduce the latest security patches to the environments. If the upgrade is not undertaken Mirantis will not provide support for environments that are still deployed using the end-of-life version.

The agreed approach was to build a new management cluster in Farnborough data centre using the new version of Mirantis and the engineering support tools used by the teams (e.g. Jenkins, Ansible, Helm etc.). Then, the existing cluster in Corsham data centre was upgraded with the current versions of Mirantis components. No other components or applications in the Corsham data centre will be updated.

[redacted] built 10 servers for the upgrade. [redacted] then built, tested and deployed the upgrade against all servers.

Mirantis upgrade costs for RY23/24 are given below.

Table 48: Mirantis upgrade costs for RY23/24

Mirantis upgrade (PR7667, PR7594 CR4952 PR7595)	23/24 (£m)
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
Total	[redacted]

1.7.5.7. DCO Service / Resource Uplift (PR7655)

Drivers for Change

Prior to DCC and [redacted] finalising and signing the Deed and Restatement of the overall Enduring Agreement, which was achieved on 30th June 2023, the parties agreed to provide the necessary contractual support via a number of Project Requests. PR7655 was raised by the DCC to cover the support required from [redacted] for the period 1st March until the end of May 2023. The period was extended by a further month to take it out to 31st June 2023, to coincide with the final signature of the Deed and Restatement.

The resourcing was to cover the following two additional areas, namely:

- Management Agent - The DCC requested that [redacted] perform a Managing Agent service in support of its contract with [redacted] for the supply of IT Physical Hosting Services.
- Cloud Hosting Change and Loss of Control Plane - [redacted] provision of resource capacity to support the new ways of working with [redacted], with [redacted] needing to work within the constraints of the DCC's and [redacted] processes for the provision of new infrastructure, dashboards and other requirements, where previously these were within [redacted]s control with the previous sub-contractor. Additionally, the scope of this element also included the provision of support (including licencing) for AWS backup.

The earlier PR – PR7563 was commissioned to bring on the resources from [redacted] and work through the additional support required following on from the transition of the hosting services over to [redacted] This covered the work up until end of February 2023.

Securing Value for Money

The table below sets out the charges incurred for this PR:

Table 49: Changes in PR7655

Ref	Description	Milestone Date	Fees value
M001 – Mar23	March 2023 Service charge	31-03/2023	[redacted]
M002 - Apr23	April 2023 Service charge	30-04-2023	
M003 – May23	May 2023 Service charge	31-05-2023	
M004 – June 23	June 2023 Service Charge	30-06-2023	

Table Note: the above charges did include the uplift for indexation which was applicable from 1st April 2023.

As the parties were working through the details as to how the two suppliers ([redacted]) would work through the details of the corresponding procedures, policies and ways of working for the two elements of the service,

it was agreed to minimise the exposure by DCC contracting with [redacted] on a fixed fee basis, rather than on a Time and Materials, as this would result in lower costs to DCC and customers.

Data Communications Company

Centralised Registration Service (Switching Programme)

Version: 1.0
Date: 31.07.2024

Table of Contents

1. Centralised Registration Service (Switching Programme) Cost Centre

Summary

What is this and why is it important?

Faster and more reliable Switching was an Ofgem sponsored programme, set up in 2016, and successfully delivered by DCC and its Delivery Partners. It aimed to enhance competition in the energy market and improve consumers' experience of switching.

DCC's successful delivery of this programme was a significant milestone in the transformation of the retail energy market, which enabled a switching process that is reliable, fast, and cost-effective.

Planned cost reductions generated a financial improvement of 19% between project launch in 2016 and go-live in July 2022. Further, we were able to deliver 24/7 service and support at effectively zero cost as it leverages synergies with the SMETS1 service provision.

RY23/24 activities and costs

We incurred £4.9m of internal costs, reported as a variance to the zero-cost baseline set by Ofgem but significantly below DCC's budget as we have been able to achieve significant synergies in DCC operating this service at an even greater level than assumed in early programme forecasts.

We have also incurred cost on a contract change to the [redacted] Registration & Address Services, a key component of the switching service.

The Central Switching Service (CSS) has processed over 27 million switches successfully since programme go live, allowing domestic consumers to switch within 24 hours, where required, also enabling faster completion of millions of internal supplier migrations through the system.

We have enabled the improvement of switching time from ~21 days to ~4.3 days and we continue to run a stable (99.9% service availability), resilient, 24/7 service, meeting, or, often exceeding its key KPIs.

In line with moving from a programme into service, the first full year has concentrated on refining our solution to ensure we are operating with excellent service availability and maximising customer experience during our interactions. Accordingly, we have successfully facilitated the Switching Address Management Service, which is a key enabler of Faster Switching. DCC have worked closely with the Network Operators to deliver over 800,000 address matches during 2023.

Future activities and costs

The next stage of this service will be to accelerate efforts to drive down costs in line with the budget.

We are currently forecasting £4.5m of internal costs for RY24/25, with a further drop to £3.9m in RY25/26 demonstrating continued cost efficiency for consumers through delivery by the DCC.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline			**RY23/24**	**RY24/25**	**RY25/26**
Total Centralised Registration Service		**£m**	**-**	**-**	**-**
Payroll costs	PR	£m	-	-	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total Centralised Registration Service		**£m**	**4.873**	**4.513**	**3.925**
Payroll costs	PR	£m	2.842	3.033	2.356
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	0.883	0.174	0.184
Internal services	IS	£m	-	-	-
Service management	SM	£m	1.148	1.306	1.385
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total Centralised Registration Service		**£m**	**4.873**	**4.513**	**3.925**
Payroll costs	PR	£m	**2.842**	**3.033**	**2.356**
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-

Accommodation	AC	£m	-	-	-
External services	ES	£m	0.883	0.174	0.184
Internal services	IS	£m	-	-	-
Service management	SM	£m	1.148	1.306	1.385
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the Switching cost centre.

Baseline		**RY23/24**	**RY24/25**	**RY25/26**
Centralised Registration Service Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
(blank)	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
Centralised Registration Service Payroll Costs	**£m**	**2.842**	**3.033**	**2.356**
Commercial and Regulation	£m	0.176	0.137	0.137
Design and Assurance	£m	0.033	0.086	0.086
Finance	£m	-	-	-
Operations	£m	1.565	1.821	1.821
Security	£m	0.131	0.137	0.137
Service Delivery	£m	0.280	-	-
Testing	£m	0.029	0.131	0.131
REC Releases Programme Resource	£m	0.627	0.720	0.043
Variance		**RY23/24**	**RY24/25**	**RY25/26**
Centralised Registration Service Payroll Costs	**£m**	**2.842**	**3.033**	**2.356**
Commercial and Regulation	£m	0.176	0.137	0.137
Design and Assurance	£m	0.033	0.086	0.086
Finance	£m	-	-	-
Operations	£m	1.565	1.821	1.821
Security	£m	0.131	0.137	0.137
Service Delivery	£m	0.280	-	-

Testing	£m	0.029	0.131	0.131
REC Release Management Programme Resource	£m	**0.627**	**0.720**	0.043

1.1.2. External Costs

We incur External Costs on specified subsets of our service providers and explain material contract variations (known as change or project requests – CRs or PRs), which are greater than £1m.

We have one material PR for RY23/24.

1.2. Purpose, Scope, and Structure

1.2.1. Purpose and scope

The DCC successfully delivered the Switching programme on the 18 July 2022, in line with expectations. Following this, we are now operating the Switching service on an enduring basis, where are our focus is the ongoing, live operation of the service and working with stakeholders to enable the end goal of next day switching.

DCC is responsible for the management of its service providers, associated service infrastructure, and ensuring the service interfaces with the necessary industry parties and systems. Part of this will be DCC's ongoing service interfaces with existing service providers who have a role in enabling next day switching.

The service needs to operate 24 hours a day, seven days a week, except for Scheduled Maintenance periods and unplanned outages. The service also must have 99.75% overall availability and 99.99% connection availability over each calendar month, excluding Scheduled Maintenance periods.[1] This is in line with our obligations, and in accordance with our commitment to provide the best outcomes for our customers, and, therefore, their customers. The programme ensures faster and more reliable switching, but also promotes competition in the market, and the subsequent driving down of prices for customers, as well as promoting innovation among energy suppliers.

DCC are proud to have provided a Switching service that has achieved the following milestones:

- 28.5million switch requests (as of end of May 2024)
- Availability across the lifetime of the service of 99.99%
- A total switching success rate across the lifetime of the service of 99.87%
- Average days to switch has come down from ~21 days pre-go-live to ~4.3

Despite this impressive system performance, we are reporting system related performance charges of 100% for RY23/24. To meet the current targets for all service levels under the SIR, DCC would have needed to invest considerable customer money which would not have delivered any additional consumer benefit. For that reason, and in keeping with DCC's licence obligations to remain economic and efficient, we have been unable to meet the service levels detailed within the Switching Incentive Regime in its current form. Please see our Switching Incentive Regime chapter for more details on our performance.

Having moved from a programme, we are now operating as a BAU service. In line with providing a new service, this full first year of the switching service has been concentrated on refining the solution, and delivering a service with the level of availability we have achieved. The next stage of this is to drive down the cost in line with our budget presented at the start of 2023. This is in line with last year's feedback to reduce expenditure in internal costs to drive further value for money.

Accordingly, we have underspent this year in comparison to the approved RECCO budget. Our future costs and scope have also not been contested by RECCO, and from RY24/25, we will see external services spend drop off. Conversely, our cost will go up slightly for payroll of our CTO and Operations colleagues who support the switching service in order to address developments we will need to respond, including potentially reprocuring contracts. In further years, and across other sub-teams, we expect to drive efficiencies in payroll costs.

Key events and objectives driving activity and cost

The Central Switching Service (CSS) is the authoritative source of registrations data in the UK energy market. The system provides the central system for the management of registrations against RMPs (Registerable Meter Points) with which suppliers (and other market participants) can interact (depending on market role). The CSS also provides:

- A comprehensive reporting capability to ensure that service performance is maintained, and market/business intelligence can be surfaced.
- Authoring of Retail Energy Location (REL) address data which is used to improve address quality across the energy industry and minimise erroneous switching because of poor address quality, a key aim of the Faster Switching Programme.

During RY23/24, the CSS has supported over 19 million switches for the benefit of consumers, though 'behind the scenes' the focus of activities has been to ensure continuous improvement to all facets of the switching service, with DCC providing oversight, expertise and assurance of REC and maintenance changes. The following activities of note were undertaken:

- Review of and planning for the implementation of changes (including but not limited to R0080, R0096, and R0169), which are improving robustness of the system and simplifying incident resolution.
- Enhancing the visibility of REL address matching processes and data to support improvements in address matching mechanisms and outcomes. This includes the development and delivery of the Address Quality Plan.
- Applied lessons learnt from last year's single major incident to improve processes and requirements for Switching major incidents supporting the overarching and established existing DCC Incident Management process. Guidance is in place throughout the process, from initial detection and analysis to response and recovery. It covers all post major incident activities, such as remedial activity and post incident review. This is designed for all major incidents including unforeseen scenarios to ensure, without delay, that all correct data is collated, all relevant stakeholders are engaged, and agreed corrective activity commences. This will therefore assist with reducing incident durations and improve incident communications with a better level of detail on impact, investigations, and ongoing actions.
- In-Life changes such as implementing functionality that allows messages to be refreshed for customers to ensure the request to switch suppliers run smoothly and to time, and enhancements to how DCC supports exhaustive testing to ensure the highest quality of functionality is delivered.
- Procurement of a new provider for the DCC service desk starting from RY24/25.
- Partnership with members of the energy industry in developing a solution following R0092 being raised by DCC in RY22/23.
- Delivery of over 800,000 address matches through 94 plus engagement touch points with market participants.

We have improved our engagement and collaboration with industry by chairing forums such as the Switching Operator Forum (SOF) as means to share performance updates, incident, and problem management progress, and effectively use it as a point of collaboration between DCC, RECCo, customers, and Service Providers. We've received some feedback on how we engagement industry via this forum and the sentiment from market participants is for DCC to continue this method of engagement.

The REC change process has also been a key focus of the DCC operations teams with daily involvement in the REC change process, helping to raise, validate, and assure improvements to the CSS through that governance structure. Changes to the CSS through the REC change process aim to improve not only the infrastructure but also user experience, such through enhancements to the CSS' functionality and additional helpful information to be provided at the point of incident raising.

1.2.2. Cost Centre Structure

There are several people working on switching activities from across the organisation, all of whom within different teams within the BAU Operations Cost centres and have their cost recharged into the SDRC Cost Centre alongside any external, contractual, or pass through charges.

The key activities which take place are within the Service Operations Team (SDOC) – primarily in Change and Release, and Service Ownership. There is also a large amount of work undertaken in the Customer Relationship Management teams (SDIN) focused on the relationship between [redacted] and DCC, managing OPR and the address management activity. Finally, our Data Science team (SDTO Cost Centre) work on various reports, which support the OPR and switching service.

1.3. Cost centre variances

Variance by GLs in the RIGs

For annual price control purposes, the Switching Programme has always had a zero baseline, and all costs must be justified through the price control mechanism. The remainder of this section and the following sections therefore describe the drivers for the activities within the Switching Programme.

A breakdown of incurred and forecast costs in price control format is presented in Table 1 below. This maps directly against the Price Control new scope GLs. Payroll costs are explained in Section 1.3 and non-payroll External Services costs are explained in Sections 1.4 and 2.

To note, unlike other Price Control sections, full incurred costs are presented rather than variance from baseline. This is owing to the different nature of the Switching Programme where all costs are reviewed as opposed to project/programme variance. Also note that the Price Control forecast and the RECCo budget are set out a different basis – with the former including committed expenditure only, as well as differences in the staff cost methodology.

Table 1: Variance from the RIGs by GL

	Total Centralised Registration Service			RY23/24	RY24/25	RY25/26
Total Baseline	**Total Centralised Registration Service**		**£m**	**-**	**-**	**-**
Total Incurred	**Total Centralised Registration Service**		**£m**	**4.873**	**4.513**	**3.925**
Total Variance	**Total Centralised Registration Service**		**£m**	**4.873**	**4.513**	**3.925**
	Payroll costs	PR	£m	**2.842**	**3.033**	**2.356**
	Non-payroll costs	NP	£m	-	-	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**0.883**	**0.174**	**0.184**
	Internal services	IS	£m	-	-	-
	Service management	SM	£m	**1.148**	**1.306**	**1.385**
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Variance by Sub-Team

The below table shows the payroll variance by sub-team. This is identical to the incurred cost of each sub-team as we have no formal baseline for the service and, therefore, all incurred cost is a variance. In RY23/24, we have reduced spending on the service since RY22/23, reflecting the fact that we are transitioning into a BAU service and concentrating on making efficiencies in payroll to deliver increasing value for money outcomes for our customers and their customers. Our costs for most sub-teams are generally falling and forecasted to continue to fall, whilst the CTO and Operations team are forecasted to increase over the next couple of years as we react to emerging developments in the service.

Table 2: Programme incurred by Function Teams

Variance		RY23/24	RY24/25	RY25/26
Centralised Registration Service Payroll Costs	**£m**	**2.842**	**3.033**	**2.356**
Commercial and Regulation	£m	**0.176**	0.137	0.137
Design and Assurance	£m	0.033	0.086	0.086
Finance	£m	-	-	-
Operations	£m	**1.565**	**1.821**	**1.821**
Security	£m	0.131	0.137	0.137
Service Delivery	£m	**0.280**	-	-
Testing	£m	0.029	0.131	0.131
REC Release Management Programme Resource	£m	**0.627**	**0.720**	0.043

1.4. Drivers for Variance – Resource

1.4.1. Commercial and Regulation

The Commercial team within this sub-programme performed the necessary contract and supplier relationship management activities with our Service Partners (SPs), including the commercial management of CRs, and worked with the Regulatory team to identify obligations contained within the REC which needed to be included within our SP contracts to ensure compliance. Having identified the changes needed to our contracts with the CSS programme (CSSP), the SSMTP, and the Public Key Infrastructure (PKI) Service Provider, the team negotiated and agreed these changes.

The team also negotiated and agreed required contract extensions for [redacted] and CGI, to provide System Integrator (SI) services for a period post-Go Live and support the CSS/DSP interface respectively. In addition, the Commercial team managed a Performance Recovery Plan with the CSSP resulting from an accumulation of delivery issues. This involved working with the CSSP to agree the nature of the poor performance, agreeing a recovery plan, and then holding weekly progress review meetings to ensure agreed activities were being progressed. This work resulted in improved performance from the CSSP.

The Regulatory team led DCC's input to the development of the enduring REC (Version 3). In this role, the sub-programme team managed DCC's response to Ofgem consultations on the drafting of the REC and provided input to technical specifications and other documents that were included in the enduring REC, including the performance regime, the change management schedule, and the Switching Operator service definition. The Regulatory team also led DCC's engagement with RECCo and the REC Code Manager to define the ways of working between the two organisations post-Switching Go Live ensuring engagement with the appropriate sub-programmes in the working sessions. In this work, the SET sub-programme supported the Regulatory team.

The Engagement team continued to lead engagement with DCC's stakeholders on the Programme. The team completed the final update to the stakeholder engagement approach and plan in April 2022 and then prepared an initial draft of the enduring plan to handover to Customer Operations. Stakeholder engagement included arranging and chairing both formal and informal stakeholder engagement events in response to customer requests, for example on the use of the REL and service management. The team also continued to lead engagement with Parties Under Integration as well as energy suppliers, including both one-to-one meetings and monthly sessions focusing on the feedback from the Programme's E2E Plan Review sessions.

Activities driving change in resource in RY23/24

From the commercial team, an average of 0.3 FTE from Contract Management supported with:

- Owning of five contracts in the Switching Program to ensure governance and change control processes for CRs, PRs, and Extensions are followed, and any disputes, risks and issues are dealt with in an efficient manner, whilst providing support to internal and external stakeholders.

- Ensuring, through negotiations, that we achieve savings and value for money (one such example being saving 9% for the year from negotiating indexation).

- Managing the contract on a day-to-day basis, including ensuring the contractual obligations are met by the Service Provider (including SLAs and KPIs).

- Having specific deliverables to support the programme team to ensure that the Switching Programme was delivered on time and within budget by making sure that all contractual obligations were adhered to, the cost of change was kept in check, and risks were monitored and mitigated.

- Reviewing the Financial Operational costs and responding to audit, governance, and ad hoc queries. Resource profiles were regularly reviewed and where contract change was necessary, particularly where additional resource was prescribed, all costs were challenged, and, where needed, they were denied if not deemed appropriate.

The Contract Manager's role is integral to the programme running well. It is necessary to ensure that all Switching suppliers were delivering against their contract. This entails calling out and managing risks well in advance by monitoring contractual performance, therefore ensuring that technical obligations are met.

A consultancy was used by the Programme to support the review of the REC v.3 updates. External consultants were also procured to deliver an Address Management and Address Matching project ([redacted]). They were procured initially directly by the Switching Programme and then subsequently by the DCC Service Management team. The Contract Manager had no involvement in their procurement but did work with them to help hold the CSS supplier to account and to monitor the address data quality.

From the regulation team, we have had one FTE working on switching, regarding the switching incentive regime. Following DCC raising R0092 'DCC Service Level Agreements for the Switching Incentive Regime' in January 2023, we have been working with our RECCo, Code Manager, Ofgem, and industry colleagues through an extensive solution development phase to ensure the DCC service levels are fit for purpose.

Over the course of an eight-month solution development period (June 2023 - January 2024), six working group meetings took place with representatives from across the energy industry. DCC's final proposal submitted to the Authority for determination on 01 May 2024 was heavily influenced by the working group and impact assessments.

We had a Risk Manager role vacant in RY23/24, as well as a leaver in GRC during the period. These are roles that have been filled already in RY24/25 Our forecast for RY25/26 does not include the small number of staff who will be allocated out to programmes. We anticipate a similar headcount as RY24/25 with an uplift in total costs in line with our pay award rates.

1.4.2. Operations

Since delivery of the Switching programme into BAU in July 2022, the team in Operations is accountable for the BAU running of the switching service. There are various individuals working across Operational functions to ensure resiliency of the system, customer and supplier engagement, and reporting. The equivalent of 15 FTE has been involved in switching from across the Operations cost centres, which has been recharged to the REC budget.

Activities driving change in resource in RY23/24.

- Service Ownership Team (two FTE) – this team worked towards improving customer journeys through providing insights and support to Customers to drive improved performance of end-to-end processes. The team have provided significant support in analysing and resolving customer issues, whilst monitoring Switching performance trends and reporting this out to industry and RECCo.

- Technical Operations Analyst (one FTE) – the equivalent of one FTE across all team members, monitoring DCC networks 24/7, 365 to ensure traffic is flowing as expected and investigating any variations so that Incidents are identified and raised at the earliest point.

- Capacity Management (one FTE) – The Demand and Capacity management team are accountable for ensuring that DCC has the right capacity at the right place and at the right time to service agreed demand from users and industry.

- ITIL Functions (three FTE) – These employees control and schedule all internal changes across the entire service provider ecosystem to ensure they are successfully deployed through release management without causing unplanned outages. They also offer second line support through a dedicated Incident Management team, which acts as the primary escalation point for restoring service during a major incident, prevent repeat occurrences of incidents by performing robust ITIL (Information Technology Infrastructure Library) problem management processes, and ensure all major incidents have root causes. During RY23/24, the incident management team, together with other DCC functions, have taken on lessons learnt and improvement recommendations from industry, and executed the relevant improvements across Operations to deliver an improved customer service during major incidents. This includes a significant amount of training, updated process and run books, improved reporting, and communication.

- Service Architecture (one FTE) – Working within Operational Change and Transition, the team manages service architecture and architectural governance, creating artifacts such as service designs, system data, plans, and ways of working.

- Supplier Relationship Managers (two FTE) – The team is accountable for ensuring suppliers operate and perform in line with their contractual obligations, including: Operational Performance management governance routines, performance recovery plans (where required), supplier service delivery risk management and risk mitigation, change management oversight for any supplier impacting change, both process and contractual (not commercial or procurement).

- Customer Relationship Managers (1.5 FTE) – This team plays a crucial role at the forefront of all operational customer engagements, effectively being the voice of the customer, as well as being the voice of DCC. They are accountable for improving customer experience, advocacy, and engagement. This team also leads and manages all Address Matching engagements with Distribution Network Operators (DNOs), Independent Distribution Network Operators (IDNOs), and other stakeholders across industry and RECCo. The team chair the SOF, which acts as a collaboration platform between DCC, RECCo and Industry.

- Data Science and Analytics (DS&A) (four FTE) - DS&A produce and provide industry with the mandated reporting and commentary. We produce and provide industry with non-mandated reporting and analytical capabilities. The team also underpin data requirements for DCC and wider industry issues to support incident and problem management (as examples), and build and deploy capabilities to support the services provided by DCC to manage licence obligations and any OPR.

One of the key activities which the operations sub-team have been supporting on is Address Matching, a key enabler for faster switching, as it aims to drive a reduction in erroneous switches, as per the original Ofgem business case. During RY23/24, DCC delivered, through its engagement with industry and work with [redacted] See External Services), over 800,000 address matches through circa 94 engagement touch points with market participants who were provided with unmatched data on a monthly basis, together with analysis that helps them understand potential drivers for poor address data quality.

DCC successfully delivered, a month ahead of target, and to quality, the Annual Address Quality Plan (demonstrating how DCC will work with industry to improve Address Quality during RY23/24) through consultation with industry, produced and delivered the annual compliance report, which highlights how DCC have delivered against the plan, which included:

- 94 bilateral meetings held during RY23/24 with each SDP and where appropriate, Suppliers to support them in understanding the data and where they can drive improvements.

- Undertaking regular reviews of address data and raised anomalies with [redacted] and SDPs for correction which facilitated the delivery of improved address match volumes.

During RY23/24, DCC significantly increased our engagement with Customers through bilaterals on Address Management, the Performance Assurance Board (PAB), and the introduction of the SOF, led by DCC.

We now have a standing quarterly slot at PAB where DCC presents an overview of our Switching performance to industry leads.

DCC introduced the Switching Operator Forum, which has enabled collaboration between industry, RECCo, and DCC, especially when there have been incidents that require industry engagement and partnership to help reconcile any issues. This forum has proved to be valuable for both DCC and SDSPs, which have provided positive feedback with regards to being informed and engaged through this forum.

There also have been other forums scheduled with industry on a quarterly basis, usually face to face, to discuss common industry issues broader than the day-to-day business and review the current/future Address Quality Improvements.

In line with the maturing of the service, we created an uplifted design of slides for the switching operator issues forum across all areas of switching Including incident change problem and performance. More detailed breakdowns are now included such as age of oldest problem, split of consumer and supplier initiated switches, incident versus switch request ratio, and future changes to be implemented. The additional information allows industry to have insight into the behaviour of consumers and how change is being delivered or issues resolved to benefit them.

Activities driving change in resource in RY24/25 and RY25/26

Our resourcing requirements will depend on any developments to which we need to respond to.

We're expecting a fairly consistent outlook across DCC Operations within the next two years, with any uplift in resource being used for potential re-procurement of contracts or other. This is on the back of the great work the Ops team have conducted over the year to embed the Switching Service into BAU.

1.4.3. Service Delivery and REC Release Management

The Service Delivery function (SD) is accountable for the delivery of DCC change programmes to time, cost, and quality, and provision of programme delivery services to change initiatives as agreed with the relevant business owner and/or DCC function. Service Delivery encompasses Programme and Project Management, Quality Management, and Business Operations. We bring insights to support planning and resourcing decisions across the SD change portfolio. During RY23/24, we had Service Delivery colleagues assigned to deliver the switching service. These resources then moved out of Service Delivery in October 2023, and into Operations, and more specifically, due to updated time sheeting, moved to the REC Release Management cost line in Operations. Therefore, the RY23/24 costs for Service Delivery and REC Release Management are for the same purposes, split over the year. From RY24/25, the costs are therefore not captured under Service Delivery and are all captured in the Operations line, REC Release Management.

Activities driving change in resource in RY23/24

RY23/24 delivered two changes for the REC service, the main change bringing benefit to DCC Customers who have decided to switch energy supplier but encountered delays due to messages processed within connected systems taking longer than promised, whereby an automated solution to replay those messages without human intervention was introduced and therefore speed up the process behind the scenes.

Activities driving change in resource in RY24/25

RY24/25 has so far delivered three REC changes, the most prominent one relating to the Market Half Hourly Settlements (MHHS) Elexon lead programme. This change ensured that DCC Customers could change their portfolio information through DCC's services in accordance with the obligations of the MHHS Programme. The other changes introduced improvements to interactions with DCC and its Customers via the Service Centre and how testing is planned with DCCs Service Providers. The slight increase in cost for RY24/25 against RY23/24 is due to the MHHS testing and management needs we have and will need to respond to in addition to our normal scope of work.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

During RY23/24, there were three individual procurements within the Centralised Switching Service that had material variance, (i.e., over £0.15 million). During RY24/25 and RY25/26, we forecast two of these procurements will continue to have material variance. The breakdown is provided below.

Table 3: Material Variance for Non-Resource

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement Type
Switching - Address Matching	ES	£m	0.638	-	-	[redacted]
[redacted] - PKI Operational Cost	ES	£m	0.162	0.174	0.184	
Service Desk	SM	£m	1.148	1.306	1.385	

1.6. External Services

1.6.1. Service Management- Service Desk

The Service Centre manages customer queries and issues on a 24/7, year-round basis. We already have a contract with [redacted] to provide these services for SMETS customers, and it was considered a value for money decision to extend this to the switching contract.

Driver for the Procurement

This activity was planned as part of the switching programme, and [redacted] were chosen as they were an existing service provider, with good knowledge of our customers and networks.

DCC's Service Centre acts as a first line of support for all incidents, service requests and queries raised by customers and service providers across all Smart Metering Services, and the new Switching Service. This support, generally, pertains to either; agents using scripted diagnostic and/or knowledge-based tools to resolve issues immediately, or escalate incidents to either DCC or the relevant service provider's second line of support.[1]

Figure 1 below outlines the interaction chain surrounding the Service Centre.

Figure 1: Interaction chains into and out of the Service Centre

[1] [2] Each service provider is required to operate a 2nd line of support service desk to meet their SLAS.

Within this interaction chain, examples of the support the Service Centre provides are outlined below:

- DSMS – Support with day-to-day queries around service provision, such as logging the returns of faulty Communication Hubs (CHs).
- SMETS2 Ecosystem – Routing service users to the second line service desks where queries around the service provider run Order Management Solutions (OMS) cannot be immediately resolved.
- Switching Service – Incident management for Central Switching Service (CSS) queries.

The incumbent service provider for Service Desk is [redacted] who were initially contracted to provide the service from January 2018 to a contract expiry in January 2023.[3] As the end date of this deal approached, DCC chose to extend this contract further on a like-for-like basis for 12-months to January 2024, at a cost of [redacted]m. As part of this extension, DCC also negotiated a further optional one-year extension to take this deal to January 2025, if necessary.

The performance of the Service Centre – and, by proxy, [redacted] as the service provider – is tracked against a set of KPIs, the list of which is available in the Annex. Throughout the contract length, [redacted] has performed to expectation and met all KPIs successfully.

Inclusion of switching

With the CSS going live in July 2022, DCC Operations were tasked with meeting over 100 new obligations under the REC. A series of obligations relate to the requirements and configuration of DCC's Service Management system to handle inbound calls from switching customers. The requirements for the system were built on the following strategic prerequisites:

- It must be able to handle a forecast of 60,000 daily switches as well as suppliers' backlogs
- The service is required to be "separated" operationally and financially from DCC's Smart (SEC) operations
- Switching services must not be compromised by DCC's Smart service operations, and vice-versa

The costs incurred in RY22/23 and forecast for RY23/24 and beyond represent the costs of operational salaries for call centre staff, plus a range of set up and ongoing infrastructure costs, including vetting, telephony licences, and training costs. In RY22/23, these summed to £1.4m.

Going forward, we are in the process of reprocuring the Service Desk/Service Management function for both Switching, and SMETS1 and 2, and envisage the new service when the current contract expires in January 2024. Though, given that the current [redacted] procurement approach is agnostic to onshore or offshore solutions, there is the potential for complications in mapping to these timelines if on/offshoring solutions have to be delivered in separate ways (i.e., offshoring solutions potentially requiring phasing from onshore to offshore). It should be noted that the current contract has the option of a 12-month extension to January 2025, thereby safeguarding continuity of service in the event of any on/offshoring phasing issues.

Securing Value for Money

The overall [redacted] contract was initially procured within our procurement process, ensuring they were the strongest supplier overall at the time. Whilst we have been reprocuring the contract, the [redacted] contract was extended on several occasions. However, it was considered that reprocuring the Service Desk to include a separate Switching service desk would result in a stronger business case and efficiency of scale. Ofgem allowed this cost last year, and the cost of this has not changed materially since.

The DCC Service Centre operates as a contactable support mechanism for smart metering and switching services, providing manual assistance to action, route, and guide service user queries and issues. The service functionality required under the SEC and REC is as follows:

- Provide first line support for SMETS and switching services through:
  - Dedicated email and telephone support provided 24/7.
  - Manual handling/logging of user issues/queries.

- This support aids in-life service delivery requests and incident management from energy customers. To achieve this, the service centre specifically needs to:
    - Offer immediate issue resolution through scripted diagnostics and/or agent led knowledge-based tools and/or scripting.
    - Offer the escalation of incidents to either the DSP or CSP second line service desks if first line support cannot resolve the issue/query.
- Be ready to 'Go-Live' in advance of the incumbent contract expiry in January 2024.

In addition, it is desirable for the provision of the Service Centre to:

- Offer scalability throughout the contract life to adapt the approach to evolving requirements of the service and drive continuous improvements.
- Enable the implementation of the following introductions to the service:
    - Increased automation of the service, providing the opportunity to scale down FTE resources.
    - Re-engineered processes to drive out efficiencies in issue resolution.

Historically, the incumbent supplier has been [redacted] who were previously contracted up to 31 January 2023. As DCC is obliged to provide this service (outlined in section H8.19 of the SEC, and in Schedule 26, Paragraph 6 of the REC), DCC needed to reprocure the service, which was to be done [redacted] through a standard request for information (RFI) to request for proposal (RFP) process.

However, during the pandemic, it became clear that DCC's requirement that Service Desk staff were onsite was not a viable option for alternative contractors. Because of the complications that the pandemic caused, DCC concluded that it was better value for money, as well as least likely to result in non-compliance with the SEC and REC that we extended the existing contract with [redacted] We took this decision in the light of both the costs of the ongoing service, but also its performance, with [redacted] consistently meeting all KPIs and SLAs.

The extension was on a like-for-like basis and was negotiated for an initial 12 months (to January 2024), though with a further 12-month optional extension (to January 2025), while we prepared for a full re-procurement.

1.6.2. [redacted] - Address Matching

Driver for the Procurement

The deliverables and requirements for Address Management were incorporated late into the Switching Service as a CR just as DCC were ready to go live with the Switching Service. Due to this late incorporation, DCC procured [redacted] through [redacted] procurement.

[redacted] were the most cost-effective consultancy, who also were in a position to apply instant knowledge and value, due to their expertise, experience, and involvement in delivering the Switching Programme.

[redacted] proactively managed [redacted] and other risks, issues, and dependencies, holding [redacted] to account against any missed deliverables. [redacted] led sessions with Code Managers regarding targets on parties relating to the execution of activities within the plan. They also took a data led approach for the optimal use of [redacted] resources and used data analysis to identify potential issues with the [redacted] algorithm, systems, and processes. Another advantage was [redacted]'s valued insights on categorisation of Address Records, one benefit of which allowed parties to target their resources on correcting data concerning one type of premises, such as Flats or Landlord supplies, at a time.

The success of the work that [redacted] delivered set up and enabled industry to deliver Address Matching improvements. During RY23/24, [redacted] delivered specialists work, collaborating with RECCO, [redacted], and DCC's Customers, successfully delivering the following:

- Detailed Address data analysis, identifying opportunities for DNOs/IDNOs to gain quick wins in delivering Address Match improvements

- Led engagement with industry, carrying out over 80 bilateral sessions with customers, which enabled DCC to deliver over 800,000 address matches during 2023.
- Delivered the 2023 Address Quality Plan and Conclusion Report (a REC deliverable).
- Supported the reconciliation of 200,000 Switches during a Category 1 incident.
- Ensured address data quality remained above 95% throughout the year. This trend continues as we progress into RY24/2025.

Securing Value for Money

By standardising ways of working, driving efficiencies in internal and external processes and through knowledge sharing sessions (from [redacted] to DCC BAU Operations), DCC will deliver a cost reduction of up to £[redacted] in RY24/25 through the exit of [redacted].

The cost is associated to data analyst resources, whose role is to manually identify mismatched address candidates which are then either corrected and reissued into the CSS or distributed to the DNO's for correction. The team produce monthly reports on the overall performance of Address Management and issue data to all key industry parties who have a stake in improving the address quality, for example the IDNOs, DNOs, Gas Transporters, etc.

1.6.3. Switching – [redacted]

[redacted] provide the PKI for the Central Switching Service. PKI is a technology which provides encryption, authentication, and non-repudiation of CSS messages via the use of digital certificates. This is therefore a fundamental aspect of CSS security, and, without this service, CSS would be unable to verify the authenticity of data submitted and would not be able to ensure the secure transmission of data to and from service users. Therefore, if this service was not place, our system could not be secured which would pose numerous ramifications including the system being unavailable and data being exposed.

[redacted] provide a fully managed PKI service, integrated with the CSS Service Management System. This facilitates seamless and secure certificate lifecycle management (request, delivery, storage, replacement, and revocation) without the need for users to interface with an additional management tool.

Service costs are dependent upon the number of separate environments, and the number of users per environment (with a "user" in this context being equivalent to a unique organisation requesting certificates in that environment). There is also a separate cost element for providing and supporting the interfaces to the CSS Service Management System.

When the service was commissioned, DCC undertook significant engagement with Market Participants, as they all had to request security certificates before they could access the CSS portal.

Driver for the Procurement

DCC looked to engage a tScheme Managed PKI Service for the Switching Programme to support the provision of Transfer Layer Security (TLF) and Signing certificates to the 200 organisations that were envisaged to use the CSS.

The Managed PKI Service provider needed to deliver the core components needed to deliver a PKI for the closed community. The supplier was expected to provide the components below as part of the end-to-end PKI managed service:

- Design and build of the PKI.
- Fully defined Certificate Policy, Policy control, and Issuing CA procedural documents to the support the PKI.
- Four PKI environments: System Integration Testing (SIT), User Interface testing (UIT), Pre-production and post-production.
- High Assurance tScheme1 compliant Root CA, under the complete control of the DCC.
- Full manged service for all PKI components.

- Hardware Security Modules for the protection of CA Private keys, including the location of the Offline Root CA and online environments hosted from a secure datacentre.

Securing Value for Money

DCC originally undertook a [redacted] procurement for this service, having issued an RFP in December 2019, with expressions of interest sought from four suppliers and receiving two submissions.

Prior to this, a market engagement exercise was undertaken to help enable DCC to understand the market better and the type of solutions on offer, improve our procurement process, and refine our requirements and how to present them in a tender. We also engaged strongly with our stakeholders when commissioning the service as all Market Participants had to request security certificates before they could access the CSS Portal.

[redacted] was the highest scoring bidder overall following the submission evaluation, they demonstrated a good understanding of the requirement, and were able to demonstrate relevant experience in the utilities sector, which aligned them well for the requirement. The [redacted] proposal was therefore the best suited and also provided the best value for money, having beat [redacted] on the commercial evaluation where criteria was based on total contract value. They also beat [redacted] on the quality evaluation, having been scored against the following criteria a) delivery 1, b) delivery 2, c) Non-functional requirements, d) outline approach, d) relevant experience, and e) conflict of interest. The contract was for a multi-year service, expiring in February 2025.

Table 4. Summary of procurement approach

Procurement – [redacted]	
Number of Initial invitations to tender	4
Number of Bids received	2
Number of Bids shortlisted / presenting	2
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

1.7. External Costs

1.7.1. [redacted] - CR4967

Drivers for Change

[redacted]) Solutions successfully implemented the Central Switching Service (CSS) and displayed their knowledge and expertise in Address Management.
In RY23/24, the [redacted] Registration & Address Services delivered:

- over 18 million Initial and Changes to Registrations at Gate Closure,
- synchronous responses to over 91 million messages received,
- over 3,600 incidents resolved,
- 13 Problem investigations initiated, and
- 143 operational changes implemented.

The Registration & Address Services are the primary CSS components delivered by [redacted] The Registration service provides the messaging interface for CSS. A bespoke application hosted on a dedicated Microsoft Azure (MS Azure) cloud tenant; it is implemented as a set of Application Programming Interfaces (APIs) which Market Participants call

to initiate message flows. The Registration service generates and issues messages to other Market Participants to ensure industry systems are synchronised.

During certain messaging flows, the Registration service will contact the Address Service (also implemented as bespoke APIs with MS Azure) to ensure there is a consistent mapping of Registrations to Retail Energy Locations (RELs) thereby eliminating address inconsistency, which was a major source of Switching failures prior to the operation of CSS.

DCC undertook an assessment of BAU requirements for the period 1 November 2022 through to 31 December 2023.
[redacted] costs are divided into:

- **Fixed Operating Costs** – this covers the [redacted] operational support of the service, including Incident, Service Request, Problem, Change, Release, Event and Security Management, Capacity, Availability and BCDR management.

- **Pass-Through Costs** – these covers consumption-based charges such as MS Azure costs, OS Address Base (the address gazetteer) licences, and address matching software provided by iDox. In this category, the MS Azure costs in-particular are driven by messaging volumes from CSS users. Throughout RY23/24, a large volume of Switching activity was driven by small number of Market Participants undertaking internal consolidation of their customer estate through Switches.

Securing Value for Money

As a result of DCC's assessment of the BAU resourcing requirements for Registration & Address Services, DCC agreed to revise the Monthly Fixed Operational Charges based on the information provided by [redacted] in its BAU resourcing proposal; dated 23 November 2022. It was accepted that [redacted] would not have the correct resources in place to effectively deliver the increased scope of service without an uplift to the number of full-time employees (FTEs), therefore the CSS would not be sufficiently managed.

As part of the review, [redacted] Solutions proposed the introduction of a 'Continuous Improvement Team' who's focus would be on the following activities:

- Implementation of Support Desk ticket reviews, to filter service desk tickets to all DCC License users, including Distribution Network Operators (DNOs) and energy suppliers to speed up resolution.
- Implementation of a new Technical Support team (five FTE) to provide more efficient first line triage resolution without the need to refer to the developer/development operations team.
- Increased resourcing of pro-active improvement team, with dedicated cloud estate management review resource and internal security manager

As part of DCC's assessment actively challenged the level of proposed FTEs whilst also challenging the respective grading of staff against the prescribed rate card. This secured a reduction of £[redacted]. This expertise could not be provided internally.

A breakdown of the costs is provided in the tables below.

Table 5: Initial vs Final Price

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

In parallel to the DCC review, [redacted] reviewed the overall resource needs to support all operational activities and oversee its BAU operation. Furthermore, as part of its investment in the BAU operation, [redacted] agreed to fund a number of these roles fully or partly during the period from 1 November 2022 through to 31 December 2023 as part

of its commitment to deliver improvements in its operational relationship with DCC and align service support with longer term expectations of resource needs as BAU settled down into a normal operating cadence. [redacted] also agreed to absorb all internal costs for the Phase 2 / BAU team from 18 July 2022 to 31 October 2022, which were over and above the previous Fixed Operational Charge that was in place prior to the agreement of CR4967.

In other value for money efforts, DCC are standardising ways of working and driving efficiencies on how we run this service which have enabled DCC to significantly reduce costs by £ [redacted].

DCC are also working with the Performance Assurance Board (PAB) and DNO and Supplier representatives to identify what good looks like, in relation to Address Matching when compared to other market leaders. This will help in establishing, strategically, the effort, resource and cost, required to keep this service going.

1.8. Switching Incentive Regime (SIR)

Details of the SIR can be found in 5.Perf_Switching_incentives_RY2324.doc.

Data Communications Company

Network Evolution:

4G Communication Hubs and Network

Version: 1.0
Date: 31.07.2024

Table of Contents

1. 4G Communication Hub & Networks (CH&N)

Summary

What is this and why is it important?

The 4G CH&N programme is driven by a government-directed change in mobile networks. Smart metering is currently based on second and third generation (2G/3G) cellular networks and this technology is now being gradually phased-out (known as sunsetting).

Without the upgrade, we will not be able to support Government and Ofgem in providing smart coverage to all eligible premises, and many meters would cease to provide smart functionality. Given the short window to swap out existing meters, the successful and timely delivery of our next generation 4G Communications Hubs (CHs) is critical.

This is a significant programme of work which has involved four key delivery suppliers and two assurance partners as well as a DCC team to design, build, and test a custom solution that can meet the needs of the GB energy market. The programme is reliant on the highest level of expertise across all functional areas both within DCC and in the supply chain.

RY23/24 activities and costs

RY23/24 forms the peak of activity for the design and build phase of the programme with internal costs of £9.6m (driving a variance of £9.5m to Ofgem's very low baseline of £0.1m).

Costs incurred comprised payroll, testing support and expert external advisors across financing, contracts and programme assurance. The payroll cost covers highly experienced programme team to carry out the essential work of planning, coordinating, managing and assuring the outputs from each of the supplier delivery partners.

The CH&N programme has now successfully completed Product Integration Testing (PIT) and Component Integration Testing (CIT) and has started System Integration Testing (SIT) and will continue to be a key focus area for DCC as we progress through the joint industry implementation plan.

Future activities and costs

We have completed the design and build phases of delivery and begun the test phase. We remain on track to deliver the initial roll out in December 2024.

Following the design and build phase peak in RY23/24, costs will start to decrease in RY24/25 (and further decreasing to £1.5m in RY25/26) as resourcing reduces in line with the completion of our delivery phases, and transition to enduring operations.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control GLs.

Baseline			RY23/24	RY24/25	RY25/26
Total CH&N		**£m**	**0.118**	**0.116**	**-**
Payroll costs	PR	£m	-	-	-
Non-payroll costs	NP	£m	0.118	0.116	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total CH&N		**£m**	**9.597**	**7.621**	**1.484**
Payroll costs	PR	£m	7.427	5.434	1.417
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	2.170	2.187	0.067
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total CH&N		**£m**	**9.479**	**7.505**	**1.484**
Payroll costs	PR	£m	**7.427**	**5.434**	**1.417**
Non-payroll costs	NP	£m	-0.118	-0.116	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**2.170**	**2.187**	0.067
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the CH&N programme.

Baseline		RY23/24	RY24/25	RY25/26
CH&N Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
CH&N Payroll Costs	**£m**	**7.427**	**5.434**	**1.417**
Commercial and Regulation	£m	0.785	1.194	0.273
Design and Assurance	£m	0.623	1.252	0.159
Finance	£m	0.000	-	-
Operations	£m	0.706	0.918	0.730
Security	£m	0.327	0.344	0.000
Service Delivery	£m	3.946	1.727	0.255
Testing	£m	1.040	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
CH&N Payroll Costs	**£m**	**7.427**	**5.434**	**1.417**
Commercial and Regulation	£m	**0.785**	**1.194**	**0.273**
Design and Assurance	£m	**0.623**	**1.252**	**0.159**
Finance	£m	0.000	-	-
Operations	£m	**0.706**	**0.918**	**0.730**
Security	£m	**0.327**	**0.344**	0.000
Service Delivery	£m	**3.946**	**1.727**	**0.255**
Testing	£m	**1.040**	-	-

1.1.2.External Costs

We incur External Costs on specified subset of our service providers and explain material contract variations (known as change or project requests – CRs or PRs), which are greater than £1m.

We have three material CR/PRs for RY23/24.

1.2. Purpose, Scope, and Structure

The 4G CH&N programme is a large and complex change to DCC's systems. DCC has ultimate responsibility for delivering the upgrade of its network and, as such, there is a significant amount of work to be carried out by DCC colleagues. The 4G service is significantly different to the 2G/3G service that is currently provided in the central and south region. To provide a more economic and efficient service to customers and consumers, DCC has opted to provide a disaggregated service model. This requires DCC to manage suppliers directly. Previously, within the 2G/2G service, the design, provision, and management of services was carried out by a Communications Service Provider

(CSP), currently VM02. The existing 2G/3G networks, in use in the south and central regions, have been superseded by the introduction of 4G networks, with 5G on the horizon.

In December 2021, the Department for Digital, Culture, Media, and Sport (DCMS) announced that 2G and 3G services will not be offered in the UK after 2033 at the latest. Therefore, the DCC will need to anticipate and upgrade its communications provisions so that smart meters would continue to function. In upgrading its systems to 4G, the DCC has taken the decision to move to a disaggregated solution, comprised of individually procured components. This was identified as the most economically efficient model for customers and consumers. This DCC decision has enabled the programme to be delivered at significantly lower cost than the 2G/3G model that uses a CSP to manage the component elements of the service.

The disaggregated model requires DCC to play a much large role in the design, build, test, and eventual operation of the service than it is required to do for 2G/3G services. The 4G CH&N programme has required the design and build of 4G CHs, a 4G data gateway to the Data Service Provider (DSP), 4G Wide Area Network (WAN) services, and a new Device Management System. This is a complex arrangement, but, by adopting a disaggregated service model, the DCC will be able to serve customers and consumers at a significantly lower cost than a CSP model. As set out in our Full Business Case (FBC), this will realise savings of £466m compared to our existing 2G/3G model. This underlines our commitment to providing value for money in delivering our secure and stable service.

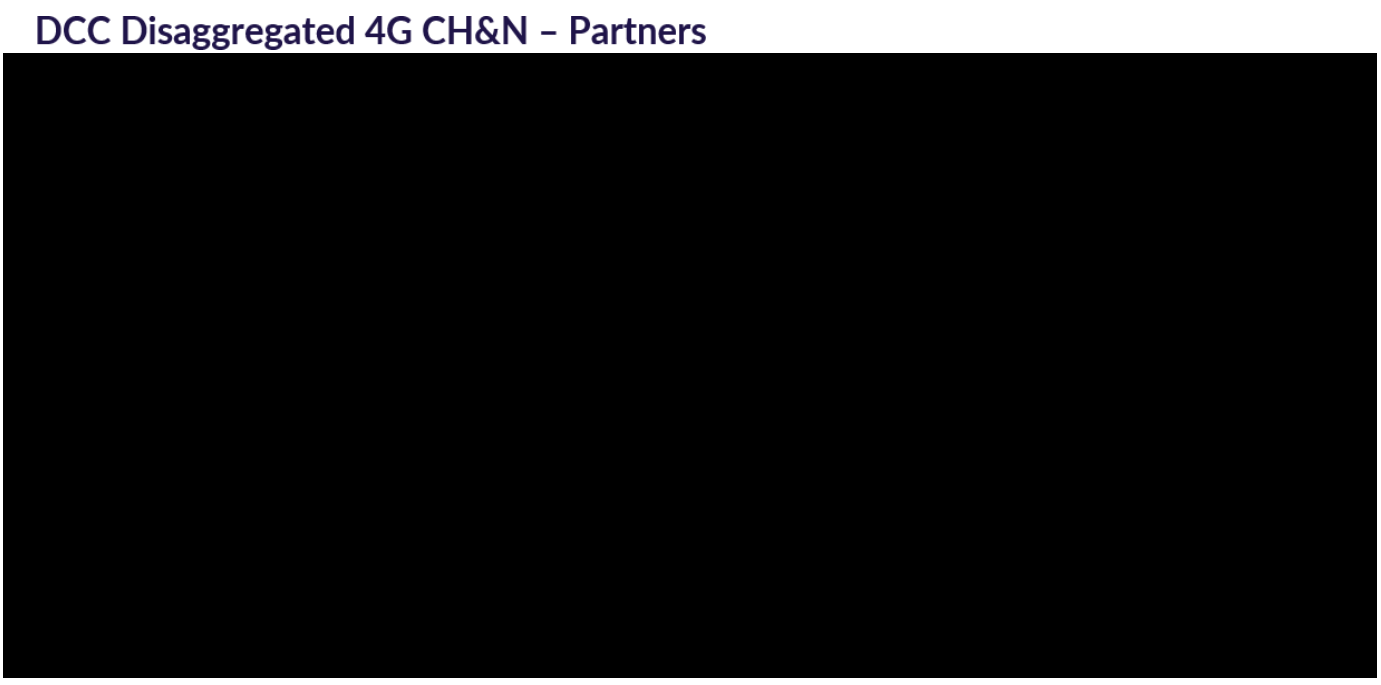
1.2.1. Scope

The scope of the programme is to provide a 4G CH&N service for all domestic and small businesses in the central and south region. This is expected to require a roll out of 24 million CHs in total. This programme of work is essential to enable smart metering services to be provided beyond 2033 when all 2G and 3G service will be decommissioned.

The FBC for CH&N was accepted on 5th September 2022 without objection by DESNZ, the SEC Panel, and the SEC sub-committees.

The 4G programme is being delivered by DCC in conjunction with several delivery partners. This can be seen in the diagram below. The CH element is being delivered by [redacted] the WAN by [redacted] the Device Manager by [redacted] and DSP integration by [redacted] In addition, the programme has engaged technical and programme assurance partners ([redacted] [redacted] and [redacted] to mitigate the risks associated with such a large and complex technology programme.

Figure 1: Overview to CH&N service and partners



Timeline

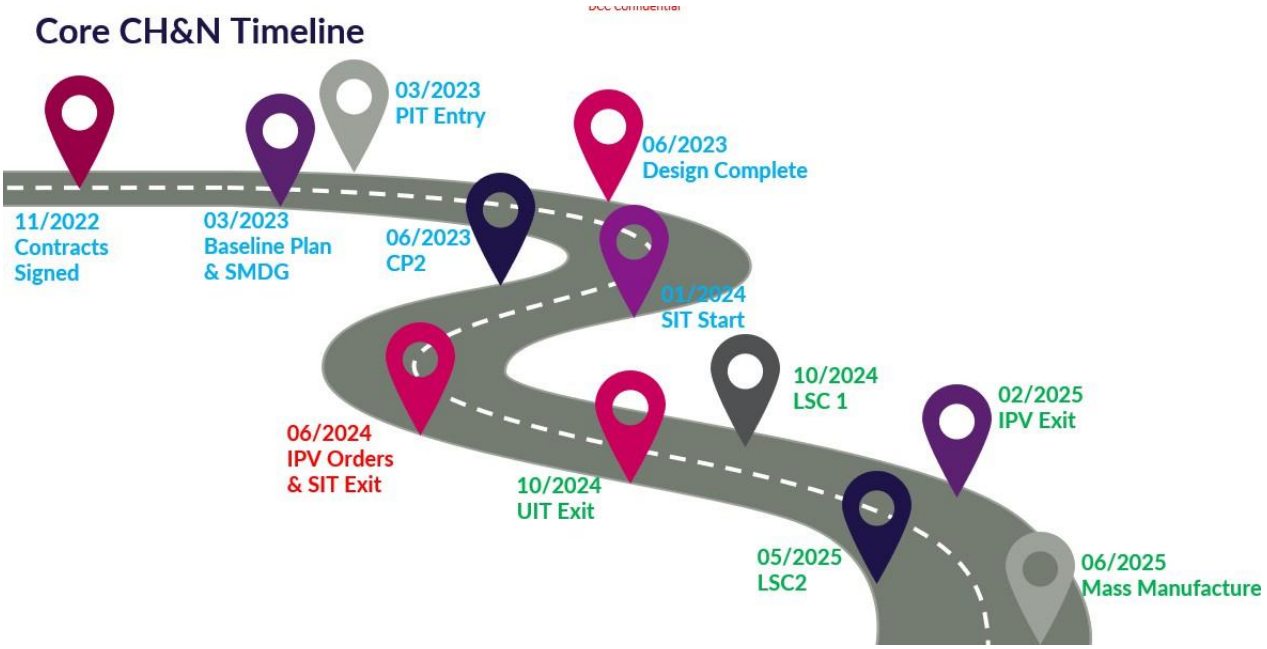
The 4G CH&N programme has been running since 2021. Due to the complexity and associated risks associated with upgrading the entire smart meter network, it took a significant amount of time to proceed through the Green Book business case process and to progress to contracts with service providers (SPs). These contracts were signed in November 2022. Throughout the business case and beyond, our focus has been on finding the right outcome for consumers while balancing customer, government, and the regulator's preferences for service functionality, delivery timelines, and costs.

During RY23/24, the programme undertook the design and build phases of the programme. The design phase was particularly complex as the DCC has opted to provide a full-service model to support 4G services, rather than outsource it, in the interest of achieving lower cost to serve for consumers. This has required operational colleagues to be much more involved than they have been in previous programmes. As the DCC will be undertaking a much bigger role in the delivery of 4G services than it has for 2G/3G the programme has been required to design a full-service model. This is required to enable DCC to manage 4G services in the live environment, working with customers and SPs to ensure a fully functional network and resolving issues as they occur.

Once the designs had been completed and assured, the programme moved into its test phases. As a complex build, the testing has been conducted across three phases: PIT, CIT, and SIT. PIT was initially conducted for the individual service components. This was conducted by individual SPs and assured by the DCC. Following the PIT phase, CIT was conducted to ensure that the elements of the solution provided by different suppliers worked together as expected to deliver an end-to-end solution. In January 2024, the programme entered SIT, meaning testing that the solution will effectively integrate with our current data system (DSP). SIT will continue until 31st July 2024. Each of the testing phases has a significant amount of internal and external governance associated with it. The internal and external governance requires the programme to engage with SEC sub committees and evidence the output of each test phase before moving into subsequent phases of work.

The programme will go live in December 2024 with an Initial Pallet Validation phase (IPV). IPV will comprise a small scale roll out to ensure that the solution is sufficiently robust to deploy at scale. The programme will be closely engaged with Industry and DESNZ as it moves towards go live to ensure that all parties are ready implement 4G CHs. A decision to mass manufacture 4G CHs will be taken in April 2025 with roll out at scale taking place from July 2025.

Figure 2: CH&N programme timeline



1.2.2. Programme Structure

It should be noted that the sub-team structure within the payroll system (in the table below) does not always match the CH&N service structure (also illustrated below). To deliver the service in the most efficient way, resources from different sub-teams are deployed and prioritised across the service as needed. A time recording system is used to cross charge functional resources into the programme cost lines.

Figure 3: CH&N Service Structure

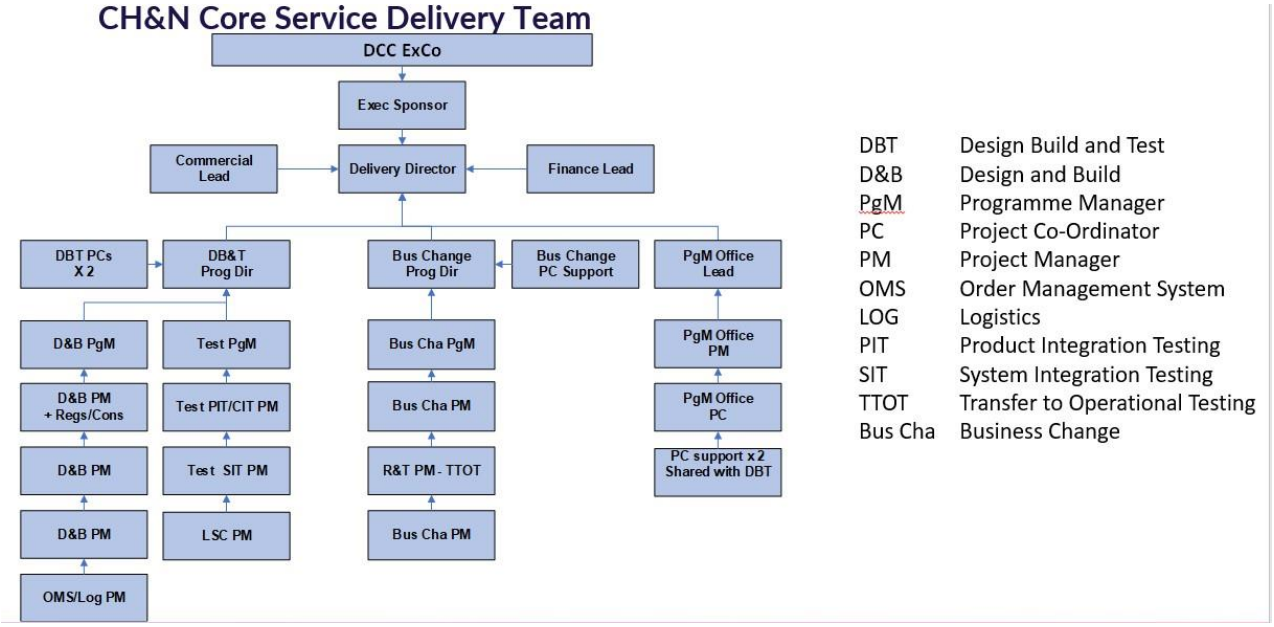


Table 1: CH&N Programme Sub-teams

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
Commercial & Procurement, and Customer Engagement.	Commercial and Regulation	• The commercial team ensure that suppliers deliver in line with contractual arrangements. They also manage any change requests arising because of new or amended requirements which occur in any major technical delivery. • The customer engagement team ensure that the progress of the programme is regularly communicated to customers through industry forums and SEC governance. This has been a significant piece of work during RY23/24 since there is a great deal of interest in the progress of the CH&N programme from energy suppliers.
Architecture and Design	Design and Assurance	• The DCC architecture and design function are responsible for the assurance of partner designs to ensure that the overall solution will deliver in line with government and industry requirements. This is a complex programme with multiple suppliers, so design assurance has required significant resources in RY23/24.
Finance	Finance	• The finance team are responsible for developing budgets, forecasts, and tracks actual spend to ensure that the programme delivers in line with business case and the board approved cost envelope. • In addition, the finance team are overseeing the Business case looking at how the purchase of Comm's is funded/financed. This programme under Licence Condition 16.6a-c which are subject to a Department for Energy Security and Net Zero (DESNZ) business case. In RY23/24 DCC continued to progress the Outline Business Case (OBC) stage of the business case working with [redacted] as specialist advisors to DCC.
Operations	Operations	• The 4G CH&N programme will operate as a fully managed service. As such, a new operational support capability is required. This has required analysis and design to ensure that DCC can support 4G services using a disaggregated model.
Security	Security	• The security function makes sure that any technical, data or process changes are compliant with all security protocols and tested appropriately.

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
		• The team owns the relationships with the National Cyber Security Centre (NCSC) and the SEC Security sub-committee.
Regulatory Affairs	Service Delivery	• The regulatory affairs team ensures that the 4G CH&N programme is delivering in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem as applicable. • They engage and consult with DESNZ, customers, and industry to understand existing problems and future needs and ensure that DCC proposals are understood and supported. The Regulatory Affairs team supports the CH&N programme to deliver this DESNZ, customer, industry, and SECAS engagement.
Testing	Testing	• The testing team ensures that testing methodologies and tools in the future DCC landscape are fit for purpose and utilise best practice. The team have developed the testing schedules for the CH&N programme and have assured the testing undertaken by suppliers to ensure they have complied with the requirements set of them. The test team have also liaised with the SEC sub-committee TAG (Test Assurance Group) to get approval from industry on test outputs for each phase of the programme.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e. mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll and Recruitment are discussed within the next section.

The 4G CH&N programme was set an extremely low baseline due to last year's disallowances. Despite the large challenges of this complex programme, we are coming in at our forecast costs, showcasing DCC's high skills in managing this challenging piece of work. When viewing the resource cost profiles over the three years (RY23/24 to RY25/26), the costs should be considered in the context of a complex delivery programme as it goes through its lifecycle.

In line with any large programme, resource costs have followed a typical bell curve profile with lower costs at the beginning and end of the delivery (mobilisation and transfer to operational service) and higher costs associated with the midpoint of the programme. This is generally when the programme incurs its highest costs as the build and test phases are carried out. In the case of the CH&N programme, this intensive, higher cost period straddled RY23/24 and RY24/25 with costs tailing off in RY25/26 as the programme moves into service.

Table 2: Variance from the RIGs by GL

	Total CH&N			RY23/24	RY24/25	RY25/26
Total Baseline	**Total CH&N**		**£m**	**0.118**	**0.116**	**-**
Total Incurred	**Total CH&N**		**£m**	**9.597**	**7.621**	**1.484**
Total Variance	**Total CH&N**		**£m**	**9.479**	**7.505**	**1.484**
	Payroll costs	PR	£m	**7.427**	**5.434**	**1.417**
	Non-payroll costs	NP	£m	-0.118	-0.116	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**2.170**	**2.187**	0.067
	Internal services	IS	£m	-	-	-

	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll Costs variance

The overall Payroll Costs variance in RY23/24 is positive, with incurred costs of £7m higher than the price control baseline. We acknowledge that previously we have not provided sufficient justification for the CH&N programme and have included more detail for this year's submission. Please note that costs remain in line with DCC's forecast for its charging statement. The reasons for such variances are set out below.

Table 3: CH&N Payroll Costs Variance

Variance		RY23/24	RY24/25	RY25/26
CH&N Payroll Costs	**£m**	**7.427**	**5.434**	**1.417**
Commercial and Regulation	£m	**0.785**	**1.194**	**0.273**
Design and Assurance	£m	**0.623**	**1.252**	**0.159**
Finance	£m	0.000	-	-
Operations	£m	**0.706**	**0.918**	**0.730**
Security	£m	**0.327**	**0.344**	0.000
Service Delivery	£m	**3.946**	**1.727**	**0.255**
Testing	£m	**1.040**	-	-

1.4. Drivers for Variance – Resource

DCC's CH&N programme team focussed on delivering the activities below during RY23/24. As explained in section 1.1.2, there has been a significant amount of work for DCC to carry out in delivering the 4G programme. The DCC is a regulated business and as such it has many stakeholders including DESNZ, the energy industry, SECAS and Ofgem. The requirement to regularly consult and engage with these entities throughout the programme drives significant activity and associated costs in the areas of programme management and governance.
DCC has introduced a time recording system to correctly allocate the costs of internal resources to programmes. During RY23/24, colleagues from across the business have been involved in working with the programme. Some of these colleagues have been allocated on a full-time basis whilst others may have contributed to an ad-hoc advisory capacity. Costs incurred are in line with the annual business plan (ABP) and are proportionate to the delivery of such a complex, bespoke technical delivery programme.

1.4.1. Commercial and Regulation

The Commercial team sets commercial strategy and leads on supplier engagements and negotiations, ensuring that all procurements conform to regulatory requirements. It reviews RFIs and ITTs to understand the market and to procure services.

The Regulation team ensures that the CH&N programme is in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem as applicable.

Activities driving change in resource in RY23/24

The commercial team have played an important role in ensuring suppliers deliver in line with contractual arrangements. This has involved regular communication with supplier and DCC delivery teams, liaison with supplier contract management teams, and the management of payment milestones. The Commercial team is key to ensuring that DCC

obtains the right levels of service from our supplier partners in line with contractual arrangements. Ultimately, this ensures that the programme and DCC obtains value for money for our customers and consumers.

The Commercial team manages any change requests arising because of new or amended requirements, which occur in any major technical delivery programme. This included supporting a [redacted] exercise for Azure hosting services for the Device Manager component of the solution.

Activities driving change in resource in RY24/25 and RY25/26

Resource levels increase slightly in RY24/25 as the requirement to manage the Design, Build and Test (DBT) element of the CH&N programme will continue up to go live. During this period, delivery partners will have multiple payment milestones associated with testing completion and operational service readiness that will require the DCC commercial team to work closely with the programme and the commercial teams from each delivery partner. This will be essential to ensure that DCC obtains best value from its commercial contracts for the delivery of 4G services. From April 2025, the programme will move into operational service and programme costs will cease.

1.4.2. Design and Assurance (CTO)

This team covers the architects and design authority to create and assure the design of systems and processes to deliver the programmes' services.

Activities driving change in resource in RY23/24

The CTO team have been responsible for the collation, evaluation, and assurance of all high level and detailed designs produced by the delivery partners. This has included internal and external governance reviews with forums such as the cross functional design authority within DCC, the TABASC SEC sub-committee, and TBDB in DESNZ. There has also been regular liaison with the Technology Working Group to ensure that the designs meet the requirements of industry and DESNZ.

Activities driving change in resource in RY24/25

Resource levels are likely to remain the same in 2024/25 as the requirement to manage the Design, Build and Test (DBT) element of the CH&N programme will continue up to go live. Work will transition to focus on the testing and assurance aspects across the new CH&N. The design and assurance team will work closely with the delivery partners to ensure that test output aligns with designs and meets business requirements. This team are also responsible for assuring the WAN coverage, which is required to meet 99.25% of meters in the central and south region ahead of go live. From April 2025, the programme will move into operational service and programme costs will cease.

1.4.3. Operations

The Service Design team ensures that processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes the processes that customers will need to use to access and operate DCC services.

Activities driving change in resource in RY23/24

As the 4G CH&N programme utilises a disaggregated service model, an entirely new service capability has had to be designed to support the end-to-end solution. This is a new requirement as 2G/3G service management was provided via the CSP (VM02). This has required extensive work with the current operational teams, new service suppliers, and the programme team to design the future target operating model, identify gaps from the existing service model, and plan the migration towards a fully managed service for 4G smart metering.

Activities driving change in resource in RY24/25 and RY25/26

Resource levels are likely to remain the same in 2024/25 as the requirement to manage the DBT element of the CH&N programme will continue up to go live. From an operational perspective, there is significant work in setting up the processes, allocating resources and ensuring all teams are fully trained up to run the disaggregated service model. This includes management of live service issues, performance monitoring and ensuring that all Service Level Agreements (SLA's) and Operational Performance Regime (OPR) metrics are met. From April 2025, the programme will move into operational service and programme costs will cease as the 4G service becomes business as usual. The on-going costs of an in-house service operation will be significantly lower than the option of a CSP model, currently used for 2G/3G.

1.4.4. Security

The Security teams ensure that any technical, data, or process changes is compliant with all security protocols and tested appropriately. These teams own the relationship with the NCSC and the SEC Security sub-committee (SSC) for these programmes.

Activities driving change in resource in RY23/24

The security function makes sure that any technical, data or process changes are compliant with all security protocols and tested appropriately. They own the relationships with the NCSC and the SSC for the 4G CH&N programme.

During RY23/24, the security function was actively involved in ensuring that all designs met required security standards. This involved regular engagement with suppliers, CTO assurance and the SEC security subcommittee. This work was also an essential pre-curser to obtaining Commercial Product Assurance (CPA) approval for the 4G CHs.

1.4.5. Service Delivery

Service Delivery includes the Delivery Director, Programme Directors, Programme Managers, Project Managers, programme monitoring office (PMO), and Business Analysts (BAs) required to deliver the programme. These roles are standard for the delivery of major programmes. Work on a complex programme is broken down into work packages, each of which requires project management effort to deliver. Work packages then feed into workstreams which are managed by programme managers. There are two senior programme director resources who have overall responsibility for the delivery of the programme plans, one from a technical perspective and the other from a service perspective. The entire programme is led by a delivery director who is accountable for delivery of all DCC and delivery partner activity to time cost and quality. There is a PMO to support all governance activity.

The resourcing levels for Service Delivery reflect that CH&N is a complex programme involving work from multiple suppliers and the DCC. As such it must be managed in a highly controlled and formally governed environment.

The service delivery team manage the overall delivery plan to ensure that work remains on track to deliver on time and to acceptable cost levels and quality. This requires daily management of activities and dependencies to maintain the course and speed of progress in line with plan.

The programme has significant internal and external governance. Within DCC, the Service Delivery team run regular functional and cross functional meetings to monitor progress against plans, surface and manage issues and raise and mitigate risks. There is a formal Programme Governance Board which meets monthly to provide Executive oversight and a point of escalation for issues that cannot be resolved at working level.

Externally the programme engages with DESNZ forums monthly (Industry Management Forum (IMF) and Smart Metering Delivery Group (SMDG)). In addition, there is a weekly Joint Delivery Resolution Management (JDRM) forum and several more senior monthly reviews (LC13, Level 2 review, collective review).

In addition to the DESNZ led governance the programme is also required to engage with SEC sub committees including the SEC chairs, Op's group, TABASC, SSC and CTG. The work required ensure that all forums are kept up to date on programme progress, and to manage actions arising drives significant resource needs within the programme. Feedback has been sought (anonymously) from industry participants on engagement efforts and responses have been positive as demonstrated in the quote "Updates through SEC, CTG and SEC Operations group have allowed DCC users to input views as the 4G programme has developed".

The service delivery team are responsible for managing risks and issues across DCC and the delivery partners. They also co-ordinate activity across all DCC functional areas and manage resources to deliver against plans efficiently and effectively.

Activities driving change in resource in RY23/24

In RY23/24, the programme was building and testing the core CH&N solution. This required significant programme resources to work with delivery partners, assure designs, maintain governance, track delivery against plans and keep internal and external forums updated with progress. To date the 4GCH&N programme remains on plan to deliver in pilot form in December 2024. Across multiple industries, including highly competitive sectors, it is unusual for a programme of this size and complexity to remain on plan and this is testament to the quality of programme management and governance.

Activities driving change in resource in RY24/25

In RY24/25, testing activity within DCC will reduce as the programme completes its testing phases and focusses on working to support industry as they start to test how the solution interfaces with their systems and move into early deployment of CHs in the live environment. This early IPV phase will take place in early 2025 with mass manufacture of CHs scheduled for later in the year.

Activities driving change in resource in RY25/26

The programme will close in early 2025/26 and any residual resources will be moved to in life change for the 4G product.

1.4.6. Testing

The Test Assurance team is responsible for ensuring that testing across DCC programmes and releases is set up and executed correctly. It aims to ensure that services meet the requirements and design and are free of defects when launched in production. Test Assurance supports these programmes in early stages of services by defining Test Approaches and Strategies. It also provides support to the procurement of test services and assures the testing activity conducted by the appointed supplier azures.

Activities driving change in resource in RY23/24

Test assurance activity for 2023/24 is in line with DCC internal forecasts and plans. The team have undertaken a significant amount of work to plan and assure all the testing activity undertaken including PIT and SIT. Whilst testing remains the responsibility of DCC's supplier partners, the DCC test assurance team are responsible for witnessing test activity, assuring the suitability and accuracy of test plans and test output reports, and taking liaising with test governance forums (Test Assurance Board – TAB and the Test Assurance Group – TAG) to agree entry and exit criteria for test phases.

Activities driving change in resource in RY24/25

In 2024/25 testing activity will reduce as the programme completes SIT and focusses on supporting industry user testing. This will comprise liaison with test participants to agree test plans, book test slots in the DCC test labs, manage system access and support though the testing process to capture and resolve issues as they arise.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

During RY23/24, there were several non-resource costs incurred by the 4G CH&N programme. These are identified in the table below with a breakdown by cost component

Table 4: Material variance for CH&N non-resources internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement Type
CH&N - Test Lab Operator Support	ES	£m	**0.223**	**0.354**	-	[redacted]
CH&N Legal Advice	ES	£m	**0.267**	0.125	-	
[redacted] - [redacted]	ES	£m	**0.467**	**0.697**	-	
Net Evo - CH&N - [redacted]	ES	£m	**0.558**	**0.439**	0.022	
[redacted] - Test Assurance	ES	£m	**0.561**	**0.487**	-	

1.5.2. CH&N – Test Lab Operator Support

RY23/24 was the fifth year of operation for the Test Labs located at Brabazon House. CH&N makes extensive use of the Test Labs facility due to the current Design, Build and Test phase, as stated previously in this chapter.

As outlined in previous years' submissions, DCC's Test Labs have generated significant cost reductions to customers and will continue to do so for many years. The costs submitted in this year's Price Control reflect the business case costs and benefits that Ofgem has previously scrutinised as part of DCC's gainshare application.

Previously costs for Test Labs were allocated within the Corporate Management cost centre. For this year, we have allocated the costs between the programmes for their usage of the Test Labs facility, as this is how it has been assigned in our financial systems. Looking at the total costs of the Test Labs across the Corporate Management and CH&N cost centres, we have spent less than the combined approved baselines:

- The baseline for Corporate Management for Test Labs is £2.125m for RY23/24, which creates a negative variance of £0.625 in that cost centre.
- In RY24/25, for Test Labs within Corporate Management, we have a negative variance of £0.59m.

In other words, we have spent within our overall baseline on Test Labs, but the regulatory accounting shows this as a series of positive and negative variances, as we have now split the costs out across multiple parts of the business.

1.5.3. CH&N Legal Advice

As we described in the Price Control submissions for RY20/21, RY21/22, and RY22/23 the Communications Hubs and Networks Programme launched a major Invitation to Tender (ITT) in December 2020 to procure 4G equipment and services worth around £2.3 billion over the life of the contracts. To support this procurement activity, DCC ran a [redacted] process at the outset of the procurement process with external law firms. The successful bidder, based on quality and price, was [redacted]

[redacted] provided legal advice and support on the procurement of capability 'end-to-end'. Their activities during the life of the procurement covered: (i) advice and assurance support concerning DCC's procurement process and obligations; (ii) support in preparing the ITT and associated contracts, the evaluation of bidder contractual submissions, and the negotiation of contract terms with bidders; (iii) advice in connection with the impacts of the procurement on DCC's other contracts and (iv) support in connection with legal content in assurance papers, including DESNZ business case documentation.

In RY23/24. [redacted] focussed on the negotiation of the last of the major contract for the 4G CH&N programme, the logistics contract. This contract provides transportation services for the Comms Hubs from arrival into the UK to the customers premises. It also provides returns services for replacement comms hubs.

Securing Value for Money

The expenditure in RY23/24 year is a continuation of the original contract signed with [redacted] in RY2020/21. These services were provided pursuant to a Call-Off Contract under the DCC Legal Framework (which was put in place following a [redacted] process). DCC also issued a further RFP to all (then) four firms on the DCC Legal Framework and, following a clarifications questions process, received responses from all four firms. The DCC legal team is small and while well placed to advise on a broad range of issues, did not have the necessary capacity to deal with a procurement of this size.

The Commercial evaluation of external law firms in the original procurement of legal support for CH&N focused upon day rates and discounts that may be applied by the supplier should certain spend thresholds be met rather than fixed price. This call-off structure was designed to offer best value for DCC, to enable DCC access to the services under the contract as the need arose and not be bound by fixed cost, while ensuring that an appropriate cost reduction was achieved in line with the volume of usage. Our assessment was that because of the uncertainty of the volume of support DCC would need during the process, it was more economic and efficient not to opt for a fixed price contract which could have been significantly more expensive had our need proven to be lower than anticipated.

Below we repeat previous year's information on the scoring and discounts that were submitted to us in the bidding process. As can be seen, [redacted] provided the largest discount from their day rates of the three bidders for expenditure over £[redacted]

Table 5: Summary of Approach for Procuring Legal Advice

Procurement - Legal advice	
Number of Initial invitations to tender	4

Number of Bids received	3
Number of Bids shortlisted / presenting	2
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

Table 6: Initial Proposal Legal Bidders Discount Rates/Value

Provider	Discount (£50,001 - £100,000) (10%)	Discount (£100,001 - £150,000) (10%)	Discount (£150,001 - 250,000) (5%)	Discount (>250,000) (5%)
[redacted]				

Following DCC's negotiations and then insistence of a BAFO stage, [redacted] improved their discounts, offering the following significant reductions in day rates based on volume:

Table 7: [redacted] BAFO Discount Rates/Value

Condition	Original % discount	Revised % discount*
[redacted]		

We firmly believe that our negotiations and decision-making have resulted in economic and efficient expenditure, achieving better discounts and quality of outputs than the other law firms.

1.5.4. [redacted] – [redacted]

Following the DESNZ non-objection to the 4G CH&N business case, in the summer of 2022 DCC established a project (known internally as [redacted] to explore options to finance the purchase of 4G CHs in the seven year roll out

period from summer 2025. In 2022, [redacted] were selected as DCC's advisory partner for the 4G CH Financing programme.

To date, DCC has been provided with financing facilities by its SMETS2 CSPs. However, given the disaggregated nature of the new CH&N programme, DCC sought to procure its own financing arrangements. This financing facility aimed to smooth the costs for industry over the life of the CH asset (approximately 15 years).

Given the number of CHs expected to be required (24 million), this is a significant asset financing project with a project spend of £[redacted] over the seven-year role out from 2025.

[redacted] role supporting DCC's business case development for 4G Financing was critical for the programme's success. Given the size and scale of the programme, [redacted] Debt Advisory, modelling, and business case support was critical in shaping the identification, market testing and costing of potential financing opportunities. As this is a highly specialist area and DCC does not have the skills internally to ensure that the best value options are identified and presented to as options to customers we ran a [redacted] procurement to gain external specialist expertise.

Work supported in RY22/23

Two key deliverables were completed in this regulatory year.

1. Following DESNZ non-objection of the CH&N Final Business Case (FBC) it was approved by the DCC Board. [redacted] supported DCC in running a [redacted] external procurement process to secure an arm's length loan arrangement of £[redacted] to finance the DBT phase of the CH&N programme.

   The impact of undertaking a financing arrangement on normal commercial terms is that DCC can achieve a cost-effective method of financing the DBT phase of the programme over an extended period. The 5-year tenure of the Facility will spread the cost of the DBT phase, mitigating the potential short-term increase in DCC charges if this arrangement was not in place.

2. In addition, [redacted] supported the DCC Finance team complete an analysis of the external debt market in the UK on the basis that DCC put in place a similar financing structure (SPV) as the current SMETS2 CH. This external analysis enabled DCC to complete the SOC stage of the 4G CH Business case which was submitted to DESNZ and approved in November 2022. It gave comfort to both DCC Executives and DESNZ that there was an appetite in the Commercial Debt market to fund the 4G CH programme.

Programme development in FY23/24

During FY23/24, [redacted] has supported the DCC Finance team's preparation of the OBC.

Given DCC's experience of financing projects, and DCC's unique position in the Energy market, DESNZ approached DCC to consider extending the Financing to cover the costs of supplier visits to consumers' homes to swap out the replacement 4G meters.

The potential cost of this service is c.£[redacted] and significantly grew the magnitude of the financing facility. Given the rise in bank of England base rates, DENSZ also requested that DCC considered the potential to pass all charges to SEC parties in case this proved a lower cost and therefore better economic value. DCC paused its OBC programme in 2023 whilst DESNZ developed its Swap Out programme, so the OBC phase has been extended from the original expectation.

Once the Swap Out programme had been defined, [redacted] completed extensive engagement with the capital markets to establish the appetite and potential costs of financing the extended value of the programme. In addition, DESNZ requested that financing options covered two alternatives:

- If DCC raised the debt.
- Of if an SPV route as recommended at SOC Business stage was selected

For the credibility of DCC's relationship with the External Debt market, it is essential that DCC has maintained its partnership with [redacted] as it determines its draft approach to funding in the OBC. [redacted] have been able to address the questions and queries that DESNZ have raised as the OBC has developed and discussed in working level meetings.

By the end of FY23/24, development of the OBC was progressing well with a draft due to DESNZ in July.

Forecast of spend in RY24/25

DCC is due to submit its final OBC in August 2024 with the core development and workings finalised in July 2024. At that point, it will be determined if DCC are to Fund or Finance the 4G CH and CH Replacement programmes. The £[redacted] of costs forecast for this year is on the basis of selecting a Financing solution. This would see [redacted] continuing to support DCC during the key external procurement and FBC preparation.

If instead, a funding route is selected at OBC then [redacted] may not be required and savings of up to c. £[redacted] could be achieved in this scenario.

Securing Value for money

The [redacted] team have continued to work under work orders approved by DCC using rates negotiated in RY22/23.

1.5.5. Net Evo - CH&N - [redacted]

Given the size, cost, and complexity of the CH&N programme, two types of assurance were required as condition of the Departmental non-objection for this programme:

1. In line with commitments made in the Full Business Case (FBC), DCC engaged the Strategic Programme Assurance Provider (SPAP), [redacted] to provide independent assurance and provide evidence to DCC in support of key decision points, milestones and quality gates. The decision to do this is based on lessons learned from the Switching Programme where the value of the external programme assurer has been recognised by Ofgem and DCC.
2. We procured the specific CH&N CI/SI Assurance through [redacted] DESNZ (formerly BEIS) noted that it is important that this assurance is in place at the start of the design process in order to ensure success of the programme. Key roles are:
    a. To assure that the content of design artifacts is supplied to the standards required by the DCC, including as set out in the DCC License, relevant codes (such as the SEC) and the Contract.
    b. Assure the suppliers' performance with regards to compliance to contractual obligations
    c. Assure the supplier against compliance to service levels and KPIs.

The role of the SPAP/ [redacted] is to:

- Assure artefacts and processes.
- Ensure the processes have been actioned and the work is to a sufficient standard.
- Collaboration/Engagement: It will be the SPAP responsibility to ensure that sufficient engagement is taking place and that each Assured Party is meeting its obligations under the Relevant Contract, as well as assist the DCC to ensure that the collaboration agreement between the Assured Parties is being adhered to for the work to be completed to planned timelines and to a sufficient standard.

DCC used a 'Framework Plus' procurement strategy to ensure value for money. Over the course of the programme to date, the SPAP has regularly reviewed and challenged risks and mitigation activity and has performed risk assessments against key milestone dates to provide an impartial view of progress. This has helped DCC to prioritise efforts and ensure that all key milestones are met.

Driver for the Procurement

To ensure a successful delivery of the CH&N service, DCC required the independent assurance of a SPAP. through a partner as a 'critical friend' on the programme. The SPAP was specifically required to monitor progress and carry out regular 'spot check' evaluations of governance processes.

Securing Value for Money

Following the evaluation of three sourcing approaches, it was agreed that a 'Framework Plus' strategy would be used. This strategy involved a [redacted] procurement between 4 eligible suppliers under Lot 3.3 'Assurance and Advice' of DCC's audit and assurance framework, and [redacted]

[redacted]

Proposals were received from two bidders: [redacted]

[redacted] provided the highest scoring Quality and Technical response at a significantly lower price than the second-placed bidder. The total value of the contract for SPAP was fixed price at £[redacted] with payment profile based on monthly core service charges, and specific assurance milestone payments.

Table 8: Summary of Approach to Procurement of Net Evo CH&N

Procurement – Assurance partner	
Number of Initial invitations to tender	4
Number of Bids received	2
Number of Bids shortlisted / presenting	2
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

1.5.6. [redacted] - Test Assurance

[redacted] supports the CTO function with resources across testing and assurance, as the requirement for these services across our programmes and operates fluctuate year on year.

Costs for testing and assurance support are included in the finance case for each individual programme business case and are assessed appropriately in terms of value for money. CTO manages its expenditure on its internal resources and [redacted] in within agreed programme resourcing budget constraints.

Having procured [redacted] CTO piloted the use of [redacted] resource on the CH&N programme initially, with the pilot funded by CTO from July 2023 – September 2023. Following the success of the pilot, support for the CH&N programme was continued under programme funding from October 2023 throughout RY23/24 and into RY24/25.

In RY23/24, [redacted] resources engaged in CH&N peaked at 14.5 FTE, split as one Test Assurance Manager, three Test Assurance Leads, and 10.5 Test Assurance Analysts. These resources were undertaking test assurance activity, primarily assuring the testing conducted in the PIT phase across eight parallel PIT stages where service providers tested changes to their component systems within the overall CH&N solution:

- Device Manager
- DSP
- CHs
- Test Bench
- WAN
- Order Management System (OMS)
- Logistics
- CIT

The activities conducted in each PIT stage included (but not limited to) defining the scope of testing required per service provider in a Test Coverage Document, assuring SP delivery plans against the specified scope, assuring test results and associated test evidence, witnessing a subset of tests executed, assuring SP test completion artefacts, and generating governance artefacts to support completion of each PIT stage and the overall PIT phase via TAB and TAG approvals

The CH&N SIT phase commenced in February 2023 and is planned to complete in July 2024. The volume of [redacted] resources was reduced to a peak of 8 FTE during SIT, split as one Test Assurance Manager, two Test Assurance Leads, and five Test Assurance Analysts. Similar test assurance activities were conducted in SIT as for PIT, with multiple fix releases requiring assurance against both SP PIT and SIT throughout the SIT phase

Refer to our chapter on our Design and Assurance (CTO) for the explanation of the procurement under External Services.

1.6. External Costs

The sections below describe the material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24. As in prior years, we explain the background, drivers, scope and how we secured value for money. Only PRs/CRs with value >£1m need to be described.

1.6.1. CR4583 – CGI - CH&N SI Services & Support for Dual Band Delivery (Dis-aggregated Solution)

Drivers for Change

DCC has developed a solution for CH&N to meet DCC's strategy for the continuing development of the UK Smart Metering solution. This CR4583 covers CGI support for SIT and UIT as well as the activities related to Transition to Operations (TTO) of the changes related to the implementation of the CH&N programme. SIT and UIT are explained in section 1 of this chapter.

Scope of Change

The activities covered by this CR4583 are:

- SIT and UIT phase preparation and execution of testing, supported by the contractors Triage, Implementation, and Infrastructure teams.
- Infrastructure build-out of additional Virtual Machines (VMs) within the SIT-A, UIT-A, UIT-B, Production/Disaster Recovery (DR) environments to support communication with 4G CHs and associated SPs.
- Infrastructure connectivity configuration to the relevant SPs.
- TTO activities which are assumed to cover limited Business Acceptance Testing (BAT), limited Operational Acceptance Testing (OAT) and production service preparation activities.
- Early Life support; and
- Programme governance and operations in support of CH&N programme delivery.

Securing Value for Money

CR4583 was first raised in February 2022, before the new CH&N contracts were in place and the requirements and delivery approach have been evolving and shaping as the programme progressed through its planning and design phases.

As such, there have been four iterations of the Impact Assessment between March 2022 when the first Impact Assessment was submitted, until the final version submitted on 8 August 2023, and to CAN signature on 31 October 2023. Multiple iterations were required partially due to requirement changes, but mostly to ensure maximum value for money is realised, considering the scope and complexity of the change.

Steps taken to maximise value for money include:

- Clear pricing models for SIT/UIT and PIT support, based on agreed volumetrics in terms of number of tests, throughput, and support requirements.
- Descoping any activities where requirements were not clear at the time of reviews, or where rationalisation of the pricing was not possible. Fixing the price for these would have meant accepting a potentially high-risk margin and lack of transparency.
- Activities which did not have clear requirements, such as the DCC Service Management System (DSMS) changes which could not be scoped at the time due to the uncertainty around the future of DSMS, were covered with separate changes, raised subsequently, when the requirements for those were developed. (CR5155 for DSMS changes, raised in August 2023).
- Activities in which the cost could not be rationalised with pricing models, and where the cost profile would vary throughout the delivery of the programme, were ordered with Project Requests on a Time & Materials basis. (PR7383 for SI Programme and SI Release Management support).
- Assumptions, volumetrics, and dependencies have been rigorously challenged and agreed with DCC CTO and Test Assurance functional stakeholders.
- Third party costs have been accepted only after reviewing actual quotes and tracked via a Procurement Tracker - and paid only against third party invoices and proof of payment.
- Considering the criticality of the services covered by this CR, four Payment Milestones have been defined, and aligned to the programme plan to incentivise CGI to deliver in time. Three of the Milestones have been categorised as Key CH&N Milestones. Not only do they delay deductions, but indemnities apply for delays to these Milestones. This resulted in £[redacted] delay payment contingencies ([redacted] of total price) and £[redacted] Working Capital Charges ([redacted] of total) added to the price. CGI was asked to provide transparency to these in the Price Breakdown, and the premium was considered necessary to mitigate the risk of delays and the major impact to the programme delivery.

Figure 4: CH&N Milestones and Values

Milestone (as per FIA)	Description	Milestone Date	Percentage of Price	Milestone Value (£)	Milestone WCC	Milestone Total
[redacted]						

A breakdown of the costs is provided in the tables below. Comparison has been made between v2.0 and final version 4.0, as version 1.0 included elements which were descoped as per the above notes.

Table 9: Initial vs Final Price of CR4583

Detail	Price initial FIA v2.0 (£)	Price final (£)
[redacted]		

Please note that the infrastructure procurement and support costs on lines 4-6 in the table are not included in the Milestones values. These are paid on installation, upon submission of third-party invoice and proof of payment.

Table 10: Initial vs Final Price CR4583

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.6.2. PR7383 – CGI - SI, SI Environment & Release Management Services for CH&N (new one)

Drivers for Change

PR7383 covers the services required from CGI as the System Integrator (SI) in the CH&N Programme, which include SI Leadership, SI Environments Management and SI Release Management services.

PR7383 was originally signed in September 2022 as DG.1484 PR7383 SoW v3.0 with the value of £ [redacted] based on the requirements and scope of services known at the time.

Subsequently, as the programme delivery advanced, there have been multiple changes to the requirements and scope of support required from CGI as the System Integrator. The scope changes scope since PR7383 V3.0 include:

- OMS and Logistics – These were excluded in v3.0 as the solution and approach had not been developed and decided upon by DCC.
- Reverse Logistics – Additional requirement to derisk the programme delivery
- TOC and SOC interfaces – Additional requirement added to enable TOC and SOC connectivity.
- DSMS changes – This was excluded from v3.0 as it was clear at that point if DSMS (DCC Service Management System) will not be changed to a different platform before CH&N Programme is delivered.
- Initial Pallet Manufacturing – added to the CH&N Programme scope in 2023.
- Rectification of the design issue related to Device Manager ([redacted] Azure environment's ability to connect to the Gamma Network, while simultaneously supporting connectivity to Vodafone (IPV4/IPV6 issue).
- Moving TRT (Technical Readiness Testing) support by the SI team from the fixed price CR4583 to the Time & Material PR7383.

Any additions to the scope of the activities impact all three areas covered by PR7383:

- SI Leadership – Additional workstreams to manage, increased complexity.
- SI Environments – Number of interfaces have doubled.
- SI Releases team – Additional releases to support.

Learning from SITB TRTs outcomes has enabled some re-estimating of activities, reducing the impact of the additional scope on the cost.

Scope of the Change

1. Adding an experienced SI Director role to ensure strong leadership during the System Integration phase of the programme, considering the high complexities involved in integrating complex solutions from four different suppliers.
2. Adding TRT support to the scope of PR7383 with the following two considerations:
    a. TRT is used for the early detection of environment issues that can be corrected before formal testing starts. Tests are run for each Interface. For failed tests, the SPs provide fixes and then CGI re-run the tests. As TRT can take from a few days to a month depending on the nature of the defect, it makes commercial sense to contract this service on a Time & Material basis, instead of paying high risk premium in a fixed price Change.
    b. TRT is carried out by the SI Environments team, and it makes sense to have all activities carried out by this team in one place.
3. Additional testing required for resolving the Device Manager Azure Environment connectivity to Gamma and Vodafone issue.
4. Additional testing required for the additional scope of OMS & Logistics, Reversed Logistics solution, DSMS, TOC & SOC.
5. Revisions to the original estimated cost profile reducing some estimations based on the actual effort booked in Open Book for the past period and updating the inflation indexation.

Securing Value for Money

The changes have been extensively discussed in multiple meetings with CGI and a detailed explanations requested from the Contractor, which have been provided in the evidence file PR7383 Uplift SI PPM RM ENV New Profile v7.2.4 09Jan2024.

As a result, the additional costs originally provided by CGI have been reduced by [redacted] in the final submission and CGI have committed to deliver the programme within the total cost envelope agreed in PR7383 v4.0.

Table 11: Summary of changes to the previously signed PR7383 v3.0 cost profile

Driver for PR7383 Change	Impact to Teams	Total Price Impact of Driver	% Increase
Version 3.0	Baseline Cost from V3.0	[redacted]	
Actualisation	Alignment with Tracker		
	Alignment to Nov 2023 Actuals		
Revised Indexation	Revised 2023 indexation		
Inclusion of TRT support (previously part of CR4583)	Agreed move to PR7383 with Emine Dogan		
Additional TRT SIT and UIT support	Additional TRT complex tests for SIT and UIT environments		
	Review of TRT support resources (following SITB experience)		
Review of resource profile / actualised levels	Changes to the expected v3.0 profiles as part of monthly re-forecasting		
Additional SI Leadership	Increase the seniority of the SI Leadership team and get SI SME support		
	Review of SI PPM Resource profile		
	Removal of SI Solution Engineering Assurance Manager		
DM<->DSP IPv4/IPv6	Revised interface to Gamma (Early Integration Testing (EIT)/SITB)		
Initial Palette Manufacture (IPM), OMS and Forward Logistics	Early release to support CH manufacture for IPV start and additional project scope to 4G CH&N programme		
Logistics: Additional Toshiba <-> DSP	Not included within v3.0 profile		
DSMS & Reverse Logistics	Additional project scope to 4G CH&N programme		
TOC and SOC	New interfaces and associated services (£348K)		
Reduction in TRT activities	Resulting from CI/SI split changes		
Overtime Provision	Supporting up to 4 weekday evenings and a Saturday each week – from Nov '23 to Jan '24 & 2 weekday evening and a Saturday each week after Jan '24.		
	Removal of Overtime		
Review of Release team profile	Reduction in Release Team Profile		
Version 4.0 Value Total @ [redacted]			
Total proposed reduction			
Version 4.0 Total Value @ [redacted]			
Net Increase from PR7383 [redacted]			

Table 12: Price breakdown of PR7383

Detail	Price initial (£)	Price final (£)
Setup Labour Cost	[redacted]	
Expenses		
Schedule 7.1 discount on PRs with continuous duration over 6 months (		
Working Capital Charge*		
Total Charges		

* Working Capital Charge applied due to the retention mechanism applied to the monthly charges to incentivise timely delivery and prevent delays to the programme caused by SI services. The retentions applied until the end of TRT.

Table 13: Initial vs Final Price of PR7383

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		

1.6.3. CR4090 – CGI - Network Evolution - Comms Hub & Networks (CH&N) DSP Interfaces

Drivers for Change

Changes to the DSP solution and the System Integration activities, required to build and operate the new 4G CH, are contracted with multiple Changes (CRs & PRs) to the DSP Agreement.

CR4090 represents the first Change in the Change Plan for the DSP support to the CH&N Programme, which consists of a list of Change Requests and Project Requests, covering the DSP support at different stages of the programme. CR4090 was the first Change to have been raised in the programme in 2021, before any of the new contracts were in place with the new CH&N Providers.

Our approach has been adopted to ensure that value for money is maximised by raising individual changes for elements of the programme with clear requirements and selecting the right contracting mechanism for each (Fixed Price or Time & Materials) to prevent high contingency premium to the Change prices if the risks of requirement changes or scope ambiguity are high.

Scope of Change

CR4090 captures:

(a) the design, build and PIT of the Modified Gateway Interface Changes required to enable the 4G CHs providers to connect to the DSP solution.
(b) the build activities for adding new gateway virtual machines to the Development/System Test, PIT performance, and SIT-B environments.

(c) the build of EIT environment to enable CIT of all DCC SPs in the CH&N programme and keeping such environment for a period of twelve months from the date of its installation; and
(d) Contractor's support for the EIT environment i.e.: labour support by the Contractor's Infrastructure project team up to 31st October 2023. Providing temporary ownership of the assets, this team acts as a central point of contact for Applications Team to arrange infrastructure changes, including include server updates, configuration changes, and patching and supporting of test windows.

Securing Value for Money

To maximise the value for money and ensure consistency and transparency of pricing, DCC Contract Management evaluated pricing models, developed with CGI against key activities including:

- Design, Development and PIT
- Level 2 support for the PIT environment modifications and the new EIT Environment (named as Standard Charges in the CR)

The pricing models were built based on a set of volume and activity type/complexity assumptions, which were discussed and agreed with the DCC functional SMEs from Technology, Test Assurance, and Service Delivery.

The third-party infrastructure and Software licenses procurement were based upon vendor quotes, submitted by CGI, with overheads and margin added in line with the contractual percentages, set in the DSP Extension CAN184.

Even though the first Price Breakdown for this CR4090 was submitted in 2021, and the rates used in the final Price Breakdown had two annual inflation indexation uplifts applied, the final price achieved a [redacted] reduction from the first price submission.

The achieved savings were due to:

- A vigorous review and validation of activities and volumes assumptions.
- Avoidance of the costs for the assumed DSMS changes, due to the lack of clarity on the requirements and the potential for moving to another Service Management system than Remedy.
- Challenging the level of seniority of the resources, including the removal of the leadership resources and Project Management Office (PMO) costs, funded centrally under the CR4470 with [redacted] reduction of charges.

To equalise the indemnity mechanism in the DSP Changes related to the CH&N Programme with the rest of the new CH&N contracts, signed with new Providers, a Remedy Rider mechanism has been added to CR4090, which covers all DSP Changes related to the CH&N Programme and provides similar protection from delays to the programme caused by CGI. In order to assure that we provide good value to customers and consumers, we have protection against programme overruns due to faults with our suppliers. Some of the cost overruns we experienced at exit of PIT have been recovered for other contract providers, where applicable, using these provisions, showing our commitment to value for money.

The negotiations of this mechanism resulted in an additional £[redacted] risk premium added to the price of CR4090, which was seen as acceptable price to pay, considering the risk of incurring costs from the other Providers for delays caused by CGI. This additional cost reduced the overall savings from [redacted] to [redacted] We compared the probabilistic costs of the indemnity with the likelihood of CGI delays imposing costs and came to the view that equalising the indemnity was the more cost-effective thing to do for customers. The overall costs of delay had the potential to run into the millions of pounds, so the factored risk indicated this was the best course of action.

Table 14: Price breakdown CR4090

Detail	Price initial (£)	Price final (£)
Setup Labour Cost		
Core DSP Team Setup Expenses		
PIT Environment: Infrastructure 'Standard Cost'		
PIT_Env: Third Party Charges		
PIT_Env: Third Party: Contingency		
EIT: Infrastructure 'Standard Cost'		
EIT: Third Party Charges		
EIT: Third Party: Contingency		
Remedy Rider Risk Premium		
Working Capital Charge		
Total Charges		

Table 15: Initial vs Final Price of CR4090

Initial IA price (£)	Final IA Price (£)	Difference (%)

2. Microsoft Azure hosting for Device Manager

The 4G CH&N programme Device Manager, provided and operated under a separate contract by [redacted] has been developed to be hosted on a Microsoft Azure tenant. Accenture is not responsible for the provision of this tenant or the associated Subscription Billing and Microsoft Support Package services, although they are responsible for managing it.

Azure billing is based on a Microsoft Customer Agreements that track the costs and manage the billing for Azure resources and services. These agreements are separated from Azure resources and capabilities that DCC suppliers, including Accenture, use to design, build, transition and run FSC for DCC within an Azure tenant.

- Customer Agreements are interoperable and can be novated to new entities.
- Azure services are not part of the customer agreement.
- They are only associated with the tenant and the linked subscriptions.

The scope of subscription billing and how it fits into the Device Manager solution is as described below:

Figure 5: Device Manager Solution

2.1.1. Commercial Approach / value for money

DCC conducted a [redacted] RFP process in November/December 2023 to secure the Microsoft subscription service from an entity that would pass on volume discounts to DCC. The process was undertaken to select the Billing Entity deemed to be the most economical and efficient option. DCC's [redacted] procurement process clearly demonstrates how adopting a customer agreement for Azure will improve value for money. To ensure future interoperability, the Billing Entity will need to be able to evidence the ability for DCC to novate agreements.

Through a detailed tender process, ten new Potential suppliers were identified, engaged .and invited to respond: -

- Existing Supplier – 0
- New Suppliers - 10

However, at this stage, suppliers were unwilling to respond to the tender due to the restrictions of Subscription Reseller only being able to provide a maximum discount of [redacted] unless they provide value added services. At this point, further engagement was then undertaken with existing suppliers to ensure more than three suppliers' responses could be competed / evaluated.

Suppliers invited to respond to the tender = 7

- Existing Suppliers – 5
- New Suppliers – 2

A total of five responses from [redacted] were evaluated.

Evaluation of the responses showed [redacted] provided most Value for Money option by a wide margin.

The evaluation of supplier responses was based on the discount offered on the Microsoft Azure list price for the PayGo service.

The graph below depicts the percentage discount offered by each supplier and the respective position after the evaluation.

Figure 6: Microsoft Azure PayGo service discount.

To allow the initial support environment build, an initial one month call off was signed with [redacted] on 4 December 2023. (The period whilst the RFP was being concluded and engagement with Ofgem was continuing). This was extended to 22 January 2024, then 31 January 2024 and finally to 7 February 2024. Total spend under the interim call off from 4 December 2023 until 6 February 2024 was minimal. [redacted] have billed £[redacted] against this activity in this reporting year.

The new Call off contract based on the RFP outcome was awarded to [redacted] on 6 February 2024.

The call off contract construct was as follows:

Table 16: [redacted] contract award construct

Description	Contract Details
Duration of the contract	The contract will be valid for 11 months with the option to extend on a monthly basis until a contract for the operational phase is awarded.
The contract value	The total cost of the contract based on the proposed Bill of Materials is $[redacted] this is subject to actual consumption.
Price structure	This contract is broken into three charge components: [redacted]

Table 17: Contract benefits

The benefits of utilising the Affiliate Microsoft Service Agreement to deliver Device Manager Azure Subscription are described below.

Area	New conditions or processes	Benefits generated
Support	▪ Capita will secure Microsoft Azure Premier Level Support. This will be a pass through cost to DCC.	▪ 'Rapid Response' functionality (15 minute response times) ▪ KPI reporting and early warning alarms with customisable thresholds ▪ Root Cause Analysis of incidents
Costs	▪ DCC have been set up with their own subscription meaning they now have direct contact with Microsoft. ▪ [redacted]	▪ Access to the Azure dashboard to manage charges. ▪ Ability to monitor costs and predict monthly charges. ▪ Capita will undertake billing, administration and provide account oversight.
Licence Obligations	▪ Contract includes the mandatory flowdown clauses to ensure compliance with DCC Licence conditions.	▪ Liability and Security provisions in the Capita IT Services MSA apply, which are more favourable than what DCC could achieve through a reseller or directly from Microsoft

2.1.2. RSC / FSC position

In parallel with these commercial activities, DCC sought clarification from Ofgem on the approach taken and likely outcome, describing benefits and its position.

At the Level 3 – Strategy and Regulation meeting on 16 January 2024, DCC provided the following updates on the procurement activity: -

- A [redacted] procurement was carried out for the subscription billing for the cloud hosting of Device Manager for the DBT phase.

- Through this [redacted] procurement process, [redacted] was identified as the most competitive bidder. Contracting with [redacted] delivers material Value for Money advantages over other bidders. [redacted] will also accept the licence flow downs and liabilities, which others most likely will not.

- [redacted] receive no competitive advantage from this arrangement (e.g. no data passes through them and they would not have access to any of the data held, access is under control of DCC), plus contracts are "novatable".

- DCC views this as RSC not FSC (as it is does not correspond to the definition of FSC in the Licence) and therefore we can contract with [redacted] for the billing subscription service.

In response, Ofgem provided its feedback on 5 April 2024, as follows: -

"We had a closer look at the issue together with the additional information that you sent through in January and have concluded that within the confines of the current Licence, the hosting service for the Device Manager constitutes Fundamental Service Capability (FSC). We understand from previous conversations that the Microsoft Azure hosting service originally sat with [redacted] as the Device Manager contractor, but has subsequently been removed from that contract.

Part D of Schedule 1 of the Licence, states that:

- "References in this Licence to Legacy Procurement Contracts are references to each such contract as from time to time amended, supplemented, revised, or replaced (whether pursuant to any future exercise of the Licensee's procurement functions with respect to Fundamental Service Capability under Condition 16 or otherwise) and include each such contract as novated to a Successor Licensee in the event of the expiry or any revocation of this Licence."

- Schedule 1 also states that FSC predominantly comprises communication services and data services.

Given that the Microsoft Azure hosting service originally formed part of that the Device Manager contract, we are of the view that this service remains part of FSC. Nor does the distinction between physical hosting and cloud-based hosting services affect the association of this service with the wider Device Manager service; so while it may not be entirely the same as the original service that sat within the Device Manager contract, it does not change its FSC classification.

The Licence is fairly prescriptive, however we are open, as part of the forward looking DCC review work, to explore with yourselves which types of functionalities (including FSC) would be appropriate to be undertaken by the parent company / organisation."

2.1.3. Post [redacted] award, activities

Whilst DCC still believes this service is RSC, as a result of Ofgem's guidance, and in order to mitigate Price Control risk, a decision was taken to commence negotiation with the second placed bidder in the [redacted] RFP to enable the move away from the [redacted] contract. This second bidder is [redacted] and DCC expects to conclude a new contract with them and move the tenant and subscription from [redacted] to [redacted] by mid-August 2024. This contract will remain in place until the end of the DBT phase and commencement of a new Run contract. The Run contract is subject to a [redacted] process that is being undertaken by DCC.

2.1.4. Costs incurred RY23/24, breakdown

To date no costs have been incurred by [redacted] as part of the revised contract arrangement. As mentioned above this is expected to commence mid-August 2024. There is a forecast for [redacted] future costs.

[redacted] has billed a minimal amount during RY23/24, predominantly set up costs incurred during December 2023 and January 2024, amounting to £[redacted] Further billing has taken place in RY24/25 and this will be reported upon then. There is a forecast for [redacted] costs between April and August 2024.

Data Communications Company

Network Evolution:

Data Services Provider (DSP)

Version: 1.0
Date: 31.07.2024

Table of Contents

1. Data Services Provider (DSP)

Summary

What is this and why is it important?

The Data Service Provider (DSP) sits at the heart of the smart metering system. The DSP Data System is a central facility controlling the flow of messages between smart metering equipment, with DCC customers (e.g. energy suppliers, network operators and other Users) communicating via these central facilities.

The DSP platform is a vital component of DCC infrastructure, and the provision of a stable, reliable and cost-effective platform is of critical importance. The future DSP will be essential to delivering continued high performance, lower maintenance costs, improved resilience and flexibility, especially as more meters are added to the network and the volume of traffic grows.

Similar to the 4G programme, DCC is disaggregating part of the future solution to drive greater resilience and improve value for money (for example using a wider supplier base).

RY23/24 activities and costs

We have incurred a total internal cost of £5.9m (reported as a variance to the zero Ofgem baseline). This was driven by both in-house capabilities and external expertise, particularly across three key procurement activities:

1. Extension of the existing DSP contract to ensure continuity of service through the re-procurement, design, build, test, and implementation. As is common for large scale technology migrations, we plan to run dual systems until the new system is operating to specification and all migrations are completed.
2. Re-procurement of the DSP Data Systems platform.
3. Procurement of a DSP Systems Integrator (SI) service.

The payroll costs underpinned essential programme management through Green Book business case, solution scope and procurement milestones, along with providing subject matter expertise from across the business into the solution design, anticipated enduring operations and commercial requirements.

As is standard practice for major technology procurement, we appointed external expert advisors which were essential in ensuring robust and independent advice, assurance and support throughout the procurement phase.

Future activities and costs

Our forecasted internal cost for RY24/25 (£8.2m) will increase as we move through the next phase of the programme lifecycle, where we are expecting to complete our three procurement workstreams.

Following this, we will start the design and build of the new DSP, and plan to move to the test phase by the end of RY25/26 with forecast costs decreasing as a result.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline			RY23/24	RY24/25	RY25/26
Total DSP		**£m**	**-**	**-**	**-**
Payroll costs	PR	£m	-	-	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total DSP		**£m**	**5.938**	**8.199**	**3.990**
Payroll costs	PR	£m	3.083	3.737	3.103
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	2.855	4.462	0.887
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total DSP		**£m**	**5.938**	**8.199**	**3.990**
Payroll costs	PR	£m	**3.083**	**3.737**	**3.103**
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**2.855**	**4.462**	**0.887**
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the DSP cost centre.

Baseline		RY23/24	RY24/25	RY25/26
DSP Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
DSP Payroll Costs	**£m**	**3.083**	**3.737**	**3.103**
Commercial and Regulation	£m	0.426	0.458	0.363
Design and Assurance	£m	0.278	1.082	0.409
Finance	£m	-	0.052	-
Operations	£m	0.171	0.539	0.582
Security	£m	0.167	0.429	0.431
Service Delivery	£m	1.736	1.177	1.319
Testing	£m	0.306	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
DSP Payroll Costs	**£m**	**3.083**	**3.737**	**3.103**
Commercial and Regulation	£m	**0.426**	**0.458**	**0.363**
Design and Assurance	£m	**0.278**	**1.082**	**0.409**
Finance	£m	-	0.052	-
Operations	£m	**0.171**	**0.539**	**0.582**
Security	£m	**0.167**	**0.429**	**0.431**
Service Delivery	£m	**1.736**	**1.177**	**1.319**
Testing	£m	**0.306**	-	-

1.1.2. External Costs

We incur External Costs on specified subset of our service providers, and explain material contract variations (known as change or project requests – CRs or PRs), which are greater than £1m.

There were no material PRs for RY23/24.

1.2. Purpose, Scope, and Structure

1.2.1. Background and Scope

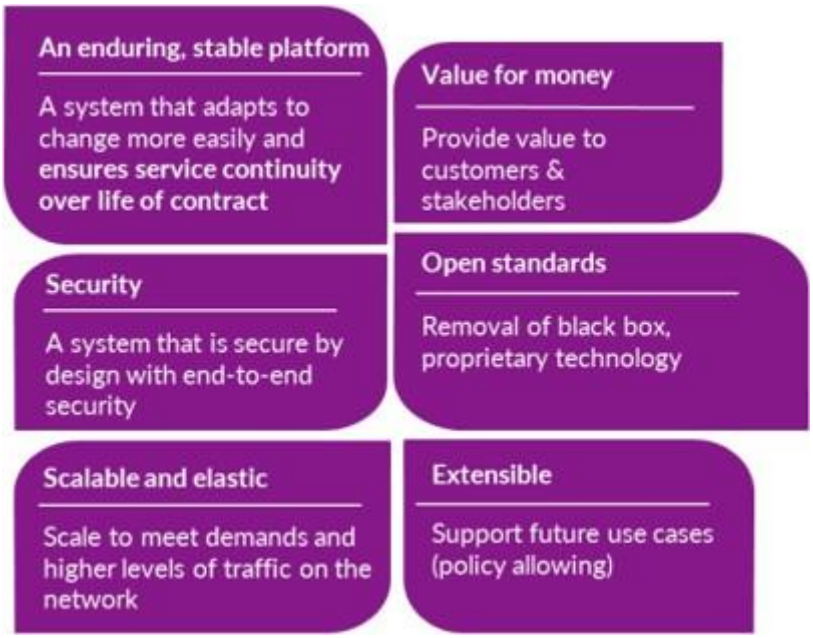
The DSP Data System is a central facility that controls the flow of messages to and from smart metering equipment, with service user organisations (e.g., energy suppliers, network operators, and other users) communicating via these central DSP facilities. These messages enable critical functions to take place, such as prepayment meter top-up, and allows for the collection of data needed for energy supplier billing, settlement, and other industry-wide services.

As the smart meter programme continues, the demand and pressure on the existing DSP infrastructure and network will intensify. Because of this, DCC and its customers are seeking a solution that offers flexibility to meet changing customer needs and to enable continued provision of the service as part of the licence requirement. We continue to focus on finding the right outcome for consumers while balancing the preferences of our stakeholders for service functionality, delivery timelines and costs.

The vision for the DSP Programme is illustrated in the figure below and is driven by:

- The need for a stable and secure service over the lifetime of the contract(s).
- Engagement with customers and the identifying business needs and requirements.
- Assessment of the most suitable technology options through market analysis.
- Planning how the solution needs to evolve to address current and future business needs.

Figure 1: DSP Vision



Since the introduction of LC16.6A-C, establishing the agreed practice of HMT Green Book business cases for projects and programmes over £10m, DCC has developed a number of complex business cases including:

- DSP Extension of Data Systems.
- DSP Data Systems.
- DSP Systems Integrator.

The business case process, which forms part of the Treasury Green Book process, is an active component in our decision-making that provides a clear framework within which investment and operational options are appraised in a clear, consistent way, resulting in a robust evidence-based case for change. It ensures that the evidence and rationale for DCC decisions are well substantiated and is integrated with DCC's 'gated' programme management approach and governance arrangements.

Central to all the business cases is the need to transform the DSP and invest in an enduring platform that is secure, scalable, extensible, and elastic to meet future demands of a growing network, process larger data volumes, and fulfil DCC's licence obligations.

Five options for the future DSP service were identified in the SOC submitted to the department in May 2022, as outlined below:

1. Continue current DSP service with as-is architecture, operated by CGI.
2. Continue current DSP service with limited, specific changes, operated by CGI.
3. Phased transformation from current DSP to target DSP architecture, delivered by CGI.
4. [redacted] procurement and development to target DSP architecture, optional re-use of code.
5. [redacted] procurement and development of a new DSP to target architecture with no re-use of code.

The preferred way forward is Option 4.

Three objectives, or drivers for change, were identified and agreed with DESNZ and stakeholders for the DSP programme at SOC stage, which are set out below:

- **Driver 1 - Complete service transition:** "The primary driver for the DSP Data Systems programme is to ensure that the DCC has completed the arrangements for continuation of services within appropriate timeframes that account for current contract end dates (October 2025 – provided the one-year contract extension is activated), with minimal disruption to the provision of those services for users."
- **Driver 2 – No degradation of service:** "The continued services should have no less capability than provided by the current service, or as defined within the SEC and other relevant documents, whichever is greater. The DCC will consider options to mitigate service failure in the event of commercial failure of the Service Provider or any element of the Service Provider's sub-supply chain where this would mean the DCC is unable to deliver its licence obligation in regard to service continuity."
- **Driver 3 – Service improvements:** "Where practical, cost effective, and timely the DCC should seek to implement improvements to the new service (either the current service, or as defined in the SEC, whichever is greater) that will bring a greater level of capability, improve resilience, achieve greater value for money than the current service and reduce cycle time for in-life change. Meeting these aims must provide no undue detriment to the achievement of driver 1 or driver 2."

The outputs and outcomes of the DSP procurement process will be captured in the FBC through which a formal non-objection will be sought from the Secretary of State prior to contract award and contract signature. This is planned for production in Q3 2024.

We set out our three workstreams in the timeline below.

Figure 2: Timeline

1.2.2. DSP Extension of Data Systems

DCC's existing contract with CGI for the DSP service expires in October 2024. DCC is performing [redacted] procurement of the future DSP service, expected to go live in October 2026, with the existing service migrated over by October 2027. However, to maintain service continuity from the existing contract expiry through to completion of migration to the future service, the existing DSP service needed to be extended to October 2026, with additional optional one-year extensions to mitigate risks of delays in the implementation of the new service.

The DSP extension options were evaluated against business needs and spending objectives, including the:

- Option to procure the DSP extension through negotiation with the existing service provider.
- Option to procure the DSP extension service through a full [redacted] procurement.
- Options to consider the value and benefit of further system change or optimisation during the extension period, and the benefits and risks of different service implementation approaches.

DCC submitted a letter to Ofgem in early November 2023 outlining options for the DSP contract extension, the preferred option being the extension of the existing contract with the incumbent supplier CGI for two years, with options for additional one-year extensions, coming into effect on 1st November 2024. The DCC assessed that this option best delivered the identified business needs and spending objectives and will enable a value-for-money service extension with minimum incremental risk. This reflects our focus on finding the right outcome for consumers while balancing customer, government and the regulator's preferences for service functionality, delivery timelines and costs.

With the current DSP contract expiring in October 2024 and the anticipated design/build/test/migrate schedule for the new DSP running through to 2027, we consider it necessary for DCC to extend the current contract in order to maintain continuity of service. DCC commenced negotiations with CGI on 24th November 2023 for a 2+1+1 years' extension (i.e., two committed years and up to 2 additional one-year extension options) of the DSP contract.

From a value for money perspective a [redacted] reduction in the CGI rate card was negotiated as part of the DSP contract extension negotiations.

A non-objection to the Strategic Outline Case (SOC) and the combined Outline and Full Business Case (FBC) was received in Q1 2024. This enabled DCC to negotiate with CGI for a two-year DSP service extension from October 2024 to October 2026, aligned to the expected new DSP service go-live, and with up to two further one-year extension options to provide contingency specifically in the event of a delay to the new DSP service go-live or

completion of migration. Renegotiated Termination Assistance Period provisions also provides two more years of contingency for the delivery of the new DSP and improves confidence in value for money, as the BAU costs during TAP are confirmed.

1.2.3. DSP Data Systems

To drive value for money, we are procuring the new DSP via three lots rather than through a single service provider. This providers competition for services and greater flexibility in the solution across the three lot areas:

- Core DSP
- DCC User Interface Specification (DUIS)
- Connectivity.

The DSP Core Services business case has also progressed through the SOC stage and the Outline Business Case (OBC) stage. Non-objection for these business cases was supplied by DESNZ following review. The SOC set out the business needs for the future DSP, the core drivers for change, the options for how these would be delivered, and identifies the preferred way forward for the DSP.

A redacted version of the DSP SOC was shared with customers in October 2022. Customer feedback, via these forums, was incorporated into the business case documents, reflecting how we have improved how we take on board and react to stakeholder feedback.

DCC sought approval to move to the next stage of procurement, specifically, to move to OBC stage, which we supported with market engagement and a Request for Information (RFI) to prepare for a future procurement in line with decisions made at OBC stage. We received a non-objection to the OBC in Q4 2023 enabling the commencement of the Invitation to Tender stage. An FBC will be prepared when the procurement completes in Q3 2024.

1.2.4. DSP Systems Integrator (SI)

The existing platform has enabled us to successfully ramp up our system capacity historically but now needs replacement for us to successfully serve our growing network. DCC will deliver the new target architecture through a [redacted] procurement approach, as required under the licence. This delivers benefits to customers through:

- Delivering target architecture and meeting customer needs.
- Lowest long-run cost to operate and change.
- Compliant procurement approach through RFP.

We are undertaking a separate three stage business case (SOC, OBC and FBC) to enable the Invitation to Tender process for the DSP SI. The SOC and OBC were produced and shared with the Department in Q1 2024 resulting in a non-objection in April 2024, which enabled us to issue the Invitation to Tender.

Our programme structure

The figure below shows how the programme was organised during RY23/24, and the key roles within each sub-team.

Figure 3: DSP Structure

It should be noted that the sub-team structure within the Clarity resource allocation system does not always match the DSP service structure illustrated in the figure above. To deliver the service in the most efficient way, resources from different sub-teams are deployed and prioritised across the service as needed.

Table 1: Sub-team Breakdown

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
Commercial & Procurement, and Customer Engagement.	Commercial and Regulation	• Sets the commercial strategy and leads on supplier engagements and negotiations. • Ensures that all procurement conforms to the regulated conditions. • Leads Requests for Information (RFIs) and Invitations to Tender (ITT) to understand the market and to procure services. • Provides guidance and oversight of legal and compliance issues and drafting of contracts. Detailed legal support is contracted to an external law firm under the oversight of the Head of Legal. • Plans, manages, and executes programme interactions with customers, including fora such as SEC Panel committees, Energy UK, and directly with customers. This is to ensure that customers are sighted on the programme and that the programme gets necessary input including to guide decisions on scope and business cases.
Architecture and Design	Design and Assurance	• Provides expertise on technical direction and definition of technical solutions, platforms, and methodologies. This is done to address current problems in delivering services and to facilitate the move to a future landscape. • Ensures the integrity of the DCC solution architecture. The team guarantees that new functionality and changes to the architecture are fit for purpose and comply with the standards necessary to maintain a robust, consistent, and integrated technical infrastructure.

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
Finance	Finance	• Budgets, forecasts, and tracks actual spend, as well as supports on business cases.
Operations	Operations	• Ensures that processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes the processes that customers will need to access and operate DCC services.
Security	Security	• Makes sure that any technical, data or process changes are compliant with all security protocols and tested appropriately. • Owns the relationships with the National Cyber Security Centre (NCSC) and the SEC Security sub-committee for the Programme.
Regulatory Affairs	Service Delivery	• Ensures that programme is delivering in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem as applicable. • Engages and consults with DESNZ, customers, and industry to understand existing problems and future needs and ensure that DCC proposals are understood and supported. The Regulatory Affairs team supports the Programme to deliver this DESNZ, customer, industry, and SECAS engagement.
Testing	Testing	• Ensures that testing methodologies and tools in the future DCC landscape are fit for purpose and utilise best practice.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e. mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in section 1.4. Payroll is discussed within the next section.

Table 2: Variance from the RIGs by GL

				RY23/24	RY24/25	RY25/26
Total Baseline	**Total DSP**		**£m**	**-**	**-**	**-**
Total Incurred	**Total DSP**		**£m**	**5.938**	**8.199**	**3.990**
Total Variance	**Total DSP**		**£m**	**5.938**	**8.199**	**3.990**
	Payroll costs	PR	£m	**3.083**	**3.737**	**3.103**
	Non-payroll costs	NP	£m	-	-	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**2.855**	**4.462**	**0.887**
	Internal services	IS	£m	-	-	-
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-

	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

The overall Payroll Costs variance in RY23/24 is positive compared to a zero baseline, with incurred costs of £3.08m.

Table 3: Programme incurred by Team

Variance		RY23/24	RY24/25	RY25/26
DSP Payroll Costs	**£m**	**3.083**	**3.737**	**3.103**
Commercial and Regulation	£m	**0.426**	**0.458**	**0.363**
Design and Assurance	£m	**0.278**	**1.082**	**0.409**
Operations	£m	**0.171**	**0.539**	**0.582**
Security	£m	**0.167**	**0.429**	**0.431**
Service Delivery	£m	**1.736**	**1.177**	**1.319**
Testing	£m	**0.306**	-	-

Variance by Team

In RY23/24, the overall Payroll Costs variance is positive. All sub-teams show a material variance except Finance. Across RY24/25 and RY25/26, five sub-teams continue to show material variances. The reasons for such variances are set out below.

1.4. Drivers for Variance – Resource

As our Ofgem baseline is zero (set out at the start of this chapter), we have explained all the activities our sub-team members have worked on during RY23/24 and forecast through to RY24/25 and RY25/26.

1.4.1. Commercial and Regulation

The Commercial team sets commercial strategy and leads on supplier engagements and negotiations, ensuring that all procurements conform to regulatory requirements. It leads RFIs and ITTs across DCC to understand the market and to procure services. Once contracts are secured, the team then supports across contract management.

The Regulation team ensures that the DSP programme is in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem as applicable.

Activities driving change in resource in RY23/24

We had 3.8 FTEs working on the DSP programme. During this period, the Commercial & Regulation areas within the DSP Programme delivered the following activities across the three workstreams:

- **DSP Data System**:
  - Successfully obtained an OBC non-objection from DESNZ.
  - Conducted a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Launched, evaluated/moderated, and concluded a successful Selection Questionnaire procurement phase which enabled an initial down selection for the ITT phase.
  - Launched, evaluated/moderated, and concluded a successful ITT procurement phase which enabled a further down selection to the next procurement phase (Stage 2 Submissions) from bidders.

- Engaged extensively with DESNZ and customers across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
- Created a new Master Services Agreement (MSA) as a DSP contracting vehicle along with an associated set of Standard Operating Policies (SOPs)

- **DSP SI**:
  - Submitted an SOC and OBC to DESNZ
  - Created a procurement plan and mobilised a multi-functional procurement team.
  - Conducted a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Launched, evaluated/moderated, and concluded a successful Selection Questionnaire procurement phase which enabled an initial down selection for the ITT phase.
  - Prepared for commencement of the ITT phase in April 2024 subject to OBC non-objection from DESNZ.
  - Engaged extensively with DESNZ and customers.

- **DSP Contract Extension:**
  - Submitted an SOC and an FBC to DESNZ, successfully obtained an FBC non-objection.
  - Renegotiated existing contract with incumbent supplier at better terms, including a [redacted] reduction in the CGI rate card.
  - Signed "2+1+1" year contract extension with incumbent supplier in March 2024.

Activities driving change in resource in RY24/25 and RY25/26

During the period in question, the DSP Programme will be focused on delivering the following:

- On **DSP Data System**:
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with preferred bidders for each of the three procurement Lots through to contact award in October 2024
  - Obtaining a FBC non-objection.
  - Ongoing engagement with DESNZ and customers.
  - Ongoing contract management with new DSP vendor partners.

- On **DSP SI**:
  - Obtaining OBC non-objection.
  - Obtaining FBC non-objection.
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with the preferred bidder through to contract award in October 2024
  - Ongoing engagement with DESNZ and customers.

We forecast the level of support to be consistent across RY23/24 and RY24/25, to align with the major the procurement activity for the programme. For RY23/24, there were 2.6 FTEs from Commercial working on DSP. We expect to see a reduction in resources for RY25/26 as the focus shifts to contract management across the various services providers and key delivery milestones.

1.4.2. Design and Assurance (CTO)

This sub-team covers the architects and design authority to create and assure the design of systems and processes to deliver the programmes' services.

Activities driving change in resource in RY23/24

At early programme stages, CTO provides expert input into solution design and procurement for the Programme. or RY23/24, there were 6.5 FTEs from CTO working on DSP. During this period, the CTO area within the DSP Programme delivered the following activities across the three workstreams:

- **DSP Data System**:
  - Extensively contributed towards the technical related sections of DSP market engagement collateral.

- Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
- Extensively contributed towards the technical related sections of DSP procurement collateral.
- Engaged with bidders via an intensive ten-week collaborative solutioning phase which enabled accurate BAFO submissions.
- Evaluated and moderated bidder submissions from a technical perspective
- Contributed towards the SOC and OBC for the DSP Data Systems workstream.
- Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
- Managed the requirement collation and approval process
- Contributed towards a detailed set of high level and low-level requirements.
- Managed CTO deliverables through the internal DCC governance process.

- **DSP SI**:
  - Defined a detailed technical scope for the DSP SI service.
  - Managed the requirement collation and approval process
  - Contributed towards a detailed set of high level and low-level requirements.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards the technical elements of the DSP SI procurement collateral.
  - Evaluated and moderated bidder submissions from a technical perspective
  - Contributed towards the SOC and OBC for the DSP SI workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Managed CTO deliverables through the internal DCC governance process.

Activities driving change in resource in RY24/25 and RY25/26

During the period in question the DSP Programme will be focused on delivering the following:

- On **DSP Data System**:
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with preferred bidders for each of the three procurement Lots through to contact award in October 2024
  - Contributing towards the technical elements of the FBC.
  - Planning next phase delivery in conjunction with the successful vendors.
  - Leading the technical design phase with the successful bidders.
  - Engagement with DESNZ and customers.
  - Delivery of the Design and Build phase through to early 2026.
  - Delivery of the testing phase through to late 2026.
  - Delivery of the migration phase through to 2027.

- On **DSP SI**:
  - Contributing towards the FBC.
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with the preferred bidder through to contract award in October 2024
  - Successfully onboarding the new DSP SI.
  - Ongoing engagement with DESNZ and customers.

There is a planned increase in headcount in RY24/25, where we need to support and assure each aspect of the design and build phase. We expect to need 9.5 FTEs across various architecture, engineering and testing roles. Our forecast testing costs are included within our design and assurance cost centre, where we will continue the activities set out in section 1.3.6.

1.4.3. Operations

The Operations team ensures that processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes

the processes that customers will need to use to access and operate DCC services.

Activities driving change in resource in RY23/24

At early programme stages, we provide expert into programme design and solution procurement. For RY23/24, there were 1.5 FTEs from Operations working on DSP. During this period, the Operations area within the DSP Programme delivered the following activities across the three workstreams:

- **DSP Data System**:
  - Extensively contributed towards the Operations related sections of the DSP market engagement collateral.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards the Operations related sections of the DSP procurement collateral.
  - Engaged with bidders via an intensive ten-week collaborative solutioning phase which enabled accurate BAFO submissions.
  - Evaluated and moderated bidder submissions from an Operations perspective
  - Contributed towards the SOC and OBC for the DSP Data Systems workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Contributed to a detailed set of high level and low-level requirements.
  - Managed Operations deliverables through the internal DCC governance process.

- **DSP SI**:
  - Contributed to a detailed set of high level and low-level requirements.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards the Operations related sections of the DSP SI procurement collateral
  - Evaluated and moderated bidder submissions from an Operations perspective
  - Contributed towards the SOC and OBC for the DSP SI workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Managed Operations deliverables through the internal DCC governance process.

Activities driving change in resource in RY24/25 and RY25/26

During the period in question the DSP Programme will be focused on delivering the following:

- On **DSP Data System**:
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with preferred bidders for each of the three procurement Lots through to contact award in October 2024
  - Contributing towards the FBC.
  - Planning next phase delivery in conjunction with the successful vendors.
  - Engagement with DESNZ and customers.
  - Delivery of the Design and Build phase through to early 2026.
  - Delivery of the testing phase through to late 2026.
  - Delivery of the migration phase through to 2027.

- On **DSP SI**:
  - Contributing towards the FBC.
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with the preferred bidder through to contract award in October 2024.
  - Successfully onboarding the new DSP SI.
  - Ongoing engagement with DESNZ and customers.

Our forecast headcount increases to about 5 FTEs for RY24/25 and beyond to align with the design and build phase. It is at this point that we must work closely with programme team and the service providers to ensure we have

strategies and required functionality to transition the new DSP to enduring operations once the programme is complete.

1.4.4. Security

The Security teams ensure that any technical, data, or process changes is compliant with all security protocols and tested appropriately. These teams own the relationship with the National Cyber Security Centre (NCSC)and the SEC Security sub-committee (SSC) for these programmes.

We regularly meet with the SSC across each year to:

- Share programme definition document and other programme documents such as business cases
- Discuss the DSP security requirements
- Discuss user impacts from proposed solution architecture
- Review vendor responses

Activities driving change in resource in RY23/24

At early programme stages, we provide expert into programme design and solution procurement. For RY23/24, there were 1.2 FTEs from Security working on DSP. During this period, the Security area within the DSP Programme delivered the following activities across the three workstreams:

- **DSP Data System**:
  - Acting as Security SME/point of contact for the Programme
  - Extensively contributed towards Security related market engagement collateral.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards Security related DSP procurement collateral.
  - Engaged with bidders via an intensive ten-week collaborative solutioning phase which enabled accurate BAFO submissions.
  - Evaluated and moderated bidder submissions from a Security perspective.
  - Contributed towards the SOC and OBC for the DSP Data Systems workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Contributed towards a detailed set of high level and low-level requirements.
  - Managed Security deliverables through the internal DCC governance process.

- **DSP SI**:
  - Acting as Security SME/point of contact for the Programme
  - Contributed towards a detailed set of high level and low-level requirements.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards SI procurement collateral.
  - Evaluated and moderated bidder submissions.
  - Contributed towards the SOC and OBC for the DSP SI workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Managed Security deliverables through the internal DCC governance process.

Activities driving change in resource in RY24/25 and RY25/26

During the period in question the DSP Programme will be focused on delivering the following:

- On **DSP Data System**:
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Continue as Security SME/point of contact for the Programme.
  - Contract development with preferred bidders for each of the three procurement Lots through to contact award in October 2024
  - Contributing towards the FBC.

- Planning next phase delivery in conjunction with the successful vendors.
- Engagement with DESNZ and customers.
- Delivery of the Design and Build phase through to early 2026.
- Delivery of the testing phase through to late 2026.
- Delivery of the migration phase through to 2027.

- On **DSP SI**:
  - Contributing towards the FBC.
  - Continue as Security SME/point of contact for the Programme.
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Contract development with the preferred bidder through to contract award in October 2024.
  - Successfully onboarding the new DSP SI.Ongoing engagement with DESNZ and customers.

During the Design and Build phase, we work with the programme and service providers to provide security design and assurance support to the solution. This ensures that the end solution from the new service providers meets our high security requirements and that we consider any consequential impacts on the new DSP system on our connected systems or our customers' devices. We anticipate 3.3 FTEs for each year.

1.4.5. Service Delivery

The Service Delivery function manages the delivery of Programmes within DCC. Service Delivery roles include Programme Director, Programme Managers, Project Managers, Programme Management Office (PMO) and Business Analysts (BAs). These roles work together to deliver DCC Programmes to time, cost and quality, utilising best of class Programme delivery and risk management methodologies.

All Programme procurement is governed and controlled by DCC's Change Delivery Methodology (CDM) process which sets out a six-stage process to ensure change is delivered across DCC in a consistent and controlled way and does so in a manner that is compliant with DCC regulations.

The CDM provides a defined method of delivering end-to-end change within the DCC. It defines a repeatable staged approach, standards, and governance required to deliver change for our customers and internally, in a flexible, but controlled and auditable manner. It ensures that the right deliverables are produced at the right time and with the right level of stakeholder input and approval to help deliver targeted outcomes within the planned time, quality, and budget parameters.

Activities driving change in resource in RY23/24

For RY23/24, there were 10.4 FTEs from Service Delivery working on DSP. During this period, the Service Delivery area within the DSP Programme delivered the following activities across the three workstreams:

- **DSP Data System**:
  - Coordination of Programme delivery, including risk/issue/assumption/dependency management, Programme planning, functional resource planning and reporting.
  - Co-ordination of market engagement process.
  - Contribution towards Delivery related market engagement collateral.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards Delivery related procurement collateral.
  - Engaged with bidders via an intensive ten-week collaborative solutioning phase which enabled accurate BAFO submissions.
  - Evaluated and moderated bidder submissions from a Delivery perspective.
  - Worked alongside the DCC Centre of Excellence to manage the delivery of the SOC and OBC for the DSP Data Systems workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Contributed towards a detailed set of high level and low-level requirements.
  - Manage internal DCC governance processes.

- **DSP SI**:
  - Coordination of Programme delivery, including risk/issue/assumption/dependency management, Programme planning, functional resource planning and reporting.
  - Contributed towards a detailed set of high level and low-level requirements.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards Delivery related SI procurement collateral.
  - Evaluated and moderated bidder submissions from a Delivery perspective.
  - Worked alongside the DCC Centre of Excellence to manage the delivery of the SOC and OBC for the DSP SI workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Manage internal DCC governance processes.

- **DSP Contract Extension:**
  - Submitted an SOC and an FBC to DESNZ, successfully obtained an FBC non-objection.
  - Coordination of negotiation of existing contract with incumbent supplier at better terms.
  - Co-ordination of signed "2+1+1" year contract extension with incumbent supplier in March 2024.

Activities driving change in resource in RY24/25 and RY25/26

During the period in question the DSP Programme will be focused on delivering the following:

- On **DSP Data System**:
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Managing the contract development process with preferred bidders for each of the three procurement Lots through to contact award in October 2024
  - Managing the mobilisation plan and process
  - Managing the delivery of the FBC and associated internal DCC governance.
  - Planning next phase delivery in conjunction with the successful vendors.
  - Engagement with DESNZ and customers.
  - Programme management, Programme Planning and RAID management
  - Delivery of the Design and Build phase through to early 2026.
  - Delivery of the testing phase through to late 2026.
  - Delivery of the migration phase through to 2027.

- On **DSP SI**:
  - Managing the delivery of the FBC and associated internal DCC governance.
  - Successfully concluding the procurement activity through to the end of October 2024.
  - Managing the contract development with the preferred bidder through to contract award in October 2024.
  - Managing the SI mobilisation plan and process
  - Programme management, Programme Planning and RAID management
  - Successfully onboarding the new DSP SI.
  - Engagement with DESNZ and customers.

Our headcount reduces to about 15 FTEs for RY24/25 because our multiple procurement activities and our business cases will all be completed part way through the year. We will continue need programme and workstream support across RY24/25 and RY25/26 to ensure the multiple workstreams meet our schedule and budget, and progress all developments through our internal governance. We will also need regular reporting to Ofgem and DESNZ for external governance.

1.4.6. Testing

The Test Assurance team is responsible for ensuring that testing across DCC programmes and releases is set up and executed correctly. It aims to ensure that services meet the requirements and design and are free of defects when launched in production. Test Assurance supports these programmes in early stages of services by defining Test

Approaches and Strategies. It also provides support to the procurement of test services and assures the testing activity conducted by the appointed suppliers.

Activities driving change in resource in RY23/24

For RY23/24, there were 2.9 FTEs from Testing working on DSP. During this period, the Test area within the DSP Programme delivered the following activities across the three workstreams:

- **DSP Data System**:
  - Extensively contributed towards Test related market engagement collateral.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards Test related procurement collateral.
  - Engaged with bidders via an intensive ten-week collaborative solutioning phase which enabled accurate BAFO submissions.
  - Evaluated and moderated bidder submissions from a Test perspective.
  - Contributed towards the SOC and OBC for the DSP Data Systems workstream.
  - Contributed to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Contributed to a detailed set of high level and low-level requirements.
  - Managed Test deliverables through the internal DCC governance process.

- **DSP SI**:
  - Contributed to a detailed set of high level and low-level requirements.
  - Participated in a comprehensive market warming exercise with 20+ potential vendors which in turn led to an extremely high level of bidder submissions to the selection Questionnaire procurement phase.
  - Extensively contributed towards Test related SI procurement collateral.
  - Evaluated and moderated bidder submissions from a Test perspective.
  - Contributed towards the SOC and OBC for the DSP SI workstream.
  - Contrexibuted to both Customer and DESNZ engagement activities across both weekly DESNZ engagement and timetabled engagement with the various customer forums.
  - Managed Test deliverables through the internal DCC governance process.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

During RY23/24, there were material variances across our support from four external services. We expect his external support to continue into RY24/25 as we complete our DSP procurements and move to the design and build phase of the programme.

Table 4. Material variance for DSP non-resource internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement Type
DSP Legal Advice	ES	£m	0.704	0.976	-	[redacted]
DSP Design Partner - [redacted]	ES	£m	0.470	0.581	-	
DSP Commercial Partner - [redacted]	ES	£m	1.305	1.826	-	
[redacted] - Test Assurance	ES	£m	0.068	0.660	0.887	

1.5.2. DSP Legal Advice

DSP is fundamentally the 'brains' of the DCC network, enabling and managing secure message flow of data and communications between smart meters and the business systems of energy suppliers and network operators. These services are critical to realising the benefits of smart metering.
The current DSP solution has been in place for a number of years and is provided by a single vendor CGI. DCC now requires a new solution with improved performance, reliability and resilience and further that is secure, scalable, extensible and flexible to meet future demands and fulfil the DCC 's Licence obligations. The DSP new solution has been designed to support a disaggregated model, allowing DCC to appoint multiple best in class vendors and to drive maximum value for money. Accordingly, the DSP procurement has been divided into two separate competitions, DSP Core (involving three separate Lots) and DSP SI.

We sought external legal advice to support the re-tender of the DSP. Given the scale, complexity and importance of DSP to our network, we were unable to undertake this type of work in-house.

Driver for the Procurement

DCC sought external legal support to deliver the DSP procurement. There were a number of drivers for this:

- *Capacity*.
  - DSP requires significant dedicated legal resource. It comprises four separate procurements, each contemplating contract award at the end of November 2024 (almost a year in duration).
  - Because of the need to run a licence-compliant green book process, each of those separate procurements will involve DCC engaging with multiple vendors on its Term Sheet, MSA and SOWs – potentially with up to 16 bidders in parallel across the programme.
  - DCC had a legal team of four at the time the DSP procurement commenced (as there had been senior legal departures that needed to backfilled). Whilst one of those four could be dedicated primarily to the DSP procurement, DCC was simply not able to support this level of bidder engagement using internal resources alone.

- *Capability*.
  - The DSP procurement is a core/flagship programme, which is not reflective of typical DCC tenders nor of typical DCC workloads. It is exceptional activity, so there is not the justification to create additional in-house roles. Added to that, there is not a pool of individual legal contractor experts in regulated sourcing deals of this magnitude, whereby we could quickly scale up to the requisite number of lawyers and then scale down when the DSP procurement is over.
  - Accordingly, we ran a procurement amongst our [redacted] procured panel of law firms. We were seeking ldeep expertise in high value, strategic technology procurements of this kind (both from a procurement, regulatory and transactional perspective), with deep experience of our sector and market, and with significant bench strength to be able to support the resourcing needs of DSP.
  - Law firms are also able to bring significant legal infrastructure to support the DSP programme, for example, technology (e.g. document design, processing and management), meeting room space and facilities (both for negotiations and bidder presentations), and associated support services, all of which contribute to a successful procurement and which could not be replicated by DCC in-house.
  - Lastly, the costs of getting these deals wrong are substantial, not just from a procedural perspective (risk of bidder challenge), but more importantly from the perspective of being able to hold the appointed vendors to account contractually for delivering the service to DCC's needs and expectations and in a way that demonstrates value for money. External legal expertise provides DCC, and ultimately consumers, with that additional layer of quality assurance, which is critical for a procurement of the importance and magnitude of DSP.

Securing Value for Money

These services were provided pursuant to a Call-Off Contract under the DCC Legal Framework (which was put in place following a [redacted] tendering process).

DCC also issued a further RFP to all five law firms on the DCC Legal Framework and, following a clarifications questions process, received responses from all five firms.

The further procurement process consisted of four stages:

- Stage 1 – The submitted proposals were evaluated and scored against the agreed evaluation criteria which included quality and commercial. A financial stability was carried out against bidders.
- Stage 2 – Following the evaluation of the submissions, DCC invited all bidders to attend interviews at Ibex House in London. Interviews were carried out by DCC Legal and Commercial.

- Stage 3 – Further evaluation, scoring and moderations sessions were held where the two highest scoring bidders were identified.
- Stage 4 – Call-Off Contract signed.

Having conducted these competitive processes, DCC appointed two law firms to perform these services: [redacted] and [redacted]

DCC has demonstrated that the cost for these services is in line or better than market specifically: [redacted] agreed an [redacted] discount in comparison to the current agreed Legal Framework rates, as well as a [redacted] rebate for spend >£[redacted] CMS provided a [redacted] discount against the current agreed Framework rates.

The contracts are call off agreements on a time and material basis, and hence we can ask the firms to stop supporting without incurring additional breakage costs should this be the request of the Board, naturally this would present a material impact to the programme.

Lastly, we would point out that the budget for legal services has been set on the understanding that DCC's Commercial function will lead on the drafting and negotiation of the DSP Statements of Works (of which there are ten in total). This will be done in line with legal training and guidance and DCC's Legal function will only provide second line support. Also, DCC's Commercial function will own the portal to communicate with bidders.

Table 5. Summary of procurement approach

Procurement - DSP legal advice	
Number of Initial invitations to tender	5
Number of Bids received	5
Number of Bids shortlisted / presenting	5
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

1.5.3. DSP Design Partner – [redacted]

Driver for the Procurement

DCC requires a Design Partner to support the development of design documentation that will be used for the reprocurement of the current DSP solution. This requirement is critical to the DSP programme and given the required increase in demand to support the programme DCC does not have internal resource **with the requisite Cloud Application Architecture & Design skillset and** experience of DSP available to provide the services; therefore, the procurement of a third-party is required to deliver the DSP design services.

The Design Partner role will be to create high-level designs and support DCC in obtaining approval of the designs through DCC's governance process. The Design Partner will support this process both as a skilled resource that can contribute elements of the design and to work as an internal assurance partner checking that designs being proposed will deliver the proposed outcome.

The Design Partner will also support the evaluation of the architectural and technical elements of the DSP bidder proposals, and negotiation of the low-level designs with the DSP bidders.

The Design Partner will act as an extension to DCC's CTO team. The initial requirement is for four resources in total, a Lead Architect and three Senior Architects; however, DCC may require different resources through the term of the agreement.

Securing Value for Money

DCC issued an RFP to six market participants and, following a clarification question process, received responses from six market participants when the RFP closed on 24 October 2023.

Market engagement demonstrated that there was no rationale for splitting this procurement into lots. The suppliers who expressed an interest in providing the service could meet all requirements, with the vast majority of services being performed in house.

The procurement process consisted of five stages:

- Stage 1: Supplier Qualification
- Stage 2: Quality and Commercial Criteria evaluation, including proposal refinement.
- Stage 3: Proposal refinement & T&C markup
- Stage 4: Negotiations
- Stage 5 Award and Contract Signature

[redacted] was one of the two highest scoring bidders and were successful in proceeding to the negotiation stage of the procurement.

The recommended pricing structure was Time and Materials as the requirements could not be fully defined in detail at procurement and would therefore result in risk pricing. Furthermore, this pricing model provides flexibility to deal with peaks and troughs in demand for the resources. DCC is not committing to a minimum volume of resources for this contract.

The contract commenced on 18th December 2023 and was awarded for a one-year term.

Table 6. Summary of procurement approach

Procurement – DSP Design Partner – [redacted] ([redacted])	
Number of Initial invitations to tender	6
Number of Bids received	6
Number of Bids shortlisted / presenting	2
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

1.5.4. DSP Commercial Partner – [redacted]

Driver for the Procurement

As part of the wider DSP programme, DCC sought support from a specialist sourcing advisory provider to help it design and run two go to market exercises. We evaluated bids and shortlisted responses to refine and evolve solutions and negotiate contracts for the Design, Build, Test, and ongoing Operation. [redacted] provided a team of resources operating within the programme and acted as an extension to the DCC Commercial team engaged on the programme.

The resourcing was flexible to manage overall cost and skills required across the go to market exercises.

DCC Commercial managed [redacted] performance based on delivery to time and quality expectations.

Securing Value for Money

DCC issued an RFP to seven market participants and, following a clarification question process, received responses from six market participants when the RFP closed on 31st August 2023. The vendors were selected to participate in the RFP due to their specific expertise in this type of work.

Market warming sessions took place, and briefing sessions with Bidders were conducted following issuance of the RfP. Pre-qualification of non-framework suppliers was completed via supplier questionnaire. One supplier withdrew from the process after the RFP was issued.

The procurement process consisted of five stages:

- Stage 1 – The submitted proposals were be evaluated and scored against the agreed evaluation criteria. A financial stability check was also carried out for all bidders.
- Stage 2 – Following the evaluation of the submissions, DCC invited shortlisted bidders to attend a presentation session at DCC's London office Ibex House. Following the presentations, scores were revisited to reflect the content of the presentations.
- Stage 3 – Further negotiations were conducted including Best and Final Offer (BAFO).
- Stage 4 – Further Presentations/Interviews were carried out following on from BAFO.
- Stage 5 – Contract Award

Following completion of Stage 4, [redacted] obtained the highest total weighted score and were awarded the contract. The fees for the term of the contract are fixed at £[redacted] excluding expenses and VAT. There are additional optional services and optional deliverables, these are fixed at £[redacted] A decision surrounding the inclusion of this scope/deliverable will be decided within the term of the contact.

DCC has demonstrated that the cost for these services is in line with the market via a [redacted] between market leading providers. Proposals have been refined through the stages of the procurement process.

£[redacted] cost avoidance was achieved during the BAFO and negotiation stage. [redacted] was the second most cost-effective bidder out of the three shortlisted bidders and scored highest from a quality perspective and highest overall. Given that a flexible resource model has been proposed, the quantity of resources varies depending on the stage of the procurement; however, at the peak, there will be 8.4 FTEs.

DCC considers that outsourcing of the procurement for the DSP services delivers better value for money than using internal resources for the following reasons:

a) DCC procurement had 5 permanent FTEs as of October 2023. DCC procurement has been recruiting since June 2023, and of over 1000 applicants, only ten have been selected to join by the end of March 2024. As such, DCC has no permanent staff who can be re-allocated to this activity.

b) For DCC to recruit the permanent headcount required to deliver the DSP, a 9 – 12-month lead time would be required. Furthermore, the resource required to deliver this complicated procurement is scarce within the UK. As such, DCC would have to increase the pay rates significantly to attract the staff required. Even with additional money and time, it is not a given that DCC could resource this with permanent staff.

c) Maintaining the highly skilled team that would be recruited as above would result in a considerable ongoing stranded cost where the resources post DSP would have limited activity and be superfluous to requirements.

d) If DCC were to establish a team with the required skills and capabilities, it would not offer resilience for illness/team departures/maternity and paternity leave.

A 2-year contract was put in place on 8 October 2023; however, this includes a 'termination for convenience' clause, therefore if board approval is not obtained, DCC can terminate and assess an alternative delivery model.

Table 7. Summary of procurement approach

Procurement – DSP Procurement Commercial Support - [redacted]	
Number of Initial invitations to tender	7
Number of Bids received	6
Number of Bids shortlisted / presenting	6
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

1.5.5. Test Assurance – [redacted]

[redacted] supports the CTO function with resources across testing and assurance, as the requirement for these services across our programmes and operates fluctuate year-on-year.

Costs for testing and assurance support are included in the finance case for each individual programme business case and are assessed appropriately in terms of value for money. CTO manages its expenditure on its internal resources and [redacted] within agreed programme resourcing budget constraints.

Budget is forecast through RY24/25 and RY25/26 for the DSP programme. As the programme is currently in the concept to contract phase, any allocated [redacted] resources are providing testing input to the concept to contract phase. Inputs include (but are not limited to):

- Contributing to RFPs.
- Evaluation and selection of bidders to down-selection and appointment.
- Stakeholder management with governance bodies and forums.
- Assuring and defining high level solution and testing requirements.
- Definition of high-level testing approaches and principles.
- Working with potential service providers to inform the commercials related to testing.
- Drafting and reviewing contract schedules related to testing.

Where the DSP programme will proceed to the contract to market phase throughout RY24/25 and RY25/26, test assurance resource forecasts incrementally ramp up in support of test preparation, execution and closure assurance activities associated with PIT and SIT. Similarly to CH&N, the volume of [redacted] resources is likely to reduce from a peak of 8 FTE during SIT, split as 1 x Test Assurance Manager, 2 x Test Assurance Leads, and 5 x Test Assurance Analysts. Similar test assurance activities were conducted in SIT as for PIT, with multiple fix releases requiring assurance against both SP PIT and SIT throughout the SIT phase

Forecast for [redacted] resources are revisited periodically and budgets refined via quarterly Lock reviews. Where internal resources can fulfil demand this option is preferred over [redacted] with [redacted] forecasts adjusted accordingly. DCC Test Assurance is currently reviewing future internal resourcing options which may reduce future demand for [redacted] resource.

Refer to our chapter on our Design and Assurance (CTO) for the explanation of the procurement under External Services.

Data Communications Company

Network Evolution:

DCC Service Management System/Future Service Management

Version: 1.0
Date: 30.07.2024

Table of Contents

1 DCC Service Management Systems (DSMS)

Summary

What is this and why is it important?

The DCC Service Management System (DSMS) provides the platform for the day-to-day interactions between DCC and its customers, allowing service-related incidents to be raised and tracked to resolution. It also enables DCC to surface data management information for customers to access from the Self-Service Interface (SSI).

The current DSMS is provided with the Data Service Provider (DSP), and supported by Remedy/BMC Helix software. In RY21/22, we engaged with customers on plans to upgrade and extend the platform. SEC panel provided clear steer to consider broader functionality to deliver maximum customer value.

RY23/24 activities and costs

We incurred internal costs of £2.5m (including payroll and external services costs related to procurement activity).

As for our other programmes, we have strictly followed the Green Book regulatory process including sharing the programme timeline through the DSP LC13B consultation process and setting out the revised approach in our Strategic Outline Case in December 2023 (which received 'non-objection' from DESNZ in February 24).

Throughout the process, we discussed the business needs of users and gained agreement from SEC Panel and its sub-committees and reflected these in our SOC and OBC submissions. However, in order to comply with Ofgem's interpretation of the procurement rules set out in DCC's Licence, we conducted additional market testing on the proposed solution, which received unanimous support for DCC's (and customers') initial proposal, a ServiceNow solution.

The subsequent Request for Proposal (RFP) added time, complexity and cost to the process (and resulted in the shift to the Future Service Management programme (FSM)).

As outlined in more detail in the following chapter, external services costs were integral to ensuring that the customer was at the centre of solution design and the programme delivered meaningful change.

Future activities and costs

We are forecasting internal costs for RY24/25 of £1.7m, driven by payroll and external services, representing a decrease in costs vs RY23/24.

Having assessed five formal bids to deliver FSM, we have selected two bidders who offer materially better technical and financial value to our customers. We are now undertaking detailed negotiations with these two bidders ahead of planned contract award in September 2024.

Our forecast external service spend is driven by the need for specialist testing support in the Concept to Contract phase which cannot be delivered in-house, with the aim of commissioning the new capability in October 2025. As we progress, we forecast a gradual decrease in total internal costs.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource

and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline			RY23/24	RY24/25	RY25/26
Total DSMS		**£m**	**-**	**-0.000**	**-**
Payroll costs	PR	£m	-	-0.000	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total DSMS		**£m**	**2.503**	**1.743**	**1.304**
Payroll costs	PR	£m	1.519	1.397	1.198
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	0.984	0.347	0.106
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total DSMS		**£m**	**2.503**	**1.743**	**1.304**
Payroll costs	PR	£m	**1.519**	**1.397**	**1.198**
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**0.984**	**0.347**	0.106
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-

Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the DSMS cost centre.

Baseline		**RY23/24**	**RY24/25**	**RY25/26**
DSMS Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
DSMS Payroll Costs	**£m**	**1.519**	**1.397**	**1.198**
Commercial and Regulation	£m	0.098	0.239	0.039
Design and Assurance	£m	0.155	0.009	0.004
Finance	£m	0.000	-	-
Operations	£m	0.094	0.435	0.578
Security	£m	0.062	0.052	0.053
Service Delivery	£m	1.038	0.662	0.524
Testing	£m	0.073	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
DSMS Payroll Costs	**£m**	**1.519**	**1.397**	**1.198**
Commercial and Regulation	£m	0.098	**0.239**	0.039
Design and Assurance	£m	**0.155**	0.009	0.004
Finance	£m	0.000	-	-
Operations	£m	0.094	**0.435**	**0.578**
Security	£m	0.062	0.052	0.053
Service Delivery	£m	**1.038**	**0.662**	**0.524**
Testing	£m	0.073	-	-

1.1.2. External Costs

There were no material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24 related to DSMS or FSM.

1.2. Purpose, Scope, and Structure

1.2.1. Background

DSMS provides the platform for the day-to-day interactions between DCC and its customers, allowing DCC customers to raise service-related incidents and track their progress to resolution. It is the key system for all service management-related activities for DCC, providing core functionality and capabilities including management of incidents and work orders as well as acting as a repository of information including coverage and future change. It also enables DCC to surface data management information for customers to access from the Self-Service Interface (SSI).

The system handles a high volume of activity, with monthly average of:

- 12,100 incidents.
- 1,700 service management requests.
- 300 change requests.
- 12 problems.
- 11,500 returns.

With roughly 20,000 meters being installed each week, these volumes are expected to continue to rise and DCC must provide a service that caters for this. We consistently strive to handle complex and large-scale operational challenges with robustness and a new DSMS is required.

The current DSMS is provided by the DSP (CGI) and is supported by a software application called Remedy/BMC Helix. DCC is the only company that uses this platform, it is heavily customised for DCC's purposes and CGI has confirmed it intends to withdraw the service when the current DSP contract term expires.

The purpose of the Future Service Management (FSM) programme is to procure a replacement capability for the Remedy/BMC Helix capability that meets the business needs identified with our Service Users and included in the Strategic Outline Case submitted to the Department on 21 December 2023:

1.2.2. Scope

The DSMS programme was initially active between 1 April and 6 July 2023. At the beginning of RY23/24, the scope of the programme was positioned as part of the CH&N programme as follows:

- Provision of a replacement system for BMC Remedy as the DSMS.
- Provision of an Order Management System (OMS) for the 4G Communications Hub and Network (CH&N) programme.
- Provision of a Logistics capability for the 4G CH&N programme.

Following correspondence from Ofgem in June 2023 that DCC's process needed to comply with the full requirements of Fundamental Service Capability procurements, DCC revisited its plans. In October 2023, DCC went out to the market with a full competitive Request for Proposal (RFP) under a new programme called Future Service Management (FSM). This reflects our focus on finding the right outcome for consumers while balancing customer, government and the regulator's preferences for service functionality, delivery timelines, and costs.

DCC concluded that the Logistics capability for the 4G CH&N programme should be retained within the scope of that programme for achievement of its objectives supporting the 4G rollout.

The revised scope of the programme was set out in the SOC as follows:

- The existing scope of DSMS including Self Service Interface (SSI),
- Self Service Management Interface (SSMI), and,
- Returns of Smart Metering Equipment Technical Specifications 2 (SMETS2) Communications Hubs (CHs).
- The question of whether to also include forward ordering functionality for 4G Comms Hubs (currently not in scope of DSMS) is under consideration with the Department, and separately with SECAS parties.

Timeline

At DESNZ's request, FSM was included within the DSP LC13b Consultation process, and through that consultation, the programme plan timeline was established to support the FSM procurement using the HM Government Green Book process.

DCC considered three options for the timing of FSM:

1. Continue BAU.
2. Implement replacement system ahead of DSP.
3. Implement replacement system at the same time as DSP.

Based on the balance of cost, benefit, and risk, DCC concluded that deploying FSM ahead of DSP was the best option because it delivers the business needs of the programme, while minimising the operational risk of running an out-of-date service, and the integration risk of two suppliers commissioning into the same environment. This logic informed the FSM timeline that DCC set out for consideration by industry within the LC13b consultation, and DCC explained that logic further within the OBC submission.

DCC's proposed timeline for the three Green Book business cases required was set out in this document The Revised Delivery Plan for Continuation of Data Services (DSP) | Smart DCC and agreed through the dates set out here:

Table 1: The Revised Delivery Plan for Continuation of Data Services (DSP)

Consultation Opens	09/11/2023
Customer Webinar	01/12/2023
Consultation Closes	15/12/2023
Conclusions submitted to DESNZ	26/01/2024

The dates published in the DCC conclusion document are here:

Table 2: FSM timeline

Strategic Outline Case Submission	22/12/23
DESNZ decision on non-Objection to Strategic Outline Case	02/02/24
Outline Business Case Submission	05/03/24
DESNZ decision on non-Objection to Outline Business Case	05/04/24
RFP Issued	08/04/24
Full Business Case Submission	30/07/24
DESNZ decision on non-Objection to Full Business Case	30/08/24
Award Contract	02/09/24
Control Point 1 (Contract Award)	09/09/24
Proposed scope of regulatory change	20/09/24
Control Point 2 (Detailed Design)	02/12/24
Confirmation of regulatory change	30/03/25
Go Live	25/10/25

As a reflection of our desire to respond to customers' needs, in November 2023, DCC shared an update on the FSM programme's overall objectives and proposed outcomes with the Operations Group (OPSG), Technical Architecture Business Architecture Sub-Committee (TABASC) and Security Sub-Committee (SSC). The DCC also shared a list of

candidate user business needs, based on the user pain points that the DCC had identified with the existing solution. Customers were asked to identify which were mandatory and which were desirable, as well as whether they had any further needs that they would like the DCC to deliver as part of the programme.

Several responses were received, and DCC returned to OPSG and SEC Panel in December 2023 to share updated business needs, taking on board stakeholder feedback. The OPSG and SEC Panel supported the business needs, and the SOC was submitted on 21 December 2023. The non-objection to the SOC was received from DESNZ on 2 February 2024.

Following further engagement with SEC Panel and sub-committees that confirmed the nature of Mandatory and desirable business needs, the OBC was submitted to DESNZ on 5 March 2024.

On 23 April 2024, DESNZ wrote to DCC confirming that it had "not identified issues at this OBC stage that could constitute grounds for withholding a future non-objection to DCC's proposed procurement of Relevant Service Capability." The Full Business Case (FBC) is due to be issued to the Department on 30 July 2024.

At the time of writing, we have assessed five formal bids, with two offering materially better technical and financial value to customers. These have been down-selected, which will enable us to facilitate a robust collaborative approach to develop a quality solution that minimises "surprises" after contract signature. We are now in detailed negotiations with these two bidders ahead of planned contract award on 2 September 2024.

1.2.3. Programme Structure

It should be noted that the sub-team structure within the payroll system (below) does not always match the DSMS programme structure set out in the table below. To deliver the service in the most efficient way, resources from different sub-teams are deployed and prioritised across the service as needed.

Table 3: Sub-team roles

RY22/23	RY23/24 Sub-teams	Description
Commercial & Procurement, and Customer Engagement.	Commercial and Customer Engagement	• The commercial procurement team set out the revised procurement strategy for the FSM programme to secure a now service provider to be responsible for the delivery of the new DSMS solution. This includes the unrestricted market warming briefing on 9 February 2024 to explain the objectives of the procurement, and that it was product-agnostic. This meant that DCC would not specify any tools for the potential bidders to include in their proposals. • The commercial contract management team provide the interface for the programme to DCC's existing service providers to achieve the change requests required to coordinate and integrate the new solution into the existing DCC ecosystem, with appropriate challenge to ensure the best value for money is achieved. • The customer engagement team ensure that the progress of the programme is regularly communicated to customers through industry forums and SEC governance. This has been a significant piece of work during RY23/24 and this team proposed the creation of the Service Management Working Group forum that has allowed DCC to calibrate how best to meet the business needs with the new solution provider tool recommendations.
Architecture and Design	Design and Assurance	• The CTO team provides expertise on technical direction, definition, and evaluation of the FSM service provider recommendations for the technical solution, and specifically how to maximise the exploitation of 'Out of the box' functionality to minimise any customisations required, whilst ensuring the business needs can be achieved. • This team also ensures the integrity of the DCC solution architecture to ensure the solution has no adverse impact on the DSP solution or any other programmes in the DCC portfolio. The team guarantees that new functionality and changes to the architecture are fit for purpose and comply with the standards necessary to maintain a robust, consistent, and integrated technical infrastructure. • This team includes the business analysts who set out the functional and non-functional requirements within the programme Requirements Traceability Matrix to

RY22/23	RY23/24 Sub-teams	Description
		ensure appropriate management of the baseline requirements across internal and external supplier artefacts.
Finance	Finance	• This team supports the programme to ensure the revised programme financial forecast of external and internal spend is accurately represented within the DCC Lock process, and consistently represented in the Annual Business Plan and the Green Book business cases.
Operations	Operations	• This team ensures that DCC has properly considered the business needs of our business users, and that the changes to any processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes the processes that customers will need to use to access and operate DCC services. This team leads the engagement with our service users in coordination with the Customer Engagement team, including the preparation for and chairing of the Service Management Working Group.
Service Delivery	Service Delivery	• Service Delivery includes the Delivery Director, Programme Directors, Programme Managers, Project Managers, and Programme Monitoring Office (PMO), required to deliver the programme. These roles are standard for the delivery of major programmes. Work on a complex programme is broken down into work packages, each of which requires project management effort to deliver.
Security	Security	• This team ensures that the High-Level Architecture set out by CTO will meet all DCC security obligations, and that these security requirements are included within the new service provider designs. They ensure that the existing service providers' technical, data or process changes are compliant with all security protocols and tested appropriately. • This team takes the lead on engagement with the external Government security stakeholders and the SEC Security sub-committee.
Regulatory Affairs	Regulatory affairs	• This team ensures that the FSM programme is delivering in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem. • This team also ensures that FSM is properly represented within and alongside the DSP LC13b consultation process; and that the plan for FSM specific SEC changes are set out in a consultation timeline that allows industry sufficient time to consider and comment upon proposed changes. • This team leads the engagement with DESNZ to ensure the business cases are appropriately socialised with, and key points discussed with customers and SECAS so that DCC proposals are understood and supported.
Testing	Testing	• This team ensures that DCC's test approach for FSM is appropriate given this is somewhat different to traditional capability releases that require significant device testing. • This team sets out the methodologies for technical testing and user testing through the appropriate environments in a manner that supports customer requirements for the changes required to implement the new DSMS capability.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e., mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll is discussed within the next section.

Table 4: Variance from the RIGs by GL

				RY23/24	RY24/25	RY25/26
Total Baseline	**Total DSMS**		**£m**	**-**	**-0.000**	**-**
Total Incurred	**Total DSMS**		**£m**	**2.503**	**1.743**	**1.304**
Total Variance	**Total DSMS**		**£m**	**2.503**	**1.743**	**1.304**
	Payroll costs	PR	£m	**1.519**	**1.397**	**1.198**
	Non-payroll costs	NP	£m	-	-	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**0.984**	**0.347**	0.106
	Internal services	IS	£m	-	-	-
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

The overall Payroll Costs variance in RY23/24 is positive due to a zero-rated baseline, with incurred costs of £1.519 in RY23/24, and forecast costs falling to £1.198m in RY25/26.

Table 5: Programme incurred by Team

Baseline		RY23/24	RY24/25	RY25/26
DSMS Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
DSMS Payroll Costs	**£m**	**1.519**	**1.397**	**1.198**
Commercial and Regulation	£m	0.098	0.239	0.039
Design and Assurance	£m	0.155	0.009	0.004

Finance	£m	0.000	-	-
Operations	£m	0.094	0.435	0.578
Security	£m	0.062	0.052	0.053
Service Delivery	£m	1.038	0.662	0.524
Testing	£m	0.073	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
DSMS Payroll Costs	**£m**	**1.519**	**1.397**	**1.198**
Commercial and Regulation	£m	0.098	**0.239**	0.039
Design and Assurance	£m	**0.155**	0.009	0.004
Finance	£m	0.000	-	-
Operations	£m	0.094	**0.435**	**0.578**
Security	£m	0.062	0.052	0.053
Service Delivery	£m	**1.038**	**0.662**	**0.524**
Testing	£m	0.073	-	-

Variance by Team

In RY23/24, the overall Payroll Costs variance is positive. Sub-teams that are causing variance are Commercial and Regulation (in RY24/25), Design and Assurance (in RY23/24), Operations (in RY24/25 and RY25/26) and Service Delivery (in RY23/24, RY24/25, and RY25/26). The reasons for such variances are set out below.

1.4. Drivers for Variance – Resource

The DCC is a regulated business, and, as such, it has many stakeholders including DESNZ, the energy industry, SECAS, and Ofgem. The requirement to regularly consult and engage with these entities throughout the programme drives significant activity and associated costs in the areas of programme management and governance.

The main purpose of the resources allocated to the FSM programme for RY23/24 and RY24/25 is to ensure that DCC achieves:

- A full competitive Request for Proposal (RFP), through the Green Book process, in sufficient time for the DCC to award a contract by 2 September 2024.
- For DCC to work with the supplier awarded that contract to Commission the new capability by 25 October 2025, to successfully achieve the delivery Design, Build, and Test across all the suppliers that comprise the whole of the DCC enterprise.

DCC's ExCo directed the programme to work to this aggressive schedule in order to protect the service to our users, whilst fulfilling the DCC's Licence and other obligations under the Smart Energy Code (SEC), by:

- Replacing the existing DSMS system as quickly as possible because it is unsupported.
- Implementing the new DSMS capability ahead of Data Service Provider (DSP) to ensure a stable service for that larger and more complex enterprise-wide change.

The FSM programme team set out the revised plan and the internal resources required to achieve it through the DCC Lock process in October 2023 and again in May 2024. It is this allocation of resources that has driven the variations.

At the time of writing, DCC has achieved all its milestones in RY23/24 to the plan consulted upon through the DSP LC13b process.

DCC has introduced a time recording system to correctly allocate the costs of internal resources to programmes. During RY23/24, colleagues from across the business have been involved in working with the programme. Some of

these colleagues have been allocated on a full-time basis whilst others have contributed to an ad-hoc advisory capacity.

The resource costs incurred are proportionate to the successful delivery of such an aggressive and complex technical delivery programme that effects all DCC's service users, all DCC's service providers, and a significant proportion of DCC's operations staff that run our service.

DCC anticipates the bulk of the resources will be consistent through RY24/25 and start to ramp down in RY25/26 following the commissioning event in October 2025 and transition into the operational "Run" phase.

The programme intends to close by the end of RY25/26 and so there are no programme resources currently forecast for later years.

1.4.1. Commercial and Regulation

Activities driving change in resource in RY23/24

The commercial procurement team set out the revised procurement strategy for the FSM programme to secure a new service provider to be responsible for the delivery of the new DSMS solution. This included significant effort to design, plan, and set out the most effective procurement that allowed the achievement of a contract award by September 2024. This includes the unrestricted market warming briefing on 9 February 2024 to 20 companies explain the objectives of the procurement, and that it was product-agnostic. This meant that DCC would not specify any tools for the potential bidders to include in their proposals. 13 bidders that indicated they wished to receive the RFP and this was prepared for issue on 8 April.

The commercial contract management team provide the interface for the programme to DCC's existing service providers to achieve the change requests required to coordinate and integrate the new solution into the existing DCC ecosystem, with appropriate challenge to ensure the best value for money is achieved. This team worked with CTO to draft over 20 CRs for issue to DCC's existing service providers following receipt of the OBC non-objection. This effort required cross-functional engagement within DCC and bilateral discussions with the existing service providers to prepare them to turn around the responses in the most expeditious manner.

The customer engagement team ensure that the progress of the programme is regularly communicated to customers through industry fora (including small suppliers' meetings and the supply chain working group) and the regular SEC sub-committee and Panel meetings for SEC governance. This reflects again our practice of taking on board stakeholder feedback through regular communication. This engagement has been a significant piece of work during RY23/24 and focussed on three streams of engagement:

1. Seeking industry agreement on the business' needs they wanted to see within the business cases (including regular sub-committee meetings and bilateral interviews with industry representatives with strong practitioner experience of working with DSM).
2. Seeking sub-committee and Panel of the statements relating to business needs within the two cases submitted to DESNZ in RY23/24 namely the SOC and OBC.
3. Establishing the creation of the Service Management Working Group forum that has allowed DCC to calibrate how best to meet the business' needs with the new solution provider recommendations for customisations of the 'out of the box' functionality.

The regulation team ensures that the FSM programme is delivering in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem. The principal activities for the regulation team related to the development of the SOC and OBC drafts, and the engagement with DESNZ on a weekly basis to ensure that DCC had properly considered their concerns.

This team also supported the FSM element of the DSP LC13b consultation process; and that the plan for FSM specific SEC changes are set out in a consultation timeline that allows industry sufficient time to consider and comment upon proposed changes.

Activities driving change in resource in RY24/25 and RY25/26

In RY24/25, the Commercial procurement team will require support from DCC Legal to ensure the preferred bidder down-select and contract negotiations are achieved to award a contract for FSM by 2 September 2024. At the time of writing, the programme is reviewing whether some terms that are not material to the DBT phase (e.g. Run) may be deferred for agreement beyond this date. Once the full contract terms have been agreed, these resources will be stood down, and the contract will be handed over to the Commercial contract management team. It is anticipated this should be complete within the RY24/25 and this team will not be required in RY25/26.

The Commercial contract management team will continue through the entirety of RY24/25 and into RY25/26 as this programme impacts all DCC service providers, and this team will be responsible for the effective management of those services according to the existing contracts for both planned and unplanned changes. This work will require extensive engagement due to the number of other programmes, regular technical changes, and supplier re-procurements taking place across the DCC portfolio in these two regulatory years.

The customer engagement team will continue throughout RY24/25 and into RY25/26 to ensure that the progress of the programme is regularly communicated to customers through industry fora (including small suppliers' meetings and the supply chain working group) and the regular SEC sub-committee and Panel meetings for SEC governance. The Service Management Working Group has agreed in principle to support the programme through the DBT phases.

The Regulatory team will continue its support through FBC and the planning and execution of the FSM related SEC consultation due to complete by 30 March 2025. It is anticipated that this team will reduce to BAU levels for programme support in RY25/26.

1.4.2. Design and Assurance (CTO)

The CTO team provides expertise on technical direction, definition, and evaluation of the FSM service provider recommendations for the technical solution, and specifically how to maximise the exploitation of 'Out of the box' functionality to minimise any customisations required, whilst ensuring the business needs can be achieved.

This team includes the business analysts who set out the functional and non-functional requirements within the programme Requirements Traceability Matrix (RTM) to ensure appropriate management of the baseline requirements across internal and external supplier artefacts.

Activities driving change in resource in RY23/24

In response to the decision to stop the procurement alongside CH&N, this team was tasked with urgently revisiting the requirements and options for technical change to deliver a new capability between CH&N and the new DSP. This change required significant effort across DCC functions and with DESNZ and key industry stakeholders (primarily TABASC and SSC) to set out an effective Conceptual Architecture solution for FSM whilst ensuring that there will be no adverse impact on the DSP solution or any other programmes in the DCC portfolio.

The team allocated to FSM conducted weekly and monthly engagements with these groups and provided an approach that gained support from both TABASC and SSC. On this basis, this was carried into DCC's internal portfolio planning for the transition states of subsequent releases (particularly the DSP), the business cases, the high-level architecture designs and artefacts, including the RTM, that were issued within the FSM RFP document set.

Activities driving change in resource in RY24/25 and RY25/26

It cannot be understated how important the CTO effort in RY23/24 has been to minimise the risk to our service users, and to regularly communicate with them and other key stakeholders as DCC undertakes major programmes in quick succession.

It is anticipated that this level of effort will continue throughout RY24/25 and RY25/26. It is proportionate to the successful delivery of such an aggressive and complex technical delivery programme that effects all of DCC's service users, all of DCC's service providers, and DCC's operational teams.

This level of effort will reduce through successful testing and once the commissioning event has completed in RY25/26, this team will ramp down significantly.

1.4.3. Operations

This team is the sponsor of the FSM programme as the DSMS capability supports all of DCC's operations for our services to users.

This team also ensures that DCC has properly considered the business needs of our business users, and that the changes to any processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes the processes that customers will need to use to access and operate DCC services.

The Service Design team ensures that processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes the processes that customers will need to use to access and operate DCC services.

Activities driving change in resource in RY23/24

As programme sponsors, the Operation Change and Transition (OCAT) team within Operations has led or supported all engagements with:

- Our service users in coordination with the Customer Engagement team, including the preparation for and chairing of the Service Management Working Group.
- DESNZ on development and articulation of how those business needs will be set out within the SOC and OBC.
- Bidders and existing suppliers to ensure our requirements are fully set out and understood.
- Internal programme governance and working groups to support planning and decision making.

The Service Design team within Operations has completed extensive work with the current operational teams, new service suppliers, and the programme team to design the future target operating model, identify gaps from the existing service model, and plan the migration towards a fully managed service for the new FSM solution.

Activities driving change in resource in RY24/25 and RY25/26

It is anticipated that this level of effort will continue throughout RY24/25 and RY25/26 and that it is proportionate to the successful delivery of such an aggressive and complex business change programme that effects all of DCC's service users, all of DCC's service providers, and DCC's operational teams.

The programme intends to close by the end of RY 25/26 and so there will be a formal transition into the Run state by end of March 2026.

1.4.4. Service Delivery

Service Delivery includes the Programme Director, Programme Managers, Project Managers, and Programme Monitoring Office (PMO), required to deliver the programme. These roles are standard for the delivery of major programmes. Work on a complex programme is broken down into work packages and workstreams, each of which requires project management effort to deliver.

Activities driving change in resource in RY23/24

The main purpose of the Service Delivery resources allocated to the FSM programme for RY23/24 has been to ensure that DCC develops and communicates an end-to-end delivery plan that achieves:

- A full competitive RFP, through the Green Book process, in sufficient time for the DCC to award a contract by 2 September 2024.
- For DCC to work with the supplier awarded that contract to Commission the new capability by 25 October 2025, to successfully achieve the delivery Design, Build, Test and across all the suppliers that comprise the whole of the DCC enterprise.

To achieve this very aggressive end-to-end plan, the DCC ExCo agreed through the third quarterly Lock process:

- A Programme Director (PD) should be assigned to FSM throughout.
- One programme manager ramping up to two programme managers; one to continue the concept to contract planning; and the new one to develop the contract to market plans.
- Project managers: one supporting technical planning, and one supporting business change; ramping up to 3 with the additional pm being responsible for the development of the CRs required for existing service providers changes; allowing the technical PM to concentrate on the new service provider procurement.
- Project coordinators and 1 PMO analyst to support all the above.

In the concept to contract phase of the DCC lifecycle and to achieve the contract award through [redacted] procurement, the has established an overarching plan for making the key decisions across four "swim lanes":

1. Business Case governance (DCC and DESNZ).
2. New Service Provider procurement.
3. Existing Service Provider change requests.
4. Customer engagement (SEC sub-committees and Panel).

In the contract to market phase of the DCC lifecycle and to achieve the existing service provider contract changes,

integrated DBT, and commissioning milestones the SD team has established a plan for achievement of work packages that deliver:

- The procurement activities to select the new service provider.
- The change management activities required by existing service providers.
- The plans for integration testing of technical and service user testing ahead of commissioning.
- The business and regulatory change activities required to support the DCC and Service user process changes driven by the new solution.

At the time of writing, DCC has achieved all its milestones in RY23/24 and RY24/25 to the plan consulted upon through the DSP LC13b process.

Activities driving change in resource in RY24/25 and RY25/26

For RY24/25, it is anticipated that the two programme managers will be reduced to one once the OBC non-objection had been received and the business change activities are handed over to a dedicated project manager.

This means the revised resource allocated to the programme for the rest of the RY24/25 will be:

- One PD.
- Two programme managers reducing to one.
- Three project managers ramping up to four; the new PM being dedicated to support the integrated test phase given the complexity of planning required to deliver this across all service users and all service providers.
- Two PCs and one PMO analyst to support all the above.

This level of effort will continue throughout into RY25/26 ramping down through the testing phases and further reducing beyond the commissioning event.

DCC believes this level of resourcing is proportionate to the successful delivery of such an aggressive and complex business change programme that effects all of DCC's service users, all of DCC's service providers, and DCC's operational teams.

The programme intends to close by the end of RY 25/26 and so there will be a formal transition into the Run state by end of March 2026.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

During RY23/24, there were two non-resource variances, being [redacted] – Test Assurance and DSMS Resource Support.

Table 6: Material variance for DSMS non-resources internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement type
[redacted] - Test Assurance	ES	£m	0.097	**0.337**	0.106	[redacted]
DSMS Resource Support	ES	£m	**0.850**	-	-	

1.5.2. [redacted] – Test Assurance

[redacted] supports the CTO function with resources across testing and assurance, as the requirement for these services across our programmes and operations fluctuate year on year.

Costs for testing and assurance support are included in the finance case for each individual programme business case and are assessed appropriately in terms of value for money. CTO manages its expenditure on its internal resources and [redacted] in within agreed programme resourcing budget constraints.

Budget is forecast through RY24/25 and RY25/26 for the FSM programme. As the programme is currently in the concept to contract phase, any allocated [redacted] resources are providing testing input to the concept to contract phase. Inputs include (but are not limited to) contributing to RFPs, evaluation and selection of bidders to downselection and appointment, stakeholder management with governance bodies and forums, assuring and defining high level solution and testing requirements, definition of high-level testing approaches and principles, working with potential service providers to inform the commercials related to testing, and drafting and reviewing contract schedules related to testing.

Where the FSM programme will proceed to the contract to market phase throughout RY24/25 and RY25/26, test assurance resource forecasts incrementally ramp up in support of test preparation, execution and closure assurance activities associated with PIT and SIT. Similarly to CH&N, the volume of [redacted] resources is likely to reduce from a peak of 8 FTE during SIT, split as 1 x Test Assurance Manager, 2 x Test Assurance Leads, and 5 x Test Assurance Analysts. Similar test assurance activities were conducted in SIT as for PIT, with multiple fix releases requiring assurance against both SP PIT and SIT throughout the SIT phase.

In our Annual Business Plan, we forecast spend with [redacted] which is, at the time of writing, under review. Forecast for [redacted] resources are revisited periodically and budgets refined via quarterly Lock reviews. Where internal resources can fulfil demand this option is preferred over [redacted] with [redacted] forecasts adjusted accordingly. DCC Test Assurance is currently reviewing future internal resourcing options which may reduce future demand for [redacted] resource.

Refer to our chapter on our Design and Assurance (CTO) for the explanation of the procurement under External Services.

1.5.3. DSMS Resource Support

Driver for the Procurement

To ensure the original replacement DSMS programme delivered a viable and suitable service for customers, it was crucial for Smart DCC to ensure Customers, Service Providers, and DCC Users were engaged and interviewed in order to identify a clear set of requirements and Customer "Pain Points". The Consultancy services provided specifically skilled resources to support DCC in carrying out an independent set of investigations and deliver a Customer Journey for the DSMS solution, highlighting challenges, areas of usability improvements and ultimately a set of Customer led Business requirements. This ensured that Industry (Customer) needs were accurately reflected into the SOC and the OBC. This activity enabled industry to identify areas of change and DCC to consider that in the development and approval of the Business Needs which were signed-off and ratified through SEC Sub-committees.

The consultancy services provided under this contract also delivered a Value Framework and Business Change Engagement Model in which a set of experienced consultants worked with DCC to develop and industry recognised delivery framework for the evaluation and prioritisation for delivery of specific requirements and Customer needs. The framework provided required specific skills and experience which DCC did not poses, namely in the evaluation of on-going delivery trends and successful delivery mechanisms and brining wider experience to the programme to ensure DCC adopted a tailored best practice approach for assessing Customer needs and assessing potential SEC modifications. The framework has been put into use firstly on the Future Service Management Programme to work with Customers, enabling us to deliver:

- A SEC Sub-Committee non-objection to the framework.
- A Customer DSMS Practitioner Working Group (Service Management Working Group (SMWG)).
- A Service Management Working Group assessment against the Value framework for circa 50 system Customisations.
- Next Step: the final ratification through Sec Sub-Committees on the SMWG outcomes.

Due to the tailored Value framework provided, DCC is now able to represent the real needs of customers and ensure delivery of the Future Service Management Programme against Customer needs and be specific in the next phase of procurement. This specificity has enabled us to identify early in the process and SEC modifications required, value driven customisations, and ensure contract provision is suitable for what is required, reducing the risk of scope growth and Change Requests. The next phase of the programme will be utilising the Business Change methodology provided by the consultancy to deliver which is informing the engagement plans and ensuring the programme delivers meaningful change through the Future Service Management Programme.

Securing Value for Money

The DCC DSMS Programme Resource contract been procured through a full competitive process. Six companies were invited to bid, and two submissions were received.

Within the RFP document, Smart DCC requested bidders submit their capacity, outlined approach, specific relevant experience, conflicts of interest, and CVs to demonstrate they are eligible. This formed the 'quality' element of the evaluation.

The initial written response scoring took place between 15 and 17 March 2023. Following this, a moderation workshop was held on 20 March 2023. The purpose of the moderation panel was to scrutinise the initial individual written scores and where there was significant divergence in the scores of the core evaluation team, the panel would seek to clarify and understand areas of concern to be probed in the supplier presentations.

The outcome of the moderations highlighted that the written quality responses were all relatively strong from [redacted] and [redacted] and the quality scores were quite close. The panel proceeded with inviting [redacted] and [redacted] for the interview stage. The interviews were held on 31 March 2023.

Commercial Evaluation

Following the RFP response submissions, evaluations of the commercials and assumptions were carried out, along with a [redacted] check.
A summary of the procurement is set out below

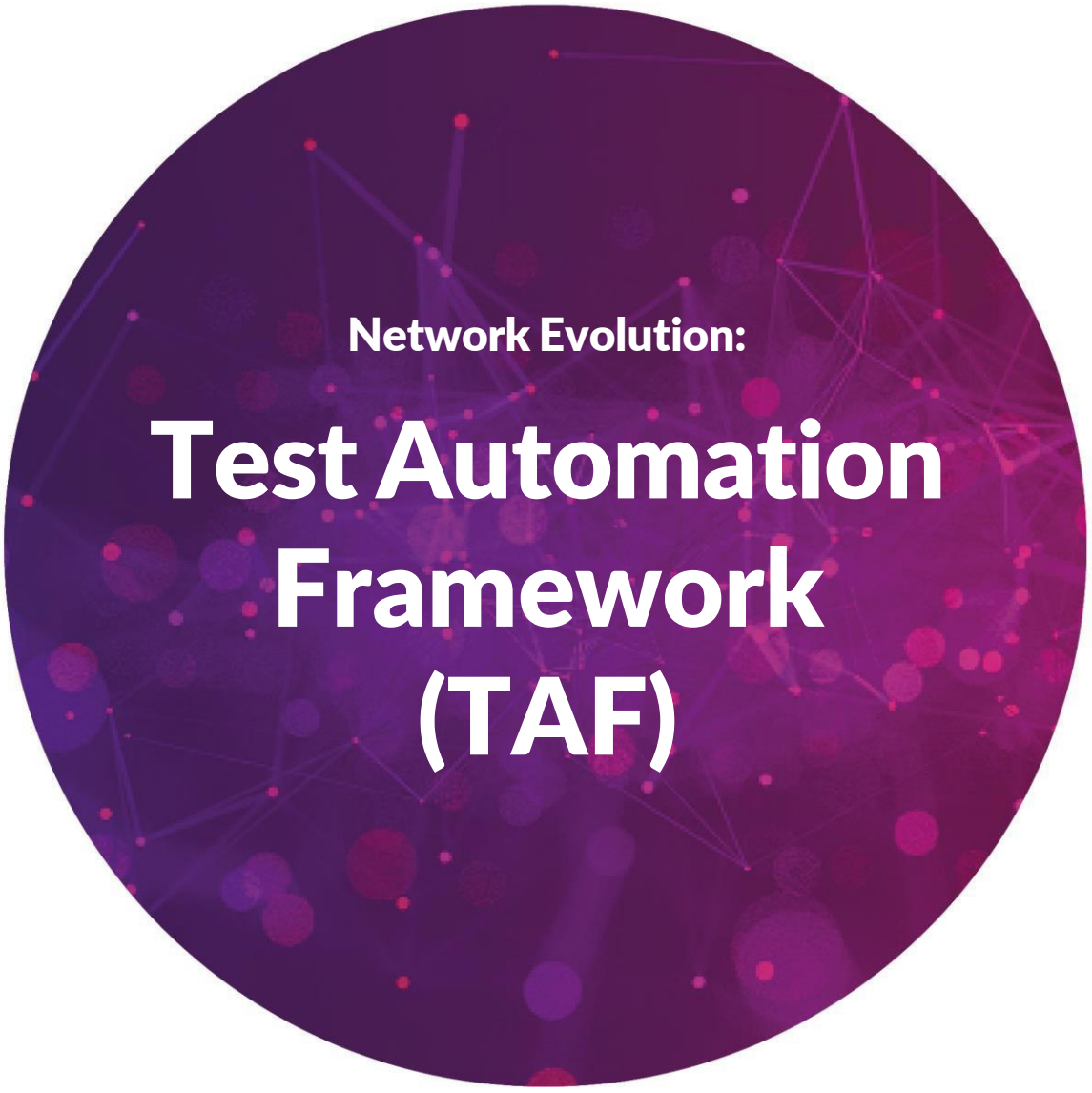
Table 7. Summary of procurement approach: DSMS Resource Support

Procurement – DSMS Resource Support	
Number of Initial invitations to tender	6
Number of Bids received	2 [redacted]
Number of Bids shortlisted / presenting	2
Strengths of Selected Bidder	[redacted]
Challenge by DCC	

1.6. External Costs

There were no material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24 related to DSMS or FSM.

Data Communications Company



Network Evolution:

Test Automation Framework (TAF)

Version: 1.0
Date: 31.07.2024

Table of Contents

1 Test Automation Framework (TAF)

Summary

What is this and why is it important?

DCC developed the Test Automation Framework (TAF) to improve its testing capability to deliver better system solutions at lower cost for customers. The programme will increase the speed of Regression and User Integration Testing (UIT), delivering cost savings while increasing test scope and device model combination coverage. This will be achieved through utilising enhanced, automated testing capabilities, which will provide greater value for money when testing SEC releases, maintenance releases and firmware releases.

Testing is an integral part of every change to DCC's network, big or small, and a mandatory part of specific types of changes.

By automating testing, DCC can run more tests, across more types of devices and therefore better identify and resolve issues before a system change is rolled out to a customer. Given the criticality of DCC's system, any change cannot compromise reliability or security before they released into the production environment.

We have been developing TAF since 2021 in response to results from our programme audits and feedback from customers. We submitted our business case to DESNZ (then BEIS) in 2022 (and it was approved in July 2022) setting our proposal for solution components under TAF and development of a test lab, including meters, comms hubs and robotics capability.

RY23/24 activities and costs

The £1.3m of internal costs are reported as variances due to the zero-baseline following our RY22/23 submission where TAF costs were reported under the Network Evolution programme. These costs (and therefore variances) comprise payroll and external services.

The payroll costs of £0.6m were driven by our Service Delivery and Testing teams working with our suppliers to complete the projects to schedule, to specification and in line with our governance requirements (which is clearly needed to undertake these activities).

Over RY23/24, we have been finalising the design and build of the TAF infrastructure ready for use by any programme, SEC release or in-life programmes. We followed a competitive process to appoint a contractor to build our new test lab facilities, with the first round of works completed in RY23/24, costing the majority of the £0.7m spent on external services (reported as a variance to the zero baseline from RY22/23).

Future activities and costs

Our forecasted internal costs for RY24/25 are £0.2m, with no material variances in any cost category. The remainder of 2024 activities on TAF will be testing and assuring our framework with our service providers, ahead of planned go live in January 2025.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline			RY23/24	RY24/25	RY25/26
Total TAF		**£m**	**-**	**-**	**-**
Payroll costs	PR	£m	-	-	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total TAF		**£m**	**1.343**	**0.197**	**0.012**
Payroll costs	PR	£m	0.595	0.072	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	0.712	0.113	-
Internal services	IS	£m	0.035	0.012	0.012
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total TAF		**£m**	**1.343**	**0.197**	**0.012**
Payroll costs	PR	£m	**0.595**	0.072	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**0.712**	0.113	-
Internal services	IS	£m	0.035	0.012	0.012
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the MHHS cost centre.

Baseline		RY23/24	RY24/25	RY25/26
TAF Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
TAF Payroll Costs	**£m**	**0.595**	**0.072**	**-**
Commercial and Regulation	£m	0.015	-	-
Design and Assurance	£m	0.015	0.042	-
Finance	£m	-	-	-
Operations	£m	0.007	-	-
Security	£m	0.052	0.010	-
Service Delivery	£m	0.352	0.020	-
Testing	£m	0.154	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
TAF Payroll Costs	**£m**	**0.595**	**0.072**	**-**
Commercial and Regulation	£m	0.015	-	-
Design and Assurance	£m	0.015	0.042	-
Finance	£m	-	-	-
Operations	£m	0.007	-	-
Security	£m	0.052	0.010	-
Service Delivery	£m	**0.352**	0.020	-
Testing	£m	**0.154**	-	-

1.1.2. External Costs

There were no material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24.

1.2. Purpose, Scope, and Structure

Under the terms of the SEC, DCC is required to undertake testing each time the DCC Total System is changed (Section D6.9). DCC considers regression testing to be an essential component of this testing, providing confidence that newly introduced functionality has not impacted existing functionality. Section H14 of the SEC also requires DCC to provide a service for DCC Users to conduct testing of their own systems against the DCC Total System.

DCC currently meets its responsibilities under D6.9 in Pre-Integration Testing (PIT) and System Integration Testing (SIT), and responsibilities in respect of DCC User testing under H14 through the provision and support of an UIT environment. PIT is conducted by the party delivering each component system of the DCC Total System (for example, Capgemini for the Dual Control Organisation - DCO) before those Systems are combined for integrated testing within the SIT Phase. The capability to conduct SIT testing as well as pre-testing of the UIT environment is currently provided by CGI.

Through bilateral engagements as well as more formal lessons learned exercises in 2019, DCC identified that for previous programmes and functional releases regression testing has not always been effective in picking up issues during PIT and SIT.[1] Customers further relate that this has a corresponding impact on the UIT phase, where issues that could have been identified through regression testing are still occurring. Key drivers of this situation include:

- Too few device combinations being used in regression testing – since the DCC Smart Metering service first entered live service there have been a significant number of new Communications Hubs variants and other Smart Metering Devices released, leading to an increase in supported device combinations. This number of combinations is significantly higher than the number currently supported by CGI regression testing
- Use of testing emulators in place of real devices – using real devices provides a more accurate representation of the behaviour of devices in the live environment, rather than simulated responses
- Insufficient coverage of Service Request Variants (SRVs) available in the DCC User Interface Services Schedule – current regression testing scripts cover only a proportion of the current range of SRVs.

In response to customer feedback and enhancements requested by DCC, CGI updated the solution along with other continuous improvement. However, the CGI solution remains limited in the number of devices it is able to support, and the nature of the solution means that a considerable number of manual breakpoints are included in a test run, which has the implication of either extending the time period taken to execute a test run or having to limit scope.

The current solution is also dependent on DSP solution elements (such as logging) to determine the outcome of a test case and still runs at a cost which DCC does not consider good value for money, with increases to test coverage under the current contractual arrangements attracting linear increases in cost.

DCC commissioned external expert analysis to identify the optimal solution. The analysis concluded that extended automation and the use of robotics would be a suitable mechanism to improve the effectiveness of regression testing activities.

DCC then followed the HM Treasury Green Book approach to submit its TAF proposal to DESNZ (then BEIS). As part of the development of the 2022 Full Business Case, DCC modelled the costs and benefits of the change programme and found significant value for customers over short and longer terms:

[1] Three reviews were conducted to suggest improvements the testing elements of the delivery of change:
- SEC Mod and BEIS Mandated Change Review – [redacted] – March 2019
- Review of System Integration Testing – Regression & Automation – Infosys – Jan 2019
- Test Performance Review - Gartner – July 2019

Figure 1: TAF Costs and benefits of the change programme

Cost / Benefit (Discounted £m 2022 terms)	3 year initial term	5 year extended term
Total Costs	£11.7m	£13.5m
Total DCC Benefit	£26.3m	£33.4m
Net DCC Benefit	£14.6m	£19.9m
Net Benefit (including Industry Benefits)	£17.1m	£24.0m

Source: DCC, Test Automation Framework: Full Business Case, June 2022.

Direct benefits anticipated from the new TAF solution (as evaluated in the Economic Case) relate to a reduction of costs compared to the current CGI solution for the following testing activities:

- SIT regression for SMETS 1 and SMETS2 SEC modifications - reduction in costs attributable to regression testing of SEC modifications compared to current arrangements
- SIT regression for SMETS 1 and SMETS2 maintenance releases – reduction in costs attributable to regression testing for regular maintenance releases compared to current arrangements
- SIT testing for DSP (DSP Data Systems) – reduction in costs attributable to regression testing to be conducted against the existing and any potential replacement DSP system as part of the DSP (DSP Data Systems) Programme.
- UIT Proving – reduction in costs attributable to testing undertaken in the UIT environment for the purposes of proving environment and Communications Hub product readiness for User Testing.

Indirect benefits anticipated from the new TAF solution include:

- Avoidance of programme delay and incident costs – increased scope of testing delivered through the TAF Solution leads to a reduction in defects found in later test phases and production, incurring a cost benefit in avoidance of programme delay and incident costs
- Avoidance of industry downtime related to incidents – extended device coverage provides the opportunity to identify more device-related issues during testing phase, reducing likelihood of live incidents and associated industry downtime and costs

1.2.1. Scope

The Test Automation Framework (TAF) programme was initiated in response to the growing complexity of the DCC Total System, which increases the scope, complexity and cost of the testing required when any modification to DCC Systems is made. This drives test complexity and expands testing scope, leading to an increase in costs required to complete testing both for the specific changes, but also more significantly for regression testing. The greatest increase in cost is being incurred during regression testing of existing code.

Introducing automation and robotics within testing will enhance the quality of testing, whilst decreasing costs and timescales for regression testing, where a level of maturity and stability should exist. This offers the ability to provide an on-demand regression testing service that can operate, if required, 24x7, with a higher activity throughout than manual tests and the introduction of real devices to any Smart Metering System under test.

The scope of TAF is to provide:

- Enhanced capacity to test with a wider range and increased volumes of real devices
- A cost-efficient approach enabling the potential for increased testing within regression testing windows through capability to extend hours of operation without operator intervention

- Delivery of a new solution in advance of procurement of new DSP Data Services allows the allows the solution to be thoroughly tested so that it will work effectively when proving the accuracy of the new DSP Data Services solution.

The TAF high solution will be delivered by a new service provider and through development of a test lab at DCC's Brabazon House in Manchester.

Figure 2: TAF scope schematic

Through a combination of traditional automation and robotics, an on-demand regression testing service can operate, if required 24x7, with a higher throughput than the current manual and semi-automated tests. The introduction of Robotic control to the solution, as well as facilitating 24/7 operation facilitates an efficient expansion of the number of real devices used in testing.

Additional / Enhanced Functionality provided by the TAF solution includes:

- Blackbox Testing - The TAF solution supports the validation of test case outcomes through means which are not proprietary to the DSP solution, thereby breaking the dependency between integrated testing and the DSP solution and so supporting future requirements for the testing of any potential DSP replacement.
- Device Coverage - The TAF solution will provide increased Device Coverage to the testing services as described below;
    - SIT - increase from the current capacity of 10 Meter Sets (the most used to date) to 80 Meter Sets
    - UIT Proving - increase from the current capacity of 10 Meter Sets (the most used to date) to 60 Meter Sets
  - This increase in capacity for Devices utilised in testing allows for a far greater coverage of Device Models within testing, supporting a more representative sample of the production estate to be utilised in testing and supports the testing of the Remote Test Lab and Wireless Instrumented Communications Hub variants in UIT Proving.
- SRVs - The scope of the regression pack for TAF covers all of the Service Reference Variants (SRVs), available from the applicable DUIS roles, using all available methods of future dating or immediate activation. The scope also allows for testing to replicate the behaviour of DCC Users by facilitating the use of SRVs in different sequences, whilst undertaking business processes, with the capability to send SRVs both sequentially and in parallel. Regression Testing carried out by CGI is a subset of the total available SRVs and business sequences, with no capability to perform parallel processing of SRVs within a business sequence.
- DCC Specific and Generic Errors - The scope of the regression pack accommodates wide coverage of specific and generic errors described within the DCC User Interface Specification.
- DCC Alerts - The scope of the regression pack accommodates wide coverage of the DCC Alerts described within the DCC User Interface Specification

- Device Level Data Validation and Interaction (Touchless Testing) - The TAF Solution supports the automated undertaking of interactions with physical Devices for tasks such as validating data items on a User Interface and the triggering of commands initiated at the Device, for example Top Up, Activate Emergency Credit, Enable Supply etc.

The TAF solution removes the technical link between regression testing and the CGI DSP solution and utilises robotics to remove the need for user interaction when running test scripts. Together this provides a more efficient and flexible regression testing service that delivers against all the key aims and objectives identified in the strategic case of this document.

Timescale

Our timeline plans go-live from January 2025, broken into the following testing milestones.

Figure 3: TAF 2024 milestones

Milestone	Planned finish
Test approach approval	July 2024
SIT A & B – CGI Build	August 2024
PIT assurance	September 2024
UIT A & B	December 2024
SIT assurance	January 2025

Key planned events and objectives driving activity and cost in RY23/24

RY23/24 was the Build phase of the TAF project. [redacted] completed designing and building the automation platform (Optimus) and the robots from Sastra arrived in the UK in June 2023. During RY23/24 the TAF project passed CDM Gate 3a which is the Design Phase. As part of Gate 3A the project produced numerous key artefacts e. g. High-Level and Low-Level Design, Architectural Design, Requirements Traceability Matrix, Business Requirements, RAID Log, Project Initiation Document, Full Business Case, Benefits Realisation Tracker.

During the redesign of the Brabazon Labs, it was decided that the Cassiopeia and Andromeda labs needed to join together to accommodate the required robots. Work was costed incorrectly based on reuse of the contractors who had originally built and fitted out the Brabazon labs so as not to negate any warranties. The Commercial team correctly advised in May 2023, that building works needed to be [redacted] procured to ensure a compliant award, under the obligations of the license, which had the unforeseen impact of delaying the project by six months whilst a procurement process was run. This also meant that storage costs had to be paid for the robots until installation could commence.

To mitigate further delay the project team repurposed a meeting room to be able to install a single stack of robots and start programming the TAF solution against DCC boxed. DCC boxed is a tool developed by Critical software that emulates the smart metering network. It is mainly used by device manufacturers who are not connected to the DCC network and so that they can test their meters.

Key milestones achieved in Q4 2023 are shown below

Figure 4: TAF Q4 2023 milestones

Month	Milestone
August	Mobilisation of the Sastra robotic installation team – first stack of robots installed for processing
August	Commenced "Tactical Proof of Concept" utilising TAF meeting room and "one set component" testing
August	Issued RFP for Lab infrastructure works
August	CDM Gate 3 achieved
September	[redacted] completed development of core components i.e., Optimus framework, Adaptor, RAF, and Logging software
September	Created the AWS hosting environment
September	Completed Sniffer module development with EDMI/Toshiba Communication Hub
September	Completed Facilities preparation including power upgrade, installation of 1GB fibre link and security changes for TAF Labs/ meeting rooms
September	Appointed [redacted] as "Principal designer" and "Contract administrator" for Lab works
October	[redacted] start the building works in Brabazon
December	Health and Safety (H&S) approval gained for Lab works
December	Installation of robots commenced

Robot installation was delayed in completion from February 2024 to the start of April 2024 due to a total power outage. After investigation it was found that residual earth currents from the robot solution was causing nuisance tripping of the power circuits. Independent power designers advised that the most cost-effective solution was to split the circuit rings to create radial circuits. Unfortunately, this meant that 12 cabinets had to be removed and reinstated, which resulted in a delay of one month.

Key planned events and objectives driving activity and cost in RY23/24

During Q1 RY24/25, testing continued against DCC Boxed whilst [redacted] worked through issues associated with connectivity between UIT_B Testing Environments. In May 2024 [redacted] managed to send and receive message within their environment. The project team are now finalising the transfer to operations and the extension of the connectivity to the other testing environments. The project is due to Go-Live in Aug 2024.

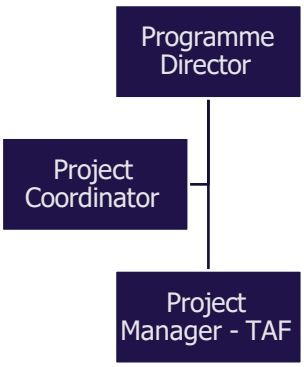
1.2.2. Programme Structure

Currently there is a single Project Manager assigned to the delivery of TAF

Project is funded through Technology Function – though I believe that this transitioned at some point during RY23/24 from Service Delivery.

The figure below shows how the programme was organised during RY23/24, and the key roles within each sub-team.

Figure 5: TAF Service Structure



The TAF Programme Manager is supported by resources from different sub-teams as needed, depending on the phase of the programme and types of skills required.

Table 1: TAF supporting sub-teams

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
Commercial and Regulation	No change	Sets the commercial strategy and leads on supplier engagements and negotiations. Ensures that all procurement conforms to the regulated conditions. Leads Requests for Information (RFIs) and Invitations to Tender (ITT) to understand the market and to procure services. Provides guidance and oversight of legal and compliance issues and drafting of contracts. Detailed legal support is contracted to an external law firm under the oversight of the Head of Legal. Plans, manages, and executes programme interactions with customers, including fora such as SEC Panel committees, Energy UK, and directly with customers. This is to ensure that customers are sighted on the programme and that the programme gets necessary input including to guide decisions on scope and business cases.
Design and Assurance	No change	Provides expertise on technical direction and definition of technical solutions, platforms, and methodologies. This is done to address current problems in delivering services and to facilitate the move to a future landscape. Ensures the integrity of the DCC solution architecture. The team guarantees that new functionality and changes to the architecture are fit for purpose and comply with the standards necessary to maintain a robust, consistent, and integrated technical infrastructure.
Finance	No change	Budgets, forecasts, and tracks actual spend, as well as supports on business cases.
Operations	No change	Ensures that processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes the processes that customers will need to use to access and operate DCC services.

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
Security	No change	Makes sure that any technical, data or process changes are compliant with all security protocols and tested appropriately. Owns the relationships with the National Cyber Security Centre (NCSC) and the SEC Security sub-committee.
Regulatory Affairs	No change	Ensures that the programme is delivering in line with DCC Licence Conditions, and proposed changes are understood and supported by DESNZ and Ofgem as applicable. Engages and consults with DESNZ, customers, and industry to understand existing problems and future needs and ensure that DCC proposals are understood and supported. The Regulatory Affairs team supports TAF to deliver this through DESNZ, customer, industry, and SECAS engagement.
Testing	No change	Ensures that testing methodologies and tools in the future DCC landscape are fit for purpose and utilise best practice. Redesigns the Brabazon Test Lab to ensure that TAF can be integrated.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e. mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll and Recruitment are discussed within the next section.

Table 2: Variance from the RIGs by GL

	Total TAF			RY23/24	RY24/25	RY25/26
Total Baseline	**Total TAF**		**£m**	**-**	**-**	**-**
Total Incurred	**Total TAF**		**£m**	**1.343**	**0.197**	**0.012**
Total Variance	**Total TAF**		**£m**	**1.343**	**0.197**	**0.012**
	Payroll costs	PR	£m	**0.595**	0.072	-
	Non-payroll costs	NP	£m	-	-	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**0.712**	0.113	-
	Internal services	IS	£m	0.035	0.012	0.012
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

The overall Payroll Costs variance in RY23/24 is positive, with incurred costs of £1.3m. TAF was reported as part of our Network Evolution Programme last year, and accordingly has no baselines set. The programme will transition to enduring operations during RY24/25.

Table 3: Programme variance by team

Variance		RY23/24	RY24/25	RY25/26
TAF Payroll Costs	**£m**	**0.595**	**0.072**	**-**
Commercial and Regulation	£m	0.015	-	-
Design and Assurance	£m	0.015	0.042	-
Finance	£m	-	-	-
Operations	£m	0.007	-	-
Security	£m	0.052	0.010	-
Service Delivery	£m	**0.352**	0.020	-
Testing	£m	**0.154**	-	-

Variance by Team

In RY23/24, the overall Payroll Costs variance is positive as the programme has a zero baseline. The sub-teams causing variance is Service Delivery and Testing, with the reasons for such variances set out below.

1.4. Drivers for Variance – Resource

1.4.1. Service Delivery

Service Delivery (SD) is a function in DCC which supports programmes and projects by coordinating across functions, driving implementation and meeting governance. The SD team drives consistency and efficiency in approach across DCC's programme portfolio and optimises the allocation of resources.

Activities driving change in resource in RY23/24

Service Delivery (SD) supported the project by providing Project Management resources and support from a Project Coordinator. SD provided one Project/Programme Manager and one Project Coordinator.

SD also provided the Change Delivery Methodology (CDM) which the TAF project follows. The CDM is a single defined method of delivering end-to-end change across the wide and varied portfolio of change within DCC. It defines a repeatable staged approach, standards, and governance required to deliver Change for our customers and internally in a flexible, controlled, and auditable.

Seven people were allocated to TAF from Service Delivery during the course of the year, which are explained in the following table.

Table 4: TAF resources from Service Delivery

ROLE	FTE
Governance Lead	0.01
Project Manager	0.70
Test Lab Service Manager	1.00

Project Coordinator	0.67
Head Of Transition and Testing	0.02
Programme Manager	0.09
Relationship Manager	0.09

1.4.2. Testing

The Testing team provided support to the project by producing the Test Approach and by working together with the Test Lab Operator and Service Provider for TAF (being [redacted]

The Testing team works with the SD to understand where and when resources are required across the programme, and allocate the relevant skillset for the programme phase.

Activities driving change in resource in RY23/24

Across the year, six people were provided by DCC's central Testing Team for different roles and timings, as described in the table below:

Table 5: TAF resources from Testing

ROLE	FTE
Service Introduction & Acceptance Manager	0.01
Test Governance Lead	0.06
Test Architect	0.08
Test Assurance Lead	1.00
Device Specialist	0.28
Test Assurance Analyst	0.60

These resources helped ensure the requirements for testing the TAF solution were fully scopes and specified, and then provided assurance across the service provider's (HCL's) activities.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

During RY23/24, there were cost increases across external and internal services compared to the zero price control baseline.

Table 6: Material variance for TAF non-resources internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement type
TAF - Test Labs Uplift [redacted]	ES	£m	0.477	-	-	[redacted]

1.5.2. TAF - Test Labs Uplift [redacted]

The existing lab infrastructure needed to be upgraded to provide the necessary facility requirements for the Test Automation Framework (TAF) project. This was achieved by appointing a contractor to combine the Andromeda and

Cassiopeia Test Labs at Brabazon House and the associated rewiring of electrics and supply of networking equipment.

The first round of works completed in RY23/24 undertaken by [redacted] was to convert two of the DCC standard Lab rooms in to one larger lab. This requirement came from the number of robots involved and H&S requirements. The main tasks [redacted] undertook included:

- Stripping existing Labs of all test bays.
- Removing the dividing wall between the labs, then re finishing the ceiling, walls, and floor.
- Patching the Radio Frequency shielding in ceiling, walls, and floor.
- Building the support wall for the test bays.
- Re-cabling the lab as per TAF requirements, with six circuits complete with breakers and all required testing and labelling of sockets and cables.
- Modifying the original test bays to accommodate the new robotics and creating holes for network sockets and mounting brackets.
- Refitting the modified test bays into the lab as per the agreed design layout.
- Installing 840 CAT5 network cables into the lab, terminating these into two new data cabinets and subsequently conducting all testing and labelling of network sockets, cables, and plugs.
- Cladding two walls with MDF and installing power and network sockets for the installation of the sniffer arrays.
- Removing and disposing of all waste.

Driver for the Procurement

These services are required to facilitate a new TAF solution which is being implemented to enhance the regression testing that DCC performs prior to implementing new solutions, or changes to existing solutions that form part of (or impact) DCC's Total System. The TAF project also provides assurance to DCC's customers of the robust testing and qualification of proposed smart solutions, and acts as an exemplar facility to demonstrate DCC's commitment to innovation.

The infrastructure upgrade needed to be outsourced as DCC does not have the construction capabilities to perform the works internally and the cost of the works was included in the budget for the infrastructure element of the TAF project.

Securing Value for Money

A [redacted] procurement process was followed under reference DCCT0280a with the RFP being issued to 11 suppliers with 1 bid received from [redacted]

A thorough evaluation concluded that [redacted] are a suitably placed supplier to meet DCC's requirements.

Their robust proposal and history of providing high-quality services for the initial creation of DCC's test labs in Brabazon House therefore familiarity of the site, provided DCC with the confidence that they have the capability and capacity to undertake the works.

[redacted] technical score was [redacted] out of a maximum of [redacted] The price submitted was within the agreed budget for the infrastructure element of the TAF project and would be paid in 3 stages.

The works were carried out in accordance with the agreed drawings and scope of works and were contracted via the [redacted] Contract under the management and supervision of an appointed independent third party [redacted] as contract administrators.

[redacted] ensured that the works were completed to the agreed specifications before issuing the instruction to DCC that payments could be made.

Table 7. Summary of procurement approach

Procurement	
Number of Initial invitations to tender	11
Number of Bids received	[redacted]
Number of Bids shortlisted / presenting	
Strengths of Selected Bidder	

1.6. External Costs

There were no material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24.

Data Communications Company

Network Evolution:

Public Key Infrastructure Enduring

Version: 1.0
Date: 31.07.2024

Table of Contents

1 Public Key Infrastructure Enduring (PKI-E)

Summary

What is this and why is it important?

The PKI-E programme was created to replace the system which protects the cyber security of DCC's smart metering services, known as the Trusted Service Provider (TSP). Without the implementation of the PKI-E programme, communication between devices would be more vulnerable to security attack, and this is therefore critical to maintaining operation.

PKI-E will enable DCC to continue providing a reliable and stable service for our customers and the replacement of the existing solution presents an opportunity to improve value for money, by increasing portability, reducing complexity and address technology obsolescence risk, adapting to emerging threats or increased demand from wider DCC programmes.

Through this programme we will competitively retender the TSP services and identify opportunities to optimise how we run all our PKI across our service providers.

RY23/24 activities and costs

DCC has strictly followed the Government's Green Book process, working very closely with DESNZ, and both the Strategic Outline Case and Outline Business Case were approved.

In RY23/24 we spent a total of £3.0m (including a £0.5m variance on payroll costs which had a zero baseline). These payroll costs relate to the Service Delivery team responsible for managing the programme through the Green Book process, DCC and service provider coordination, stakeholder forums, and also internal and external governance.

Future activities and costs

Our PKI-E programme is on schedule to go-live, as planned, in March 2026.

In 2024/25, work continues on the Full Business Case. Following successful completion of the Request for Information (RFI) procurement stage, DCC is currently reviewing shortlisted bids to down-select the most suitable supplier.

Our forecast costs increase as we transition towards delivery of the solution, which involves a wider scope of activities, a new supplier and testing, with ongoing oversight to ensure that our new solution meets our security requirements.

We will continue engaging with customers through the Smart Energy Code (SEC) sub-committees once we appoint our supplier and complete our design, build, and run phases.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline			RY23/24	RY24/25	RY25/26
Total PKI E		**£m**	**2.609**	**2.792**	**2.987**
Payroll costs	PR	£m	-	-	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	2.609	2.792	2.987
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total PKI E		**£m**	**3.036**	**3.845**	**3.787**
Payroll costs	PR	£m	0.550	0.705	0.446
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	2.486	3.139	3.341
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total PKI E		**£m**	**0.427**	**1.053**	**0.800**
Payroll costs	PR	£m	**0.550**	**0.705**	**0.446**
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-0.123	**0.348**	**0.354**
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the PKI-E cost centre.

Baseline		RY23/24	RY24/25	RY25/26
PKI E Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
PKI E Payroll Costs	**£m**	**0.550**	**0.705**	**0.446**
Commercial and Regulation	£m	0.064	0.080	-
Design and Assurance	£m	0.004	0.105	-
Finance	£m	-	-	-
Operations	£m	0.017	0.080	0.074
Security	£m	0.034	0.203	0.108
Service Delivery	£m	0.394	0.237	0.265
Testing	£m	0.036	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
PKI E Payroll Costs	**£m**	**0.550**	**0.705**	**0.446**
Commercial and Regulation	£m	0.064	0.080	-
Design and Assurance	£m	0.004	0.105	-
Finance	£m	-	-	-
Operations	£m	0.017	0.080	0.074
Security	£m	0.034	**0.203**	0.108
Service Delivery	£m	**0.394**	**0.237**	**0.265**
Testing	£m	0.036	-	-

1.1.2. External Costs

There were no material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24 for PKI-E.

1.2. Purpose, Scope, and Structure

1.2.1. Purpose

The PKI-E Services Programme was established to conduct a full [redacted] re-procurement of the TSP service, and to assess opportunities to consolidate other PKI applications within DCC's estate.

The current contract with BT for the SMKI (Smart Metering Key Infrastructure) and IKI (Infrastructure Key Infrastructure) services, also known as TSP, expires in March 2025. SMKI is used for securing all messages sent between DCC users and smart metering devices installed at consumer premises. IKI is used for securing interfaces

to SMKI (including the SMKI Portal and the SMKI Web service).

Without the implementation of the PKI-E programme, devices will not have capability to identify and confirm identity of the messages coming from other devices and service users, which will leave communication between devices vulnerable to security attack. Since devices will not be able to identify the messages, it will potentially affect the whole Smart Metering programme, which will stop functioning. Therefore, the service contract must be maintained in order to meet our licence requirements. Through completing the programme, we will continue to be able to provide a reliable and stable service for our customers and meet our licence obligations.

The Strategic Outline Case (SOC) was submitted to DESNZ on 30th May 2023, and following discussions with DCC, DESNZ responded on 26th June 2023 stating that they were content for DCC to progress to the Outline Business Case (OBC) stage. Proposals from suppliers are currently being evaluated by the respective DCC teams. We are taking on board stakeholder feedback through these discussions and proposals. The contract signature process is on track to be completed by mid-December 2024. All relevant Joint Industry Plan (JIP) milestones with DESNZ will be updated as per the revised plan.

The current high level programme plan with key milestones (including JIP milestones) is set out below.

Figure 1: PKI-E Plan on a Page

1.2.2. Scope

Following workshops with key DCC stakeholders, a range of scope options were developed and assessed. The preferred option for procurement was established as "SMKI, IKI and platform reusability". This would mean implementing the scope of the SMKI and IKI option and embedding options within the service to upgrade it to address emerging threats and customer-driven change. The preferred option splits into two workstreams:

1) Setting up the platform for success with the capability to make future improvements and supporting consolidation efforts.
2) Implementing the scope of option for current TSP services and establishing an extendable platform which gives DCC the capability to make improvements in response to emerging threats, and customer-driven change.

After analysing the options for different service solutions, including taking into account value for money, DCC chose a tailored option. The tailored option enabled the DCC to meet the scope as stated above using a managed PKI solution hosted in a third-party cloud environment. DCC will procure external services for the design, build and test of the new solution. As we seek a provider for our preferred solution, we will ensure that the chosen option will balance customer, government and regulator preferences for service functionality, delivery timelines, and costs.

Activity in RY23/24

In the reporting year, we have focussed on designing the programme scope and solution and documenting our proposals under the Green Book business case process for DESNZ. Once the project receives a Green Book non-objection from DESNZ, we will proceed to the design, build, and test phase. Our teams will ramp up to manage the service provider through to delivery and provide design, testing, and governance support across the process. We operate with a focus on providing a value-for-money service to our customers, which is partly achieved through [redacted] procurements.

In RY23/24, our focus was on releasing the RFI and RFP to the suppliers and obtaining a range of responses from suitable bidders. We have also completed business cases i.e. OBC (successfully completed), with FBC on track for completion.

Key planned events and objectives driving future activity and costs

We have set out our timeline in the table below.

Figure 2: PKI-E Timeline

Critical Path milestones	Actual date	Commentary
RFP initial evaluation and Moderation	08 May 2024	RFP evaluation and moderation completed.
CIO contract Signature	28 May 2024	[redacted] selected as Competent Independent Organisation (CIO), Contract signature to be completed
Final Supplier Selected	14 Aug 2024	Final supplier will be selected after due process
FBC Submitted to DESNZ	22 Oct 2024	Internal DCC approvals received. FBC issued to DESNZ.
DESNZ decision on FBC non-objection	27 Nov 2024	DESNZ decision on the FBC
Control Point 2	13 Dec 2024	DCC to consider whether further License Condition 13B (LC13B) consultation is needed
Contract Signature	20 Dec 2024	Contract awarded and vendor onboarding progresses. Design, Build, and Test (DBT) phase can commence.

In RY25/26, we will be focussing on delivery activities including design, build, and test. This will also include governance activities i.e. liaising with various governance and regulatory forums, updating technical assurance and governance boards, and liaising with release activities with third party suppliers.

1.2.3. Programme Structure

The PKI-E Programme is to procure a replacement to the SMKI and IKI security services in a cost-effective way. Activities started in RY20/21 with a tactical re-platforming of existing SMKI services to ensure business continuity, which was delivered in September 2022. The PKI-E Service Programme to address the longer-term needs was launched in FY21/22 and plans to reach Change Delivery Model (CDM) Gate 2 in November 2024.

The figure below shows how the programme was organised during RY23/24, and the key roles within each sub-team. As with any long-term programme, the structure of the team changes over time to reflect the focus of activities in any given period.

Figure 3: PKI-E Structure

programme structure illustrated in the figure above. To deliver the service in the most efficient way, resources from different sub-teams are deployed and prioritised across the service as needed.

Table 1: PKI-E Sub-teams

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
Commercial & Procurement	Commercial (Commercial and Regulation)	Sets the commercial strategy and leads on supplier engagements and negotiations. Ensures that all procurement conforms to the regulated conditions. Plays a key role in cost management throughout the procurement process. This includes analysing pricing structures, identifying cost-saving opportunities, and ensuring that procurement activities are conducted within budgetary constraints.
Architecture and Design	Architecture (Design and Assurance)	Provides expertise on technical direction and definition of the overall PKI technical solution, platform, and methodologies adopted. This is done to improve DCC's capabilities for delivering efficient and value for money services and to facilitate the move to a desired, strategic future landscape. Will assure the integrity of the DCC solution architecture, including assurance that any new functionality and changes to the architecture are fully comply with the standards necessary to maintain a robust, consistent, and integrated technical infrastructure that are fit for purpose.
Finance	Finance	Budgets, forecasts, and tracks actual spend, as well as supports on business cases.
Operations	Operations	Ensures that processes required to support the future DCC service and technical landscape are coherent, efficient, and properly defined to meet the needs of in-life operations, including SLAs. This includes

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
		the processes that customers will need to use to access and operate DCC service, support wrapper agreed with all parties and implemented. Ensure transition plan has been created and approved and in line with security and regulatory requirements and operational standards. All acceptance criteria and deliverables are met and evidenced prior to go/no go decision, including all defects agreed, reviewed, and accepted by DCC operations. Ensure warranty and hypercare requirements and deliverables are met prior to exit and acceptance into service. Work off items and technical debt agreed and approved. Service and business outcomes created, agreed, implemented, and monitored. Live Service Criteria is planned, evidenced, and submitted to OPSG prior to go live and formal approval received.
Security	Security	Makes sure that any controls protecting the data or process changes are compliant with all security protocols and tested appropriately. Owns the relationships with the National Cyber Security Centre (NCSC) and the SEC Security Sub-Committee.
Regulatory Affairs	Regulatory Affairs (Commercial and Regulation)	Ensures that PKI-E programme is delivering in line with DCC License Conditions and the SEC. This includes the development of consultations on delivery plans under LC13B. Helps to identify any changes required to the SEC and ensures that any proposed changes are understood and supported by our customers, DESNZ and Ofgem as applicable.
Testing	Testing	Ensures that testing methodologies and tools in the future DCC landscape are fit for purpose and utilise best practice.
Legal	Legal (Finance)	Review legal aspects of the RFP and advice on positions, such as intellectual property rights, data, and security. Evaluation of bids, in particular bidders' markup of contractual documents e.g. the term sheet, and subsequently full contract. Upon selection of preferred bidder, lead the contract negotiation. Provides guidance and oversight of legal and compliance issues and drafting of contracts. Detailed legal support is contracted to an external law firm under the oversight of the Head of Legal.
Customer Engagement	Customer Engagement (Commercial and Regulation)	Plans, manages, and executes programme interactions with customers, including fora such as SEC Panel committees, Energy UK, and directly with customers. This is to ensure that customers are sighted on the programme and that the programme gets necessary input including to guide decisions on scope and business cases. Engages and consults with customers, and industry to understand existing problems and future needs and ensure that DCC proposals are understood and supported. Acting as the conduit for the customers voice on DCC programmes
N/A – part of commercial and procurement	Procurement (Commercial and Regulation)	Ensures that all procurement conforms to the regulated conditions. Leads Requests for Information (RFIs) and Invitations to Tender (ITT) to understand the market and to procure services.

RY22/23 Sub-teams	RY23/24 Sub-teams	Description
		Leads evaluation and moderation of the bids from various suppliers. See through the complete procurement process from Request for Information to Contract signature.
N/A	Contract Management (Commercial and Regulation)	Provides detail on current contract, including all T&C's/Exit/Termination Assistance and has a full understanding of contractual obligations of both parties. Also to give insight on any commercial queries that arise across the project. Acting as the bridge between DCC and the incumbent supplier to ensure there is no degradation to the current service during Exit/Termination Assistance.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e. mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll and Recruitment are discussed within the next section.

Table 2: Variance from the RIGs by GL

	Total PKI E			RY23/24	RY24/25	RY25/26
Total Baseline	**Total PKI E**		**£m**	**2.609**	**2.792**	**2.987**
Total Incurred	**Total PKI E**		**£m**	**3.036**	**3.845**	**3.787**
Total Variance	**Total PKI E**		**£m**	**0.427**	**1.053**	**0.800**
	Payroll costs	PR	£m	**0.550**	**0.705**	**0.446**
	Non-payroll costs	NP	£m	-	-	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	-0.123	**0.348**	**0.354**
	Internal services	IS	£m	-	-	-
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

The overall Payroll Costs variance in RY23/24 is positive, with incurred costs of £0.550m. There is no baseline set for the programme, therefore all material resource costs are a variance.

Table 3: Cost Centre Variance by Team

Variance		RY23/24	RY24/25	RY25/26
PKI E Payroll Costs	**£m**	**0.550**	**0.705**	**0.446**
Commercial and Regulation	£m	0.064	0.080	-
Design and Assurance	£m	0.004	0.105	-
Finance	£m	-	-	-
Operations	£m	0.017	0.080	0.074
Security	£m	0.034	**0.203**	0.108
Service Delivery	£m	**0.394**	**0.237**	**0.265**
Testing	£m	0.036	-	-

Variance by Team

In RY23/24, the overall Payroll Costs variance is positive. The Service Delivery sub-team is the main cause of that variance and continues for RY24/25 and RY25/26. In RY24/25, the Security team has a material variance of £0.203m. The reasons for such variances are set out in the drivers for variance section.

1.4. Drivers for Variance – Resource

Security has a peak of spend for RY24/25 due to the CIO's PKI assessment, fieldwork, and other activities. Service Delivery has a variance due to its large role in helping to coordinate all the cross-functional teams from Programme inception, programme delivery, through to programme go-live. This was, in our previous submission, not sufficiently certain, hence the low baseline.

1.4.1. Security

The Security teams ensure that any technical, data, or process changes are compliant with all security protocols and tested appropriately. These teams own the relationship with the NCSC and the SEC Security Sub-Committee (SSC). Their make-up will flex according to the needs of the programme as it matures.

The Security team has a leading role in ensuring that the PKI-E Services service delivers its objectives and does so to schedule. This includes supporting discussions with suppliers and key stakeholders such as the SEC committees and the NCSC. The team is a crucial advisor to ensure the design of the PKI-E solution meets the stringent security requirements for DCC's deemed critical national infrastructure.

In RY2023/24, the Security team engaged with Business Analysts (BAs) and Procurement teams in refining the RfP requirements and reviewing responses from bidders. The Security team has been actively engaged ensuring requirement reflects the robustness of the system DCC is expecting supplier to deliver.

In RY24/25, the Security team will also engage with and manage Competent Independent Organisation (CIO) activities. The CIO will schedule and plan the DCC's PKI assessment, ensuring compliance against design, implementation effectiveness, the SEC G (Security Governance) and the SAF (Security Architecture Framework). These will include collaboratively conducting fieldwork as per the guidance from DCC SCF (Security Control Framework) and requirements.

In RY25/26, the Security team will ensure all the relevant frameworks will be complied with. During the DBT phase, Security team will be reviewing the design documents and security test plans. They will also be assisting Test Assurance teams with a review of security test plans and test results. Finally, the Security team will participate in scoping the penetration test and managing remediation of the findings.

There will be an increase in the engagement of the Security team members in RY24/25 and RY25/26 with the rest of the functions, including Design and Assurance, Operations, Service Delivery, CIO and Commercial, as we move towards implementation.

1.4.2. Service Delivery

Service Delivery includes the Programme Director, Programme Managers, Project Managers, PMO and BAs required to deliver the programme. Service Delivery supports the programme by coordinating across functions, driving implementation and meeting governance. The team drives consistency and efficiency in approach across DCC's programme portfolio and optimises the allocation of resources. Service Delivery is helping to coordinate all the cross-functional teams from Programme inception, programme delivery, through to programme go live. Service Delivery ensures all aspects of the programme are covered by adhering to our programme management governance processes.

Activities driving change in resource between RY24 and RY26

The team size is consistent across the three-year period to reflect the resource intensity required for the programme development phase through the Green Book process and procurement, before the programme shifts into delivery part-way through RY24/25.

Service Delivery will:

- Ensure that the end-solutions align with the expectations and requirements of the project stakeholders, including clients, customers, sponsors, and end-users. They will do this by delivering what was promised, thereby maintaining trust and satisfaction.
- Ensure that the products meet the required quality standards. This includes testing, verification, and validation processes to guarantee that the deliverables meet the desired specifications and perform as intended.
- Support value of money through the effective utilization of resources and seeking to avoid cost overruns or delays in the delivery.
- Identify and mitigate potential risks and issues that could impact timeline delivery of the project. They will do this by addressing risks proactively, such as technical issues, resource constraints, or external dependencies, service delivery helps minimize disruptions and ensures project continuity.
- Ensure that the intended outcomes are achieved while meeting stakeholders' expectations, maintaining quality standards, managing costs, and mitigating risks.
- On a weekly basis track the Risks, Assumptions, Issues, and Dependencies (RAID). The Delivery Management Office (DMO) helps the programme team to keep up to date with the RAID log, project milestones and planning activities in Clarity (our Project Management tool).

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

There is one variance in RY24/25 and RY25/26, this being for [redacted]

Table 4: Material variance for PKI-E internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement type
[redacted] - Test Assurance	ES	£m	0.029	**0.286**	**0.345**	[redacted]

1.5.2. External services – [redacted]

[redacted] supports the CTO function with resources across testing and assurance, as the requirement for these services across our programmes and operates fluctuate year on year.

Costs for testing and assurance support are included in the finance case for each individual programme business cases and assessed appropriately in terms of VFM. CTO manages its expenditure on its internal resources and [redacted] in within agreed programme resourcing budget constraints.

Budget is forecast through RY24/25 and RY25/26 for the PKI-E programme. As the programme is currently in the concept to contract phase, any allocated [redacted] resources are providing testing input to the concept to contract phase. Inputs include (but are not limited to) contributing to RFPs, evaluation and selection of bidders to downselection and appointment, stakeholder management with governance bodies and forums, assuring and defining

high level solution and testing requirements, definition of high level testing approaches and principles, working with potential service providers to inform the commercials related to testing, and drafting and reviewing contract schedules related to testing.

Where the PKI-E programme will proceed to the contract to market phase throughout RY24/25 and RY25/26, test assurance resource forecasts incrementally ramp up in support of test preparation, execution and closure assurance activities associated with PIT and SIT. Similarly to CH&N, the volume of [redacted] resources is likely to reduce from a peak of 8 FTE during SIT, split as 1 x Test Assurance Manager, 2 x Test Assurance Leads, and 5 x Test Assurance Analysts. Similar test assurance activities were conducted in SIT as for PIT, with multiple fix releases requiring assurance against both SP PIT and SIT throughout the SIT phase.

Forecast for [redacted] resources are revisited periodically and budgets refined via quarterly Lock reviews. Where internal resources can fulfil demand this option is preferred over [redacted] with [redacted] forecasts adjusted accordingly. DCC Test Assurance is currently reviewing future internal resourcing options which may reduce future demand for [redacted] resource.

Refer to our chapter on our Design and Assurance (CTO) for the explanation of the procurement under External Services.

Please refer to our chapter on CTO (Design and Assurance) for the explanation of procurement.

1.6. External Costs

There were no material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24 for PKI-E.

Data Communications Company

Enduring Change of Supplier (ECoS)

Version: 1.0
Date: 31.07.2024

Table of Contents

1. ECoS Programme

Summary

What is this and why is it important?

Enduring Change of Supplier (ECoS) is a Mandated Programme in accordance with Condition 13A.1 of the DCC's Smart Communication Licence. Under this, DCC must establish efficient, economic, coordinated, and enduring arrangements for the changing of Device Security Credentials on or following completion of a supplier transfer in respect of premises with a smart metering system.

The ECoS programme was mobilised to achieve three key objectives:

- Build a new ECoS solution and migrate all existing Transitional Change of Supply (TCoS) devices on the DCC network to the new ECoS solution by the end of April 2024.
- Install and commission new ECoS devices. This is achieved through the issuing of an updated manufacturing pack (containing the new ECoS security certificate) allowing customers to switch their manufacturing production lines from TCoS to ECoS devices from September 2023. This switchover process takes approx. 9-12 months to complete before new ECoS devices can be installed.
- Decommission the current TCoS solution in the DSP in October 2024 when the current DSP contract expires.

During 2022, the Department asked DCC to determine options for mitigating a risk associated with objectives 2 and 3. DCC, with support from the Department and SEC parties, proposed a change request to provide a backstop solution to allow customers to continue to install the residual TCoS meters after October 2024. This solution is known as Private Key Transfer (PKT).

RY23/24 activities and costs

The ECoS programme successfully delivered the first objective to build the new ECoS solution and went live on 28th June 2023 as planned. Migrations completed on 26th January 2024, well ahead of the April 24 target date.

Overall, we incurred £2.4m in internal costs on this programme, with payroll costs £0.1m lower than Ofgem's baseline. Regarding external costs, the majority of spend was on our Switching service providers to deliver the new ECoS solution, with all individual variances below the materiality threshold.

During RY23/24, the PKT solution was fully endorsed by our customers following wide engagement under SEC Governance. Indeed, as part of the Live Service Criteria (LSC) for ECoS Go Live in June 2023, the SEC Panel Chair, in her letter to the DESNZ, made the implementation of PKT a requirement to achieve LSC acceptance.

Future activities and costs

We anticipate reducing spend across our payroll costs. Within our sub-team resources, we expect a variance for our Design and Assurance sub-team in RY24/25 of £0.3m to reflect critical assurance activities as we reach programme completion.

We now have greater certainty over the skills and resources required than in our previous price control submission, underpinning a more robust forecast this year.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline			RY23/24	RY24/25	RY25/26
Total Enduring Change of Supplier (ECoS)		**£m**	**2.143**	**1.804**	**1.804**
Payroll costs	PR	£m	2.117	1.778	1.778
Non-payroll costs	NP	£m	0.026	0.026	0.026
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total Enduring Change of Supplier (ECoS)		**£m**	**2.362**	**0.849**	**0.012**
Payroll costs	PR	£m	2.002	0.849	0.012
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	0.360	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total Enduring Change of Supplier (ECoS)		**£m**	**0.220**	**-0.955**	**-1.792**
Payroll costs	PR	£m	-0.115	-0.929	-1.766
Non-payroll costs	NP	£m	-0.026	-0.026	-0.026
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**0.360**	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the MHHS cost centre.

Baseline		RY23/24	RY24/25	RY25/26
Enduring Change of Supplier (ECoS) Payroll Costs	**£m**	**2.117**	**1.778**	**1.778**
Commercial and Regulation	£m	0.080	0.080	0.080
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	0.254	0.254	0.254
Security	£m	0.063	0.063	0.063
Service Delivery	£m	1.283	0.943	0.943
Testing	£m	0.437	0.437	0.437
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
Enduring Change of Supplier (ECoS) Payroll Costs	**£m**	**2.002**	**0.849**	**0.012**
Commercial and Regulation	£m	0.071	0.087	-
Design and Assurance	£m	0.064	0.279	-
Finance	£m	0.015	-	-
Operations	£m	0.205	0.018	-
Security	£m	0.050	0.115	-
Service Delivery	£m	1.113	0.350	0.012
Testing	£m	0.484	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
Enduring Change of Supplier (ECoS) Payroll Costs	**£m**	**-0.115**	**-0.929**	**-1.765**
Commercial and Regulation	£m	-0.009	0.007	-0.080
Design and Assurance	£m	0.064	**0.279**	-
Finance	£m	0.015	-	-
Operations	£m	-0.049	-0.236	-0.254
Security	£m	-0.014	0.052	-0.063
Service Delivery	£m	-0.171	-0.594	-0.931
Testing	£m	0.048	-0.437	-0.437

1.1.2. External Costs

Section 1.6 below describes the material Change Requests (CR) and Project Requests (PR) that incurred costs of more than £1m in RY23/24. As in prior years, we explain the background, drivers, scope and how we secured value for money.

We have one material PR for RY23/24.

1.2. Purpose, Scope, and Structure

1.2.1. Purpose

Enabling energy consumers to change supplier securely and easily is one of the fundamental purposes and benefits of the smart metering rollout. The ability to switch supplier is underpinned by DCC's change of supplier process requiring the replacement of certificates on devices (primarily meters), identifying the responsible supplier.

When the original technical and security architecture for DCC was developed within the government's Smart Metering Implementation Programme, it was decided that DCC should implement a temporary solution, or Transitional Change of Supplier (TCoS). The rationale was to avoid requiring additional change from energy suppliers during the mass roll-out of smart meters. While designed and successfully operated at a very high standard of security, TCoS is not fully aligned with the Trust Model for smart metering, primarily because TCoS functionality is provided by the Data Service Provider (DSP). It was always intended that TCoS should be replaced as soon as practicable by an ECoS process, so as to introduce a greater degree of separation.

On 1 August 2019, DCC received a Direction from DESNZ for the purposes of Condition 13A of the Smart Meter Communications Licence (the DCC Licence), to produce an implementation plan for the ECoS arrangements. The plan was required to set out the activities which DCC and its external Service Providers needed to undertake, and the deliverables required, to deliver the ECoS arrangements, including reaching a position where the TCoS arrangements would be discontinued.

It is a requirement of Condition 13A of the DCC Licence that DCC consult the SEC Panel and all SEC Parties regarding the proposed content of the plan before submitting it to BEIS for approval. That consultation took place between 23 January 2020 and 21 February 2020. DCC received five submissions on the content of the plan and responded to all comments, accordingly, publishing the final document on the Smart DCC website[1].

1.2.2. Scope

DCC received Secretary of State approval on the 30th March 2020 to progress delivery of the following requirements:

- To design and build an IT solution to manage the activities relating to Change of Supply (CoS) – notably the validation of an 'Update Security Credentials' (CoS) SRV6.23 from the Gaining Supplier, the co-ordination of related messaging with the Access Control Broker and ultimately efficient replacement of Losing Supplier security credentials with ones provided by the Gaining Supplier, on the devices within the end consumers' smart metering system.
- Procurement of a hosting platform to support the ECoS solution – a hosting platform and relevant infrastructure required to independently host the ECoS solution.
- Implementation of a managed service agreement for ECoS – a managed service which will maintain, monitor and evaluate the service on behalf of the DCC, in order to ensure the continuity of the Service Management framework for the ECoS Service

The initial procurement process resulted in the same supplier being awarded both the second and third requirements, hosting and service management. To leverage better value, it was therefore decided to combine these two requirements into one procurement phase for the latter stages.

Since April 2020, DCC has taken a structured approach to planning, engagement, and implementation. Updates were provided at relevant stakeholder and SEC meetings, including newsletters and industry drop-in sessions at regular intervals.

Key events and objectives driving activity and cost in RY23/24 and RY24/25

In the lead up to Go-Live, the ECoS Programme engaged extensively with all the aforementioned groups and on 26 May 2023 submitted its evidence to DESNZ, SEC Panel, and Sub-Committees on DCC's readiness to Go Live with the ECoS arrangements on 29 June 2023. This included an extensive Live Service Criteria Document providing a report on DCC's readiness for ECoS, including an assessment against the Live Service Criteria. This step was critical for DCC to validate for stakeholders that it had progressed effectively through the programme delivery stages and was ready for Go Live on 29 June 2023.

On 23 June 2023, the SEC Panel Chair wrote to DESNZ recommending proceeding with the new ECoS Service having considered the Live Services Criteria and supporting evidence from DCC and the views from the TAG, Operations Group (OPSG) and SSC On 29 June. On 29 June, DESNZ provided a direction to re-designate SEC Subsidiary

[1] The consultation conclusion documents is available on the Smart DCC website: Consultation on the Delivery Plan for Enduring Change of Supplier

documents in support of ECoS Go Live and the ECoS Programme went live on 29 June 2023, moving to the Migration Phase of ECoS.

Since Go-Live, DCC has been focussing on delivering the agreed service improvements, namely, Private Key Transfer, Manufacturing Pack, and Portability.

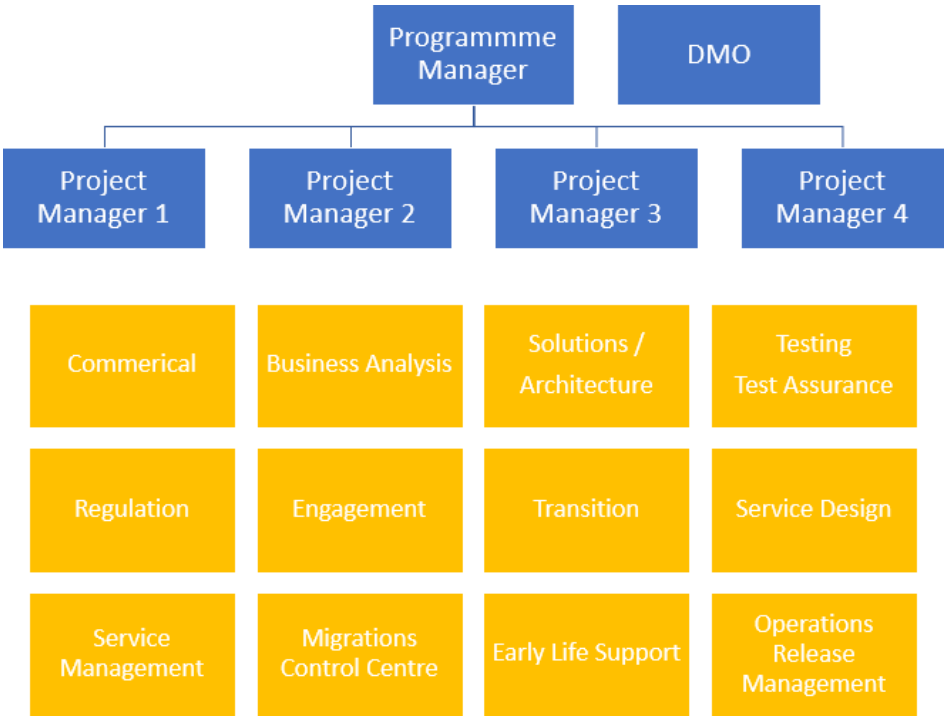
DCC completed the ECOS migrations on 26th January 2024 in line with the JIP milestone and is now migrating each newly installed device after 3 – 7 days. This was despite turbulence in the broader energy market. We successfully proved our system handles complex and large-scale operational challenges with robustness.

To minimise disruption to customers during migrations, DCC held twice monthly drop-in sessions to discuss and address concerns. We consistently looked to take on board stakeholder feedback. DCC also performed internal migration performance analysis and testing prior to going live to ensure that the migration and business as usual performance met the requirements. DCC created a migration control and reporting process to manage and report on migration outcomes.

1.2.3. Structure

Organisationally, the Cost Centre structure for RY23/24 is consistent with the structure reported in the RY22/23 submission, with an updated Organisational structure and sub team mapping reflected and narrated below.

Figure 1. Programme organisational structure



The mapping of the ECoS Programme is set out in the table below:

Table 1. Description per Sub-Team

Sub Team structure reported in RY22/23	Current Sub-team membership RY23/24	Sub-team	Description
Programme Director	Delivery Programme Director	Service Delivery	Overall Leadership of the Programme including overseeing delivery and acting as the senior stakeholder and supplier interface.
1 x Lead Programme Manager 1x Support Programme Manager	1 x Lead Programme Manager 1 x Support Programme Manager	Service Delivery	Oversees the delivery of the ECoS Programme and its phases as identified by the LC13a Delivery Plan.
4 x Project Managers	4 x Project Managers	Service Delivery	Support the Programme Managers. Deliver respective programme elements. The Project Managers breakdown into the following areas for Design, Build and Test: (i) Application (ii) Infrastructure (iii) Operational Readiness and (iv) Migration.
PMO	PMO Delivery Management Office	Finance	Provides project verification, governance and general project support to standards, policies and procedures defined by EPMO
Regulation, Engagement and Commercial & Legal	Regulation, Engagement and Commercial & Legal	Commercial and Regulation	Functional support to the whole lifecycle, and distinct phases, of the programme including external engagement and regulatory matters.
Business Analysis	Business Analysis Service	Design and Assurance	Comprehensively captures requirements, informing the solution to be delivered.
Early Life Support Device Management Transition Migration Control Centre	Early Life Support Service Management Transition Migration Control Centre	Operations	Designs and manages the structure of the service transition. Manages and operates Data Science and Analytics function.
Solutions Architecture Service Design	Solutions Architecture Service Design	Design and Assurance	Provides solution architecture and planning of initial design.
Testing and Test Assurance	Testing and Test Assurance	Testing	Manages and provides testing services of the designed solution and assurance of system interoperability across service providers.
Security Architects and Assurance	Security Architects and Assurance Security	Security	Specify design, build, and testing of security requirements to ensure that the process is designed so that data remains secure through the change of supplier process.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e., mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll is discussed within the next section.

Table 2: Variance from the RIGs by GL

	Total Enduring Change of Supplier (ECoS)			RY23/24	RY24/25	RY25/26
Total Baseline	**Total Enduring Change of Supplier (ECoS)**		**£m**	**2.143**	**1.804**	**1.804**
Total Incurred	**Total Enduring Change of Supplier (ECoS)**		**£m**	**2.362**	**0.849**	**0.012**
Total Variance	**Total Enduring Change of Supplier (ECoS)**		**£m**	**0.220**	**-0.955**	**-1.792**
	Payroll costs	PR	£m	-0.115	-0.929	-1.766
	Non-payroll costs	NP	£m	-0.026	-0.026	-0.026
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**0.360**	-	-
	Internal services	IS	£m	-	-	-
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-
	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

Our reporting shows underspend on payroll costs compared with our baseline, but Table 3 and section 1.4 explains the variations across our sub-teams.

Each external service in isolation falls below the materiality threshold of £150,000. This reflects our transition from design and build of the ECoS solution to go-live and enduring operations, where we have demobilised our external service providers following commissioning.

Table 3: Programme incurred by Team

Variance		RY23/24	RY24/25	RY25/26
Enduring Change of Supplier (ECoS) Payroll Costs	**£m**	**-0.115**	**-0.929**	**-1.765**
Commercial and Regulation	£m	-0.009	0.007	-0.080
Design and Assurance	£m	0.064	**0.279**	-
Finance	£m	0.015	-	-
Operations	£m	-0.049	-0.236	-0.254
Security	£m	-0.014	0.052	-0.063
Service Delivery	£m	-0.171	-0.594	-0.931
Testing	£m	0.048	-0.437	-0.437

1.4. Drivers for Variance – Resource

1.4.1. Design and Assurance

We are forecasting that total payroll costs will be less than the baseline for RY24/25. However, the mix of sub-team skills within the overall programme forecast has changed from what we expected in our RY22/23 price control submission. We see a reduction in Operations and Service Delivery costs as we transition from programme to enduring operations.

Consistent with a Systems Engineering Management approach, our Design and Assurance team provide critical checks and assurance across the development and delivery phases so are integral as we approach completion of our programme. This ensures that the planned design criteria are met and delivered through each stage of the develop, build, test, transition to business-as-usual operations.

The ECOS System was authorised for development and delivery by DCC as a part of the LC13A change. The system is intended to replace the TCOS system that was part of the original design for DCC systems and is currently hosted as a logically separated system within the DSP system.

Activities driving change in resource in RY24/25

Support from the Design and Assurance team has been extended into 24/25 as the Cross Functional Design Assurance activities continue through the year for the PKT implementation.

DCC's Cross Functional Design team ensure a Systems Engineering governance model that aligns the requirements and design, through development and testing verification to implementation and ready for service. Our cost variance applies to six resource support types across the year:

Table 4. CTO resource profile

Specialism	FTE
Architecture	0.50
Business Analysis	0.13
Engineering	0.50
Engineering	0.33
Technology Innovation	0.50
Testing Services	0.38

Our team has supported three main activities of development and delivery:

1. Delivery of ECOS against LC13A requirements
    a. ECOS system go live that occurred at the end of July 2023.
    b. Migration of devices from TCOS to ECOS credentials that was completed in April 2024.
    c. Planning for TCOS Shutdown once all devices are able to be managed in the ECOS system. This is currently being delivered in August 2024.
2. Additional work that was not envisaged under LC13A and/or not delivered prior to ECOS go live.
    a. In order to mitigate the service impacts of devices that are unable to be migrated or to have their certificates changed, the Private Key Transport programme was instigated and pursued, at the direction of DESNZ. This takes the private key credentials from the TCOS system and transfers them for operation in the ECOS system. This was delivered by July 2024 ad required.
    b. In order to mitigate the risk of ECOS private credentials being compromised or deleted in a public cloud environment, work was completed on risks mitigation through the use of offline credential creation and secure transfer into the ECOS operation. This was delivered by July 2024.
3. Other ECOS related activity
    a. A new manufacturing pack is required to be implemented prior to the expiry of current certificates in 2026, and the new COS credentials are an essential part of this. A new draft pack has been created at the end of May 2024 and full delivery of a validated pack to industry is envisaged in Q1 2025.

It should be noted that this work, undertaken to meet the requirements of DESNZ and other stakeholders, has also given us learnings to take to other programmes to reduce delivery risk and increase delivery speed. Particular examples of this are the manufacturing pack, portability and hosting of security credentials in public clouds.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

The cost centre is showing a positive variance for External Services overall. However, none of them is individually variant with the largest cost summing to £[redacted] and are not narrated in this section.

As we have moved to an enduring solution, we do not forecast costs for RY24/25 and RY25/26 as the programme becomes embedded in our Operations function.

1.6. External Costs

The section below describes the material CR that incurred costs of more than £1m in RY23/24. As in prior years, we explain the background, drivers, scope and how we secured value for money.

1.6.1. CR4889: Proposed new design – ECoS Monitoring solution and Integration TOC / DS&A / SOC

Drivers for Change

In their role as the ECoS Party, [redacted] provides the technical hosting and service management services that underpin the ECoS Service. The hosting services are provided using Microsoft's Azure cloud solutions.

In providing the hosting services, [redacted] would be required to handle, manage and analyse a range of data feeds to help them perform their role, these feeds would be for both internal and external consumption (by the DCC). The original contract set out ways that the DCC would receive such data feeds.

As part of DCC's cyber-security programme of work, it was seeking, in the context of ECoS, to allow the Technical Operations Centre (TOC), Security Operations Centre (SOC) and Data Science & Analytics (DS&A) Service through new / additional functionality to technically integrate with the ECoS Party ([redacted] or the Contractor) to allow for the exchange / remittance of service performance, business transactions and security data through secure methods.

DCC initially issued a number of CRs to cover the scope of this CR, before combining them into a single CR (CR4889). The previous CRs were:

- CR4737 - [redacted] DS&A reporting data feeds;
- CR4849 - [redacted] TOC monitoring; and
- CR4723 - [redacted] (ECOS DCC SOC Interface Requirements).

DCC decided to consolidate the above changes and further additional requirements into a single CR (CR4889) on the rationale that in doing so this would be more efficient and avoid costs being incurred in processing several changes in tandem and affording the opportunity to achieve economies of scale from combining the delivery resources into a single team rather than several working in parallel. The benefits of doing this are included in the analysis set out in the Securing Value for Money sub-section below.

The final scope of CR4889 was to deliver the following seven Solution Areas:

Items / Solutions that were chargeable to the DCC:

- **Solution Area A - DS&A Integration** - Functionality to prepare and export data files with aggregated events and transactions generated by the ECoS Application for the benefit of the DS&A Service / team.
- **Solution Area B –SOC Integration** - Configuration and customization of Azure technical component / resources to export their respective security activity logs to the Azure Event Hubs and enablement of access to those Event Hubs for the DCC SOC.
- **Solution Area C –TOC Integration** – Provision of access for the DCC's TOC users to the Azure Dashboards created by the Contractor and the implementation of further Power BI Dashboards which were created as part of Solution Areas E and F.
- **Solution Area D - Application Log Processing** - Functionality to process and conform application component log data, into a data model that is capable of managing the performance and activity of the ECoS Application.
- **Solution Area E - Application Monitoring Dashboards and Performance Reports** - Implementation of dashboards to monitor application status and activity, and the production of performance reports which were set out in the Contractor's Agreement.

Items / Solutions that were not chargeable to the DCC:

- **Solution Area F - Cloud and Platform Monitoring Dashboards** - Implementation of dashboards to monitor the Azure cloud and platform activity.
- **Solution Area G - Availability and Utilisation Reports** - Implementation of Cloud infrastructure availability and utilisation report as set out in the Contractor's Agreement.

Securing Value for Money

As outlined within the above to secure value for money DCC took the action to combine the previous 3 CRs into a single change, enabling consistency, economies of scale and better control of the delivery risks.

By combining the 3 CRs and not raising separate changes for each of the above solutions, the Value for Money recognition from [redacted] stated (extract from Full Impact Assessment (FIA)):

> *The Charges provided for the Design, Build and Test and Support phases across all Solution Areas (A through to E) are inclusive of synergies applicable whilst the Contractor develops and builds its own monitoring solution to cater for the Performance Measures contained within Schedule 2.2 of the Agreement. The value of the synergies applied to the Charges of this FIA are based upon the full support of all Solution Areas equating to a total of £[redacted] compared to the DCC procuring each Solution Area in isolation. The total synergy saving is broken down into the following for each Solution Area:*
>
> - *Solution Area A -*
> - *Solution Area B -*
> - *Solution Area C -*
> - *Solution Area D -*
> - *Solution Area E -*

[redacted]

Noting that only 5 of the 7 Solution areas (A through to E) were chargeable activities back to DCC, the accrued potential saving / cost avoidance / synergies was equivalent to £[redacted] (as per the above breakdown). Solution Areas F and G were activities which the Contractor was doing at their own expense and therefore not a chargeable activity back to the DCC. This was in part to replace a toolset which they were no longer proposing to use and replace it with one which met DCC requirements.

Furthermore, DCC in analysing and updating the volumetric assumptions for the system operation to align with those applicable to the Production environment, rather than the yet approved outputs from the System Capacity Testing (SCT) provided further reductions in the proposed Contractor's FIA charges. This sought to ensure any assumptions reflected the current position and no misalignment was present.

Additionally, DCC removed the need for support from the contractor for Solution Areas A, B & C beyond 31st December 2024, to recognise DCC intention to bring such services in-house from January 2025 onwards. This meant these three service areas would not be required from January 2025 until the end of the Contractor's Term. This again provided further downward movement in the contractor's FIA charges.

Overall, the DCC received 6 updates of the contractor's FIA from v1.0 to v1.6, as the scope and delivery plans were refined and finalised.

A breakdown of the costs is provided in the tables below.

Table 6: Price Breakdown

Detail	Price initial (£)*	Price initial (£)	Price final (£)
Delivery	[redacted]		
Run Services			
Azure Costs + Tools			
Total Charges			

*Supplier estimated the cost of delivering the 6 Solution Areas if they were delivered in isolation, rather than as a single CR.

Table 7: Initial vs Final Price

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]	[redacted]	[redacted]

The above saving of [redacted] rises to [redacted] if we consider the initial price plus the synergies/ savings from contracting for the Solution Areas separately, as DCC had initially started down that route to contracting for the scope of work, before its actions to consolidate.

Table 8: Initial vs Final Price for combined solution areas

Estimated (£)	Final IA Price (£)	Difference [redacted]
[redacted]	[redacted]	[redacted]

1.7. Baseline Margin Project Performance Adjustment (BMPPA)

Details of the ECoS BMPPA can be found in 5.Perf_BMPPA_ SMETS1_ECoS_CHN_RY2324 for RY23/24.

Data Communications Company

Market-wide Half Hourly Settlement

Version: 1.0
Date: 31.07.24

Table of Contents

1. Market-wide Half-Hourly Settlement (MHHS)

Summary

What is this and why is it important?

Market-wide Half-Hourly Settlement (MHHS) is an Ofgem initiated industry-wide reform designed to enable more accurate and timely settlement, ultimately facilitating the move to a smarter and more flexible energy system (e.g. by enabling greater provision of time of use tariffs). Ofgem estimates that MHHS will bring net benefits for GB consumers of between £1.6bn and £4.5bn over the period 2021-2045.

Smart meters play a pivotal role in delivering government's aspirations to move from irregular and infrequent charging using customer and agent meter reads to a more responsive half-hourly process.

DCC is a key delivery partner to the wider MHHS Programme, enabling changes to facilitate the new Meter Data Retrieval (MDR) role in the settlements process as well as supporting customers to successfully access the half-hourly data.

RY23/24 activities and costs

Total internal costs of £0.9m (mainly payroll and external services) is all reported as a variance to the Ofgem baseline as this was set at zero.

To enable the new MDR changes were required to our Switching and Data Service Provider systems. The new MDR role was introduced into Production in June 2024 in readiness for the MHHS Go-live, planned for April 2025.

We completed all our requirements, and the programme entered SIT as planned on 11th March 2024. This testing ensures that the end-to-end MHHS Operating Model worked across all systems before the go live decision, and that DCC is positioned to support the managed migration of suppliers onto the half-hourly settlement arrangements.

Future activities and costs

Our forecast internal cost for RY24/25 is £1.6m. As the programme nears Go Live, further testing support and migration planning (including operational readiness) will be required. This includes the ability to support the expected increase in information passing through our systems. Our cost variances therefore reflect the shift to implementation and then transition to enduring operations from RY25/26.

1.1. RY23/24 Cost Variances Overview

We summarise our relevant Internal and External Costs in this section and explain the material cost variances (greater than £150k) in further detail throughout the document, grouped based on general ledger codes (GLs).

1.1.1. Internal Costs

We set out the baseline set by Ofgem from our previous year's submission, our costs incurred and forecasts, and highlight the material cost variances. In the following sections, we explain the programme purpose and our resource and non-resource costs.

Programme variance by GL

The table below provides a breakdown of incurred and forecast costs in price control format i.e., mapping costs directly against the price control (GLs).

Baseline	GL		RY23/24	RY24/25	RY25/26
Total MHHS		**£m**	**-**	**-**	**-**
Payroll costs	PR	£m	-	-	-
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	-	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Incurred			**RY23/24**	**RY24/25**	**RY25/26**
Total MHHS		**£m**	**0.931**	**1.609**	**0.268**
Payroll costs	PR	£m	0.514	1.609	0.268
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	0.417	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-
Variance			**RY23/24**	**RY24/25**	**RY25/26**
Total MHHS		**£m**	**0.931**	**1.609**	**0.268**
Payroll costs	PR	£m	**0.514**	**1.609**	**0.268**
Non-payroll costs	NP	£m	-	-	-
Recruitment	RC	£m	-	-	-
Accommodation	AC	£m	-	-	-
External services	ES	£m	**0.417**	-	-
Internal services	IS	£m	-	-	-
Service management	SM	£m	-	-	-
Transition	TR	£m	-	-	-
IT Services	IT	£m	-	-	-
Office Sundry	OS	£m	-	-	-

Programme Variance by Sub-Team

The table below shows the payroll variance by sub-team within the MHHS cost centre.

Baseline		RY23/24	RY24/25	RY25/26
MHHS Payroll Costs	**£m**	**-**	**-**	**-**
Commercial and Regulation	£m	-	-	-
Design and Assurance	£m	-	-	-
Finance	£m	-	-	-
Operations	£m	-	-	-
Security	£m	-	-	-
Service Delivery	£m	-	-	-
Testing	£m	-	-	-
Incurred		**RY23/24**	**RY24/25**	**RY25/26**
MHHS Payroll Costs	**£m**	**0.514**	**1.609**	**0.268**
Commercial and Regulation	£m	0.047	0.161	-
Design and Assurance	£m	0.005	0.311	0.021
Finance	£m	-	-	-
Operations	£m	0.111	0.243	0.192
Security	£m	0.017	0.028	-
Service Delivery	£m	0.212	0.865	0.054
Testing	£m	0.123	-	-
Variance		**RY23/24**	**RY24/25**	**RY25/26**
MHHS Payroll Costs	**£m**	**0.514**	**1.609**	**0.268**
Commercial and Regulation	£m	0.047	**0.161**	-
Design and Assurance	£m	0.005	**0.311**	0.021
Finance	£m	-	-	-
Operations	£m	0.111	**0.243**	**0.192**
Security	£m	0.017	0.028	-
Service Delivery	£m	**0.212**	**0.865**	0.054
Testing	£m	0.123	-	-

1.1.2. External Costs

We incur External Costs on specified subset of our service providers, and explain material contract variations (known as change or project requests – CRs or PRs), which are greater than £1m.

We have one material PR for RY23/24.

1.2. Purpose, Scope, and Structure

Customer consumption is currently profiled – a profile represents the pattern of electricity usage for a customer within a segment of the electricity supply market. In April 2021, the MHHS decision and full business case was published by Ofgem. This confirmed the proposed Target Operating Model and therefore proceeds with giving energy suppliers access to the exact half-hourly costs of customer consumption patterns, rather than being profiled as they are now for Non-Half Hourly (NHH) customers.

MHHS will make it easier for electricity suppliers to offer Time of Use (ToU) tariffs, which in turn will incentivise customers to shift load patterns. Customer load shifting will benefit intermittent generation, electricity network balancing, and reduce the need for network infrastructure investment. Ofgem estimates that their chosen option for MHHS will deliver net benefits to GB energy consumers in the range of £1,559m-£4,509m over the period 2021-2045. This is set against a cost of around £90m to implement, showing that the programme overall delivers excellent value to consumers.

We emphasise our commitment to providing value for money both to our customers and end consumers. Below, we demonstrate the efficient way we have carried out our obligations and how we have secured the optimal outcome at the lowest reasonable cost.

MHHS will be achieved by mandating that electricity suppliers settle all customers with capable meters (or equivalents) in a half-hourly (HH) capacity. Domestic customers will retain the option to opt out of this for import settlement data but not for export. Any Third-Party Intermediaries (TPIs) would also need to access the meter independently for data.

To achieve this and deliver a full solution for MHHS, it was necessary to make changes to the Smart Energy Code (SEC) and DCC's systems. A number of obligations have been imposed on the various stakeholders of the programme by Ofgem, including DCC. One obligation was that DCC raised a SEC modification to progress the delivery of the programme.

DCC is a delivery partner to the wider MHHS Programme, building enabling changes to facilitate the new MDR role as well as supporting the customers successfully access the half-hourly data. We work in collaboration with Elexon's Industry MHHS Programme team, in discussing and agreeing dependencies. We have supported the Programme in presenting material to customers on the overarching programme as well as the specific changes which DCC are building via multiple forums as managed by Elexon, with buy-in and understanding from the intended customer base. This new MDR role will allow third party companies to offer services at competitive rates that could be passed onto customers in their homes. These services could request information from Smart Meters at a much higher cadence per day that allows accurate forecasting of buying and selling of electricity.

1.2.1. Scope

The changes to be implemented by DCC will be an integral part of a much wider industry change programme, largely based on the Balancing and Settlement Code (BSC), but also impacting the Retail Energy Code (REC) and Distribution Connection and Use of System Agreement (DCUSA).The work at DCC is split into 3 sub-programmes as follows.

SEC/REC releases

Budget for this phase of the programme was approved by DCC Board in May 2023. The external changes were agreed through the SEC governance process in accordance with Section D and DCC's established stakeholder engagement processes. The post PIT test costs however were not additional as they would have been incurred by the Jun 2024 SEC system release, within which the MHHS changes will be delivered.

- Both programmes served the licence condition of meeting the MHHS requirements via the Release mechanism for both codes.
- The SEC Release programme for June 2024 was agreed with SECAS, in which DCC would deliver the new functionality to introduce the new industry role of MDR into production services. The SEC Release process is governed by external forums where industry customers vote on the acceptability of SEC modifications based on costings that DCC presents in those forums. In essence, the spend is agreed for functional deliveries before we engage with any commercial agreements with DCC Service Providers, ensuring the work we carry out is informed by our customers' requirements, and that they are engaged on the way in which we deliver them. This evidences our improving responsiveness to customers.

- During mobilisation of the MHHS Programme, Ofgem set an overall envelope for DCC to operate within of £20m – DCC has maintained its cost envelope within that budget across both the SEC/REC and Capacity elements of its delivery, thereby demonstrating excellent value for money for our customers, and delivering in line with all stakeholder expectations, including that of Ofgem.

Capacity Programme

Budget for this phase of the programme was approved by DCC Board in May 2023.

- Ofgem directed DCC to ensure the capacity requirements for MHHS were met outside of the SEC Release framework via letter in August 2022. The budget for this was still included in the overall Ofgem business case as mentioned above. As the capacity requirements matured and submitted to DCC Service Providers for consideration, DCC challenged multiple estimates to ensure that value for money was at the heart of delivering the capacity uplifts, while, at the same time, ensuring the service it provides is maintained and, where possible, enhanced. The objective of DCC's Service Providers was to size their systems according to DCC requirements and ensure the service met agreed performance standards. Our established processes for procurement have ensured that we have delivered within the budget agreed with Ofgem at the start of this work, despite a difficult operating environment of rising costs, due to inflation and other factors.

Supporting industry-led testing and migration

We ran workshops in October 2023 with industry programme members and our service providers to scope and agree assumptions for the testing preparation and support, which were required to be in place ahead of March 2024. The assumptions were formalised with the MHHS Industry Programme, and placed under programme change control.

The budget for this phase of the programme was authorised by the DCC Board in December 2023 for internal governance, to deliver the industry-led testing and migration.

Testing

This DCC testing scope is to support two key areas 1) Functional Testing and 2) Migration testing. The functional testing scope will provide the following support to Elexon, enabling the completion of critical end-to-end testing of the MHHS infrastructure, and the delivery of the MHHS programme milestones, which are:

- Testing support - test scenario reviews, the processing of test cases through DCC systems (including access to test meters), and, where applicable, the provision of evidence in support of the successful execution of tests. The work is across the DSP (Data Services Provider) and CSS (Central Switching Service) programmes. This work also includes the management of any testing defect fixes that are applicable to DCC.
- Environment connectivity support – configuring the test environment to support the end-to-end testing, and working with any test participant who needs to perform the required steps to connect to the environment.
- Data Preparation support – the provision & preparation of test data for the programme, and the loading of this data into the test environment

The Migration Testing phase is incorporated into the overall Functional Testing period, and at time of writing the scripts for these are still in development.

- DCC have completed all elements of preparation for the MHHS Programme SIT Functional Testing. The programme entered SIT as planned on 11th March 2024, and is due to run through to the end of March 2025.

<u>Migration</u>

This migration support was lower priority as was not required until April 2025 compared to testing support listed above, so we had an internal milestone to seek Board Approval once requirements were developed.

Migration support is composed of:

- Support for the Industry-led Migration of MPANs to MHHS, managing these through the existing CSS/DSP systems. This may include additional data requirements from CSS in order to monitor this process.
- Alignment of DCC Operational functions with the Elexon Service Delivery Management processes (once defined by Elexon)

These activities are critical to ensuring the implementation of MHHS to timescale, and ensuring the required support is in place at DCC.

1.2.2. Cost Centre Structure

SEC and REC Releases

The MHHS changes were raised under a SEC Modification (MP162) and were progressed in the same way that any other modification would be progressed. The MHHS changes were not complex and thus a separate project team was

not required to support these changes outside of the enduring SEC Release team. We have utilised the existing team in absorbing the additional change request, thereby providing value for money for our customers in delivering this additional scope in the wider MHHS programme.

The resourcing costs incurred by DCC in RY23/24 have been absorbed by the existing SEC Release Management Team. This has included the work to support the progress of the SEC Modification and the capacity uplift. There has been support from the Strategy and Regulation team assigned to respond to items such as the MHHS consultations, attend cross code working groups, and lead the additional engagement with Ofgem. These additional roles have been integral to DCC ensuring that our stakeholders stay informed, and ultimately ensuring that stakeholder opinion is taken into consideration when any decisions are made regarding spend and programme delivery. This is particularly important to DCC given the material benefit that MHHS will bring to our customers, and we are committed to ensuring this result is optimal.

DCC implementation costs and additional ongoing costs are not separately assigned to an MHHS project and appear within the Jun 2024 SEC Release costs. DCC can separate out the costs associated with the MHHS changes from the other SEC modifications included in the SEC Release.

Supporting Industry-Led Testing & Migration

Our delivery of the SIT Functional Testing & Migration is managed by a team within our Service Delivery function, with Systems Integration support from CGI.

Whilst Functional Testing and Migration Testing is not being delivered through the REC or SEC modification process, DCC is required to carry out these activities for the MHHS programme. These very specific requirements have been defined through dedicated workshops between DCC and the industry MHHS Programmes and were agreed with the programme in October 2023. There are clear regulatory requirements which underpin this work, by virtue of DCC licence condition 21 (H). Equally, DCC is a Party to both the Smart Energy Code (SEC) and the Retail Energy Code (REC). Requirements of the MHHS Governance Framework overlap those of the SEC/REC and introduce additional requirements that support a successful chieve of the MHHS Programme and fully realise the associated benefits (stated previously).

Our programme structure

Figure 1 – Programme organisational structure

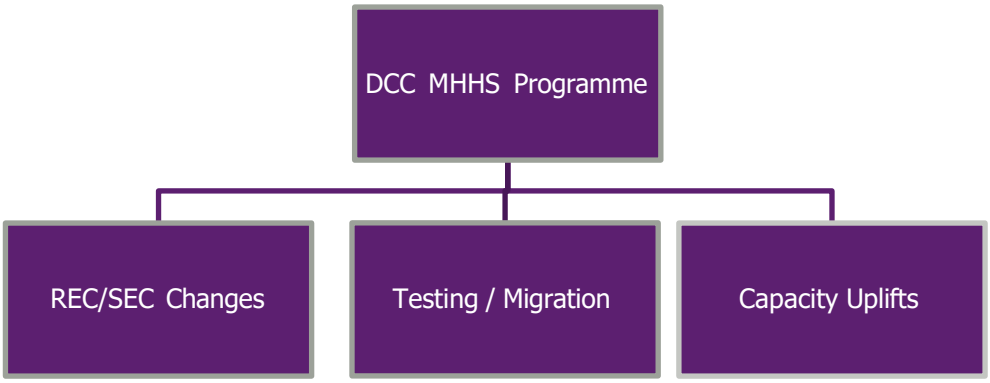


Table 1 – Description of MHHS Functional Sub-Teams for Each Service

Sub-team RY22/23	Sub-team RY23/24	Description
SEC Releases	SEC Releases	Accountable for: Delivery of MP162 (SEC Modification) to provide the MDR role to Industry
REC	REC Releases	Accountable for:

Sub-team RY22/23	Sub-team RY23/24	Description
Releases		• Delivery of R0044 (REC Change Proposal) to update the interface data fields between the Switching Service and the Data Services Provider (DSP) central SMETs solution.

N/A	Testing/Migration	Accountable for:
		• Preparatory work for Industry SIT Functional Testing
		  • Environment Readiness
		  • Test Data Production & Augmentation
		  • Test Scenario/Test Cases Reviews, Validation & Preparation
		  • Test Meter Provisioning
		• Support for SIT Functional Testing
		  • Evidence provision for participant testing
		  • Defect Management support
		• Support for Industry Migration
		• Service Delivery

Capacity Uplifts	Capacity Uplifts	Accountable for: • Delivery of the Ofgem mandated capacity/infrastructure elements to ensure the new MHHS Service operates within agreed levels and supports the Migration phase.

1.3. Cost centre variances

Variance by GLs in the RIGs

The table below provides a breakdown of incurred and forecast costs in price control format (i.e., mapping costs) directly against the price control General Ledger codes (GLs). Non-payroll costs are explained in a later section. Payroll is discussed within the next section.

Table 2: Variance from the RIGs by GL

				RY23/24	RY24/25	RY25/26
Total Baseline	**Total MHHS**		**£m**	**-**	**-**	**-**
Total Incurred	**Total MHHS**		**£m**	**0.931**	**1.609**	**0.268**
Total Variance	**Total MHHS**		**£m**	**0.931**	**1.609**	**0.268**
	Payroll costs	PR	£m	**0.514**	**1.609**	**0.268**
	Non-payroll costs	NP	£m	-	-	-
	Recruitment	RC	£m	-	-	-
	Accommodation	AC	£m	-	-	-
	External services	ES	£m	**0.417**	-	-
	Internal services	IS	£m	-	-	-
	Service management	SM	£m	-	-	-
	Transition	TR	£m	-	-	-

	IT Services	IT	£m	-	-	-
	Office Sundry	OS	£m	-	-	-

Payroll costs variance

The overall Payroll Costs variance in RY23/24 is positive, because MHHS was delivered within Operations in RY22/23 and standalone costs not yet forecast. Accordingly, no baselines have been set and all costs show a positive variance, with more material variances for RY24/25.

Table 3: Programme incurred by Team

Variance		RY23/24	RY24/25	RY25/26
MHHS Payroll Costs	**£m**	**0.514**	**1.609**	**0.268**
Commercial and Regulation	£m	0.047	**0.161**	-
Design and Assurance	£m	0.005	**0.311**	0.021
Finance	£m	-	-	-
Operations	£m	0.111	**0.243**	**0.192**
Security	£m	0.017	0.028	-
Service Delivery	£m	**0.212**	**0.865**	0.054
Testing	£m	0.123	-	-

Variance by Team

In RY22/23, the overall Payroll Costs variance is positive. The Service Delivery team provided support to mobilise the programme in RY23/24 and implementation in RY24/25. The costs for Design and Assurance and Operations also grow in RY24/25 as the programme reaches its implementation phase. The reasons for such variances are set out below.

1.4. Drivers for Variance – Resource

1.4.1. Commercial and Regulation

The Contract Management team are responsible for ensuring the activities being delivered by the various service providers meet agreed specifications and completion time. We also manage the necessary changes through contract variations, deal with claims or disputes which may arise and close contract amendments in a timely manner. We review impact assessments and scope of works, analysing the detail provided on resource and costs ensuring value for money for DCC and customers. We also ensue DCC are not exposed to any unnecessary risk.

1.4.2. Design & Assurance (CTO)

Technical Architects provided essential expertise when MHHS was being mobilised and also during the assurance stages when technical solutions/costs were submitted by DCC Service Providers. They continue to provide support and knowledge during the Programme, although that has reduced now it's entered into its testing phases.

Activities driving change in resource in RY24/25

Aspects of Design & Assurance relating to variance in costs can be attributed to CTO resource supporting requirements validation for a very complicated Programme and the further testing support outside of the recognised SEC Release mechanism. The further testing support was planned after the DCC internal testing process was completed.

1.4.3. Operations

Operations are responsible for working with the programme team to ensure that the change can be delivered into operational areas successfully. Operations follow the Operational Change and Transition (OCAT) process to define Service Outcomes, Service Acceptance Criteria, and Warranty Measures, ensure programme alignment, and monitor delivery. Operations attend a number of relevant MHHS Programme Advisory & Working Groups on Service Delivery, Migration, Transitional & Operational Readiness, inputting relevant operational knowledge and experience from previous implementations to represent DCC's interests & contribute to the overall success of the programme.

Operations also perform analysis on the impacts to their business processes, identifying and contributing to process changes, and assessing and developing the knowledge & training for their staff.

Activities driving change in resource in RY24/25

As the Programme increases the focus on implementation planning ahead of Go-Live in April 2025, all aspects of Operational Readiness for DCC are being managed ahead of this date., The processes for managing the DCC elements of Service Delivery, Migration monitoring & reporting and Warranty measures are being developed ahead of April 2025.

Activities driving change in resource in RY25/26

Operational support for the post-implementation management of Migration Monitoring, Capacity Monitoring, Reporting and Warranty measures, during the critical first year of MHHS operation, ensuring DCC provide the support required for the successful industry roll-out.

1.4.4. Service Delivery

Service Delivery (SD) are responsible for programme managing and co-ordinating the overall delivery of the MHHS programme across the Design, Build, and Test phases of the REC/SEC changes through operational readiness to the successful deployment of the MDR solution via the June 2024 SEC Release, and for the establishment of the required support for industry E2E SIT Testing and Migration through to go live in April 2025. SD are responsible for managing the timely execution of plans with Service Providers – namely [redacted] [redacted] CGI (Arqiva, VMO2, Secure, Trilliant, DXC), and internal functional leads.

The MHHS programme has been subject to internal governance via Programme Governance Board attended by senior functional leads with overall accountability for their various deliverables, and Programme Advisory Group which includes attendees from the Elexon Programme and Ofgem. This is in addition to external governance oversight via Ofgem and various SEC Committees to ensure the MHHS programme delivers the right outcomes for customers. A full Risks, Assumptions, Issues, and Dependencies and (RAID) log is held and managed by the SD function.

SD have delivered the MHHS programme to the industry plan and to budget across the three workstreams for RY23/24, as approved by Ofgem and DCC Board.

Activities driving change in resource in RY23/24 and 24/25

In RY22/23's Price Control submission, MHHS did not have a committed internal cost forecast, meaning the RY23/24 baseline is zero. RY23/24 costs represent what was actually spent on the Programme for internal resource, and the RY24/25 and RY 25/26 is reflective of planned resource costs during these periods.

As detailed in Figure 1, the Programme is delivering MHHS via 3 separate workstreams, supported by full-time Programme & Project Managers, and 0.5FTE of a Programme Director. The number of resources has flexed during the year to match the demand requirements of the programme. The increase in costs from RY23/24 to RY24/25 is explained by this large ramp up in activity to ensure we deliver this much needed programme for our stakeholders.

1.5. Drivers for Variance – Non-Resource

1.5.1. Summary

In RY23/24, there was variance of £417k for our external services. There was one materially variant GL code, which was CR4672 – [redacted] Our other costs mostly relate to other Change Requests (CRs) and Project (PRs) with other key service providers including, [redacted]. These are set out in the RIGs Supplementary Schedules.

Table 4. Material variance for MHHS non-resource internal costs

Variance	GL		RY23/24	RY24/25	RY25/26	Procurement type
CR4672 – [redacted]	ES	£m	0.180	-	-	[redacted]

1.5.2. CR4672 – [redacted]

CR4672 supported the necessary interface changes to support the MHHS traffic coming from Switching into SMETS (the Data Service Provider - DSP).

Drivers for Change

Without the CR, the migration of MHHS information via the new MDR new role switching would not be possible. The introduction of this new role means that third party organisations can offer services, specific to Settlements, under strict guidelines, and exclusive to Settlements, to drive competition within the Energy Industry and ensure fair service to Customers.

For the required interface changes, this change was put through the REC governance forums (RECCo), but SEC was informed of progress and are aware of it.

Scope of Change

[redacted] are the solution provider for all Switching traffic that comes into DCC - they are the only Service Provider that could make the necessary interface changes. [redacted] are identified as the Central Switching Service (CSS) Provider. They provide the systems that support the Faster Switching Service, provide code change, added functionality expertise, and also host the infrastructure on which this service sits.

Securing Value for Money

DCC Programme team went through rigorous evaluation of the costs associated with MHHS to ensure that its Service Providers understood the requirements clearly and the solutions provided were aligned directly with expectations. The cross section of DCC skills to support that process ranged from Technical Architects, Business Analysts, Financial & Commercial subject matter experts, and Programme and Project Management. The extensive experience across these functions from both the deployment of change both in the SMART Metering ecosystem and the Switching Service ecosystem meant clear challenges were made to DCC Service Providers and robust monitoring of costs was achieved to minimise the cost the Customers.

A breakdown of the costs is provided below.

Table 5: Price Breakdown CR

Detail	Price initial (£)	Price final (£)
Design, Build, Test and Deploy interface changes	[redacted]	
Total Charges		

1.6. External Costs

The section below describes the material PR that incurred costs of more than £1m in RY23/24. As in prior years, we explain the background, drivers, scope and how we secured value for money.

1.6.1. PR7651 – CGI DSP – Early testing of the Meter Data Retriever user role for the June 2024 SEC System Release

Drivers for Change

The purpose of PR7651 is to cover the early testing of the MDR user role. It is not intended to provide cover for the entire June 2024 SEC System Release and a separate PR will be created for the remaining post-PIT (Preliminary Integration Testing) activities required for the June 2024 SEC System Release. More detail on the change is available on the SEC website.

Under the Change with reference CR4813, CGI will introduce into the DSP System a new MDR DCC User Role with access to a limited set of Non-Critical Read Only Service Request Variants (SRVs) and, where applicable, to Scheduling SRVs in respect of those SRVs. The DSP System will deliver to the sending Meter Data Retriever all DCC Alerts and Future Dated Execution Device Alerts associated with the SRVs initiated by the MDR. It is planned to deploy CR4813 to the Production Environment as part of the June 2024 SEC System Release.

The approach to testing the new MDR role as part of the overall MHHS Programme has been accelerated due to alignment with the wider Elexon plan. The System Integration Testing (SIT), pre-UTS (User Testing Services) and UEPT (User Entry Process Testing) stages of this new user role has been brought forward to take place in 2023, instead of in 2024. Therefore, it is closer to the time of the June 2024 SEC System Release in which the MDR role is expected to be deployed into the Production Environment.

Scope of Change

The scope of this PR7651 is listed below:

- SIT Preparation.
- SIT Execution.
- Pre-UTS Preparation and Execution.
- UEPT Preparation and Execution.

Testing support will also be required from CGI's Implementation team and System Integration (SI) Triage team. Management oversight effort is needed by CGI's SI Programme and Project Management team. Effort will also be required from CGI's SI Environments and Release Management team.

Securing Value for Money

CGI calculated the initial price for PR7651 (Early testing of the Meter Data Retriever user role for the June 2024 SEC System Release) as £[redacted] We expected the activity to cover a 9-month period between June 2023 and February 2024.

The scope of work covering the early testing of the MDR user role as described in this Statement of Work (SoW) v1.0 included [redacted] days of labour at a cost of £[redacted] expense charges of £[redacted] and 64 ALM licenses over an 8-month period at a cost of £[redacted] Working Capital Charges are not applicable for this change as the decision was made to pay monthly in arrears under the Time and Materials principle. This Project qualifies for a [redacted] discount as the duration is greater than 6 months, resulting in a saving of £[redacted] CGI factored in a contingency of [redacted] of £[redacted] as is common practice. The principle being that CGI shall use the contingency amount reasonably and in good faith and notify the DCC Project Manager (PM) when contingency is expected to be utilised.

DCC renegotiated the agreed Expenses rates to reflect the reduction in travel. The agreed saving of £[redacted] per day in Expenses charges applied from the start of this work in June 2023. At the time of this SoW v1.0 submission, it was not expected travel for the Contractor would change. As such, a £[redacted] saving was factored into the expense charges.

After several meetings, review and feedback sessions, CGI DSP provided an updated Price Breakdown v1.1. This

version had a total cost of £[redacted] delivering a £[redacted] or [redacted] saving against the Price Breakdown v1.0. In summary, the main changes made to this FIA and Price Breakdown v1.1 for PR7651 included:

- UIT timescales updated following the latest DCC version of the Plan on a Page.
- UEPT testing is mandatory for those Test Participants who will be running Service Requests under the MDR user role.
- The Implementation Team Security Architect and Design Team Leader roles have been amended, as these resources have been agreed to be charged at the rate for L5 instead of that for L6 following DCC negotiation (delivered '£' savings).
- After discussions and challenges by DCC, the UIT effort for provision of assistance to DCC with data requirements for UIT testing (with Elexon SIT) has been removed (delivered '£' savings).

As depicted in the Price Breakdown table below, we reduced labour charges by [redacted] expenses by [redacted] and contingency value by [redacted] The volume of ALM licenses remained unchanged, but the rate card discount also improved by £[redacted] to £[redacted] The total reductions achieved for the early testing of the MDR user role was a reduction of £[redacted] (**down** [redacted] with the total charges having reduced from £[redacted] to £[redacted]

A breakdown of the costs is provided in the tables below (SoW and Price Breakdown v1.0 versus SoW and Price Breakdown v1.1):

Table 6: Initial vs Final Price (detailed breakdown)

Detail	Price initial (£)	Price final (£)
Labour cost	[redacted]	
Expenses		
ALM licences		
Contingency		
Rate card discount ([redacted] for Projects for continuous duration of greater than 6 months)		
Working capital charge		
Total Charges		

It is important to note any potential savings are not fully realised above as this PR7651 is still underway and the total cost of this project is not yet known.

Table 7: Initial vs Final Price

Initial IA price (£)	Final IA Price (£)	Difference (%)
[redacted]		