Data Communications Company

DCC Business & Development Plan

2023/24
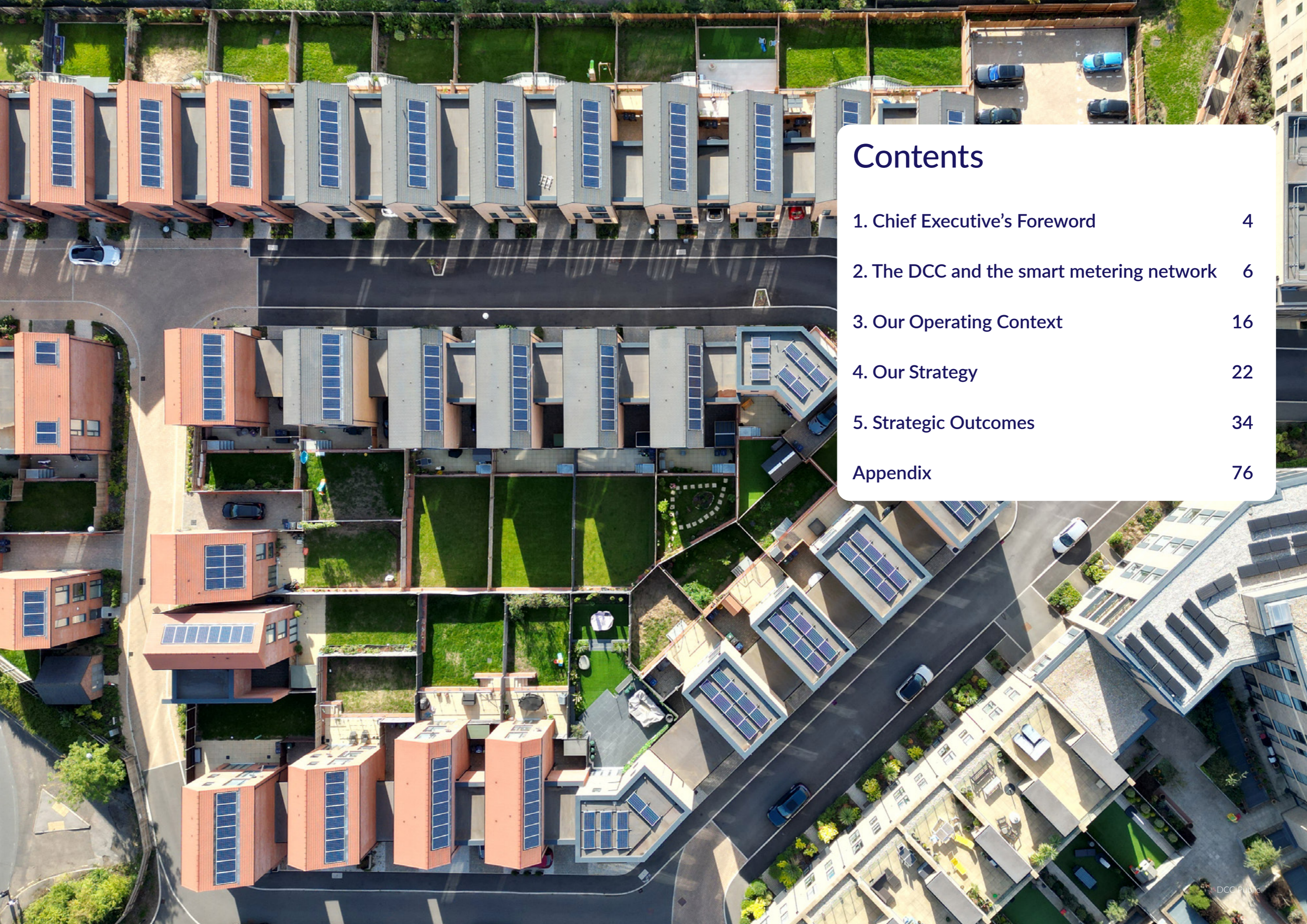
Contents

1. Chief Executive's Foreword

At the DCC our purpose is to make Britain more connected so we can all lead smarter, greener lives. Every year, as part of our licence conditions, we produce a five-year Business and Development Plan that sets out our strategic objectives and plans.

This plan is for our customers and stakeholders across the energy industry and sets out how we are continuing to support the smart meter roll-out. The core of what we do remains the same – we engage, design, procure, secure, assure and operate a reliable smart metering service that, at scale, will comprise a national network of 55 million meters in 33 million premises.

Over the past year, we and our partners have achieved some significant milestones. More than half the homes in Great Britain are now connected to the network with more than 27 million meters saving over one million tonnes of carbon dioxide annually. As outlined in the recent National Audit Office report, the benefits of smart metering are beginning to be realised, ranging from lower costs for suppliers to broader power sector decarbonisation. Notably, these benefits included the Demand Flexibility Service put in place by the National Grid Electricity System Operator (ESO) over winter 2022-23 which enabled consumers with smart meters to receive a financial incentive for shifting their consumption from peak times.

Despite this progress, the effects of climate change, the energy crisis and ongoing cost of living challenges continue to necessitate a pivotal role for energy policy. In line with this changing context, the DCC has worked closely with Ofgem and the Department for Energy Security and Net Zero to ensure that the obligations on and expectations of the smart metering network continue to support broader policy aims and ambitions.

To reflect this and our ongoing evolution as an organisation, we will focus our efforts over the coming years on four strategic outcomes. These are designed to ensure that we are clear on the rationale for choosing to do what we do and have been developed in consultation with our stakeholders.

We will continue to focus on the delivery of a reliable and stable nationwide network. Last year, network availability was 99.9%, covering more than 99% of premises across Great Britain. However, that means some homes and small businesses are still not covered by the Wide Area Network. We are working hard to address this and ensure that all consumers can enjoy the benefits of a more digital energy system, such as those we have seen following the launch of the Central Switching Service (CSS). The CSS has supported over eight million switches since it went live, reducing the average time to switch by over 20%.

In operating the network we maintain a security posture and resilience expected of an asset deemed to be Critical National Infrastructure. Working closely with our colleagues at GCHQ and the National Cyber Security Centre, we will continue to enhance our security protocols and policies that enable us to detect and respond effectively to emerging cyber threats. We will measure our progress through independent assessment and leveraging established best practice, such as the National Institute of Standards and Technology Cybersecurity Framework (NIST CSF).

We are increasing our focus on right-first-time delivery, ensuring our services are delivered to the time, cost and quality expectations of our customers and wider stakeholders. We have put in place a number of initiatives to support this, including the implementation of the PRINCE2 process-based method of project management, the formal adoption of Treasury Green Book business case process and greater adoption of lifecycle management and service family principles.

Central to this is our next generation 4G Communications Hubs and Networks Programme. This incorporates customer feedback to build in the flexibility and scalability needed to support future over-the-air updates, allowing upgrades without the need for engineer visits.

At the same time, we need to ensure that our network remains fit for the future, providing the accessibility, flexibility, and speed of change expected of a modern network and commensurate with the scale of the net zero challenge. Central to this will be the evolution of our Data Service Provider (DSP) – the smart metering network's core messaging platform – into a more flexible, disaggregated architecture. Our vision is for customers to be able to develop products and services directly on the network, reducing the cost of change and cycle time. In doing so, we will not only enhance our customers' experience of the network but also ensure that they, and others, can unlock its transformative possibilities – from

helping to combat fuel poverty, to accelerating activities linked to energy efficiency targets and enabling system-wide grid flexibility.

As a licensed monopoly, we have a responsibility to consumers to deliver value for money and ensure that at a time of challenging household budgets we do not place significant additional costs on their energy bills. To this end, we have set ourselves a target of £30m in enduring cost efficiencies over the next three years. We have a responsibility to our people to offer an engaging and compelling career choice. Finally, a responsibility to the planet that we act sustainably, limiting our emissions and embodying our purpose to live greener lives through the actions we take across our organisation. We will measure and manage our progress on this through our Responsible Business Framework.

Of course, this five-year period will also be marked by a change in regulatory arrangements for the DCC, with our current licence due to expire in September 2025. At the time of writing, we are still awaiting Ofgem's decision on our future licence model. But, irrespective of the outcome, we are committed to working with the regulator and our customers to ensure a seamless transition.

The urgency of the change to a decarbonised and digitalised energy system that delivers for consumers has never been clearer, as outlined throughout the Climate Change Committee's latest progress report. As an already established national asset, highly secure and operating at scale, the smart metering network and the DCC provide a platform for policy implementation that can both accelerate decarbonisation and drive social good. Leveraging this effectively will ensure we are all in a position to lead smarter, greener lives.

Angus Flett, Chief Executive Officer

We are driven by our purpose: making Britain more connected so we can all lead smarter, greener lives.

2. The DCC and the smart metering network

Since being awarded the licence in 2013, the DCC has designed, built, and now manages the telecommunications technology infrastructure that underpins the smart meter roll-out. At scale, the smart metering system will support secure data communication across 100 million devices in 30 million premises, as well as delivering the central systems needed to support faster, more reliable switching.
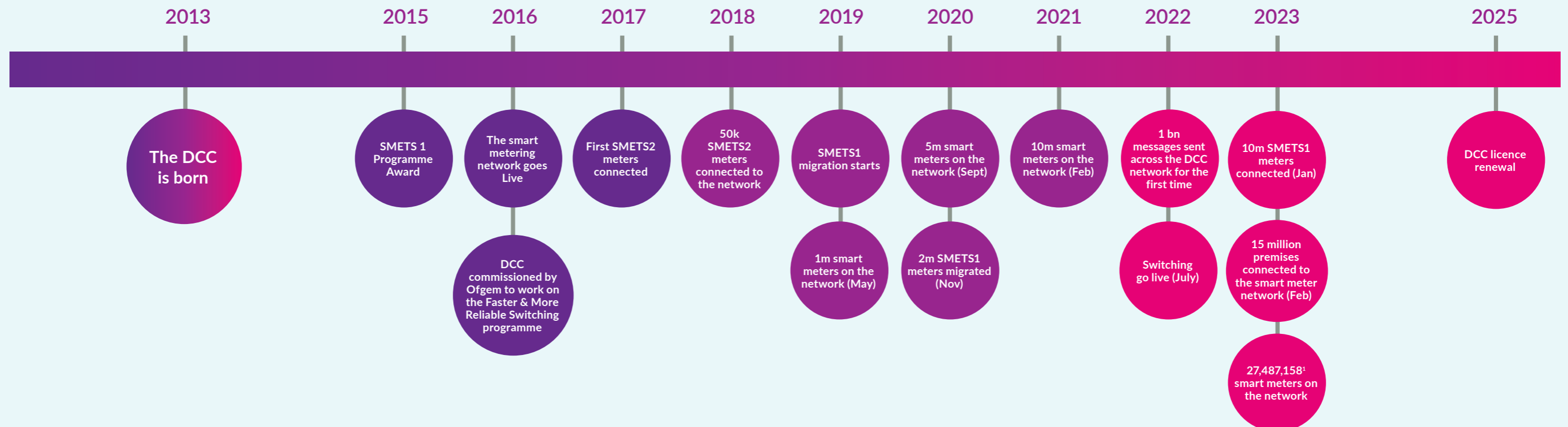
What the DCC is responsible for

✓ **Smart meter enrolment:** support the roll-out of smart metering by ensuring new smart meters can be connected to the network at the first time of asking

✓ **The network:** develop, operate and maintain the smart meter network, with a dedicated team monitoring its performance 24/7 365 days a year

✓ **Security:** operate to the highest security standards as defined by Critical National Infrastructure. The smart meter network was designed with security at its core, alongside the National Cyber Security Centre (NCSC) – part of GCHQ.*

✓ **Efficiency:** deliver all of the above in an efficient and economical manner to ensure we are delivering value for money for our customers, and ultimately consumers

What the DCC is not responsible for

✗ **Smart meter installations:** the government has required energy suppliers in England, Scotland, and Wales to provide smart meters to their customers

✗ **Policy changes** that affect the cost of living and energy crisis: the government along with the regulator are responsible for energy policy and associated changes, however DCC can act as a platform for policy implementation

✗ **Promotion and advertising of the smart meter roll-out:** Smart Energy GB (SEGB) is the not-for-profit campaign helping everyone in Britain understand the importance of smart meters and their benefits to people and the environment.

✗ **Meter readings:** the DCC does not have access to individual meter readings. These are encrypted and securely transported to energy providers and distribution networks

DCC Timeline

2013 — The DCC is born

2015 — SMETS 1 Programme Award

2016 — The smart metering network goes Live / DCC commissioned by Ofgem to work on the Faster & More Reliable Switching programme

2017 — First SMETS2 meters connected

2018 — 50k SMETS2 meters connected to the network

2019 — SMETS1 migration starts / 1m smart meters on the network (May)

2020 — 5m smart meters on the network (Sept) / 2m SMETS1 meters migrated (Nov)

2021 — 10m smart meters on the network (Feb)

2022 — 1 bn messages sent across the DCC network for the first time / Switching go live (July)

2023 — 10m SMETS1 meters connected (Jan) / 15 million premises connected to the smart meter network (Feb) / 27,487,158[1] smart meters on the network

2025 — DCC licence renewal

*https://www.smartdcc.co.uk/our-smart-network/protecting-data-on-the-smart-meter-network/
[1] Last updated on 18.07.2023

Smart Energy House

The network operates to the highest security standards in Europe and operates separately from the potential pitfalls of the public internet.

Low carbon technologies

Electrification of heat and transport will result in the installation of and engagement with new low carbon technologies, including electric vehicle chargers, heat pumps and rooftop solar photovoltaic (PV) panels.

Smart appliances

Devices that you connect to your smartphone or tablet for better control, convenience, and information.

Smart electricity meter

Unlike traditional meters, which simply register a running total of energy used, smart gas and electricity meters can record half-hourly price and consumption data and provide automatic meter readings to your energy supplier.

In-home display unit

Displays near-real time information on energy usage, cost and greenhouse gas generation for both gas and electricity.

Smart gas meter

Unlike traditional meters, which simply register a running total of energy used, smart gas and electricity meters can record half-hourly price and consumption data and provide automatic meter readings to your energy supplier.
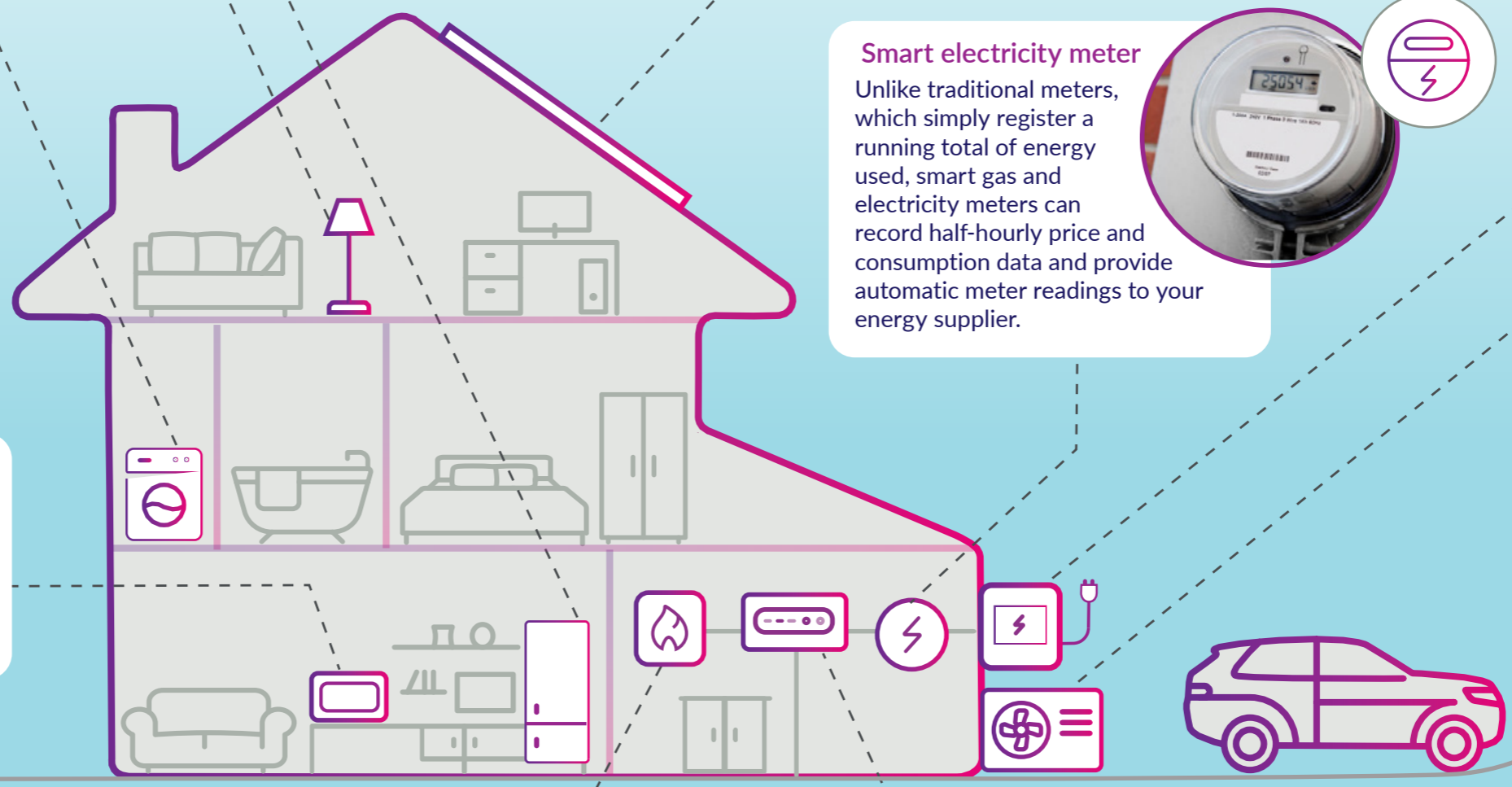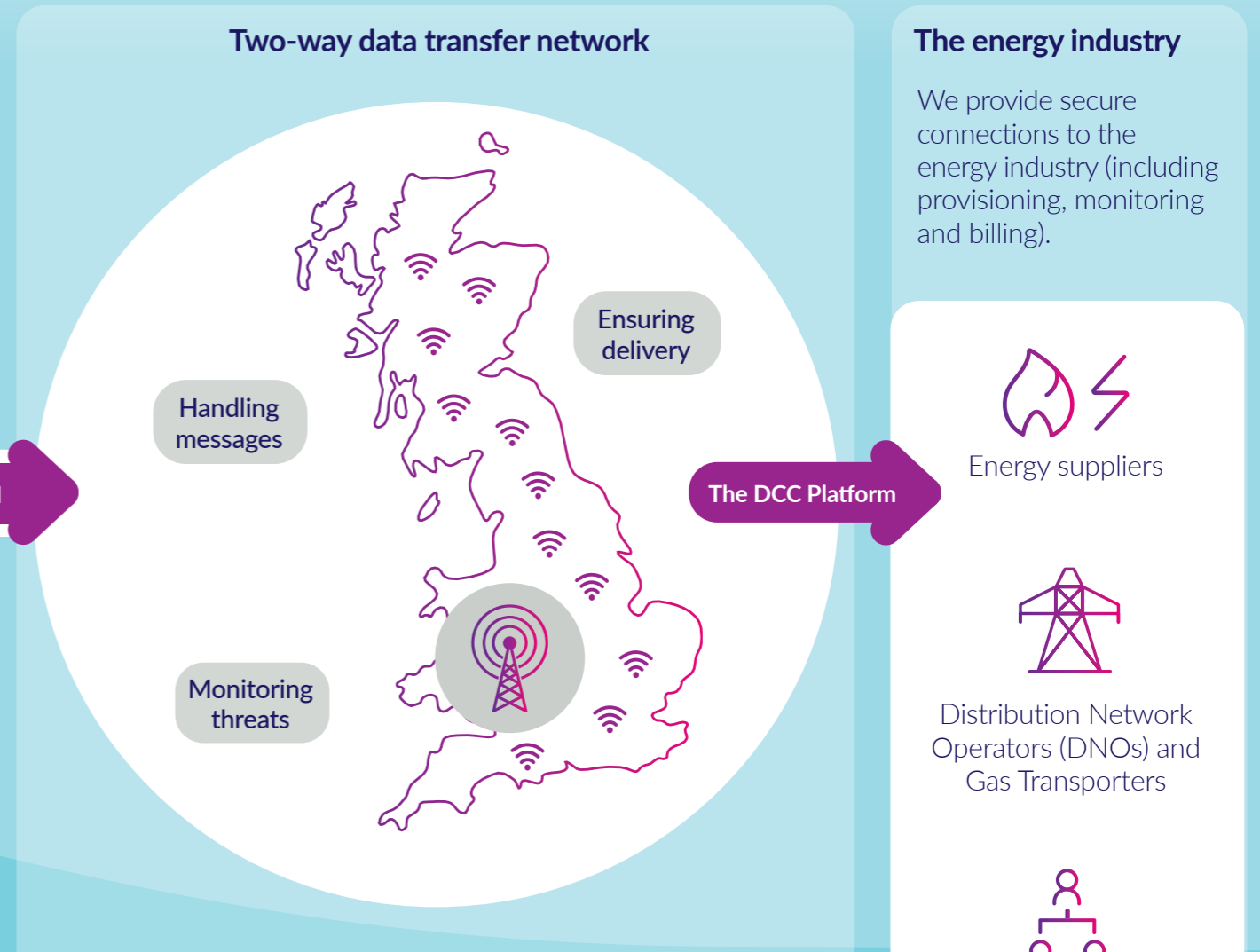
Communications hub

Creates a home area network to receive the data from meters. It adds a second layer of security and transports encrypted data over the Wide Area Network (WAN), a private network (separate to the internet) to the DCC.

HAN:

The Home Area Network (HAN) enables devices and appliances to communicate with each other. The obvious example is the smart meter and the in-home display units.

WAN:

The Wide Area Network (WAN) is another name for the Smart Metering Wide Area Network. DCC sends, receives, and conveys communications to and from registered SEC Parties and their meters and other devices in End Consumer premises.

Home Area Network and Wide Area Network

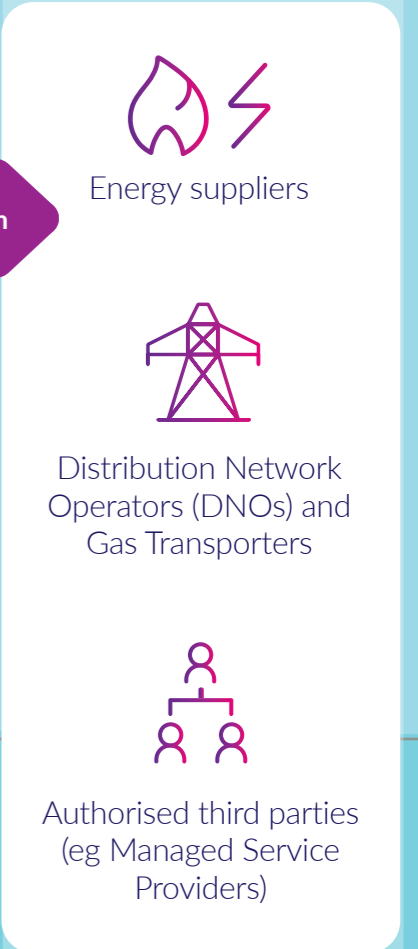## Home Area Network (HAN)

Wide Area Network (WAN)

Two-way data transfer network

The energy industry

We provide secure connections to the energy industry (including provisioning, monitoring and billing).

Handling messages

Ensuring delivery

Monitoring threats

The DCC Platform

Energy suppliers

Distribution Network Operators (DNOs) and Gas Transporters

Authorised third parties (eg Managed Service Providers)

Communications hub HAN WAN

Our work means the energy industry has a real-time view of consumption, allowing it to optimise energy generation and storage, and smooth the peaks and troughs.

"A secure critical national infrastructure exemplar"

Ciaran Martin, former CEO, NCSC

- The data is transmitted to the DCC across the Wide Area Network, made up of radio and mobile masts. This already provides over 99.3% coverage with work underway to ensure 100% of eligible homes and small businesses can access the network

- The smart meter network was designed with security at its core, alongside the National Cyber Security Centre (NCSC) – part of GCHQ

- The network is monitored 24/7 365 days a year by the DCC in our Security and Technical Operations Centre

- The DCC never sees or keeps consumption data, we transport it securely straight to our customers

- In addition to the smart metering network, we operate the Central Switching Service which enables energy consumers to switch energy supplier on the next working day

Managing the network

We are focused on operating a stable, reliable, and secure network with a coverage level that enables our customers to meet their roll-out targets across Great Britain.

Through the DCC's Technical Operations Centre (TOC) and Security Operations Centre (SOC) we monitor and manage the network 24 hours a day, 7 days a week,

365 days a year. It helps us to track the progress of the smart meter roll-out, manage issues on a day-to-day basis and plan for and forecast future growth and demands. For more information, please visit our live dashboard at:
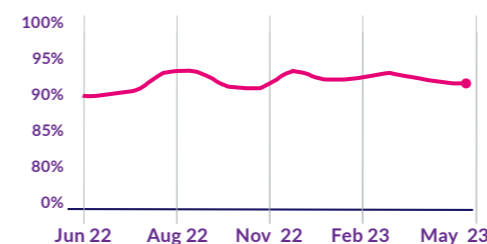
https://www.smartdcc.co.uk/our-smart-network/network-data-dashboard/

Total smart meters connected

27,487,158

Last updated on 18.07.2023

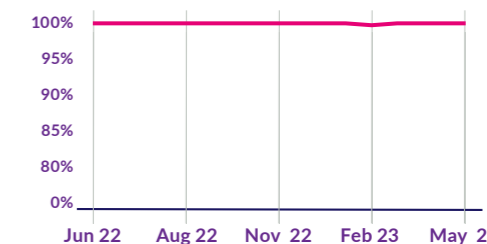**Service requests overall performance average**

92%

Last updated 18.07.2023
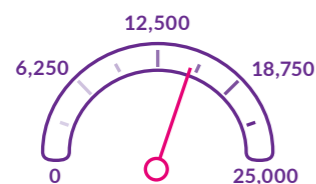
Network availability average

100%

Last updated 18.07.2023

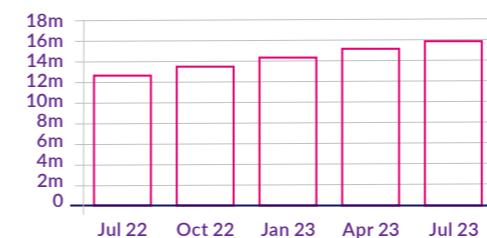**Average daily connection rate**

15,021

Weekday connections, second generation smart meters
Last updated on 31.05.2023

Connected homes

16,529,371

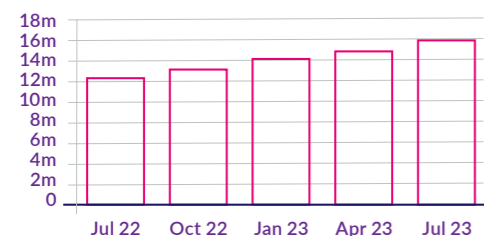Last updated on 18.07.2023

CO2 emissions saved

1,012,782

Tonnes, by all smart meters on DCC network over past year
Last updated on 17.07.2023

SMETS2 smart meters on the network
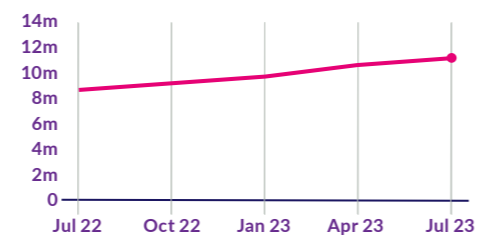
16,030,861

Second generation smart meters
Last updated on 18.07.2023

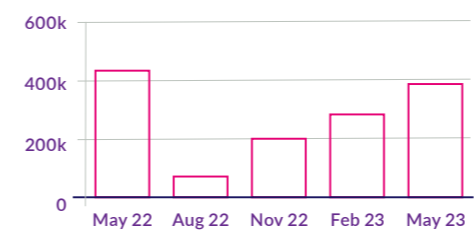**SMETS1 smart meters connected to network**

11,457,151

First generation smart meters
Last updated on 18.07.2023

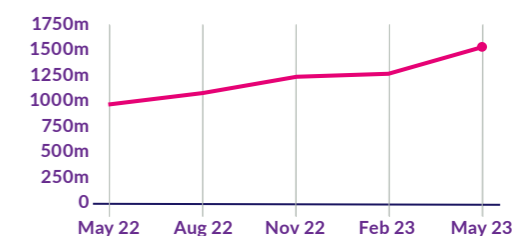**Energy switches in past month**

401,826

Changes of supplier involving smart meters on network
Last updated on 31.05.2023

Messages sent monthly

1,507,812,325

Last updated on 31.05.2023

The scale and reach of smart metering data

Smart metering delivers significant benefits to energy consumers, for example by automating meter readings and improving the accuracy of energy bills, through to empowering consumers to better manage their energy consumption and improving outcomes for prepayment consumers.

There are now more than 27 million smart meters installed and enrolled onto the DCC's nationwide secure network. Up to 1.5 billion messages are securely encrypted and sent to and from homes and small businesses every month.

The DCC network supports almost 150 different types of messages, including service requests and alerts.

Some of the most common messages include:

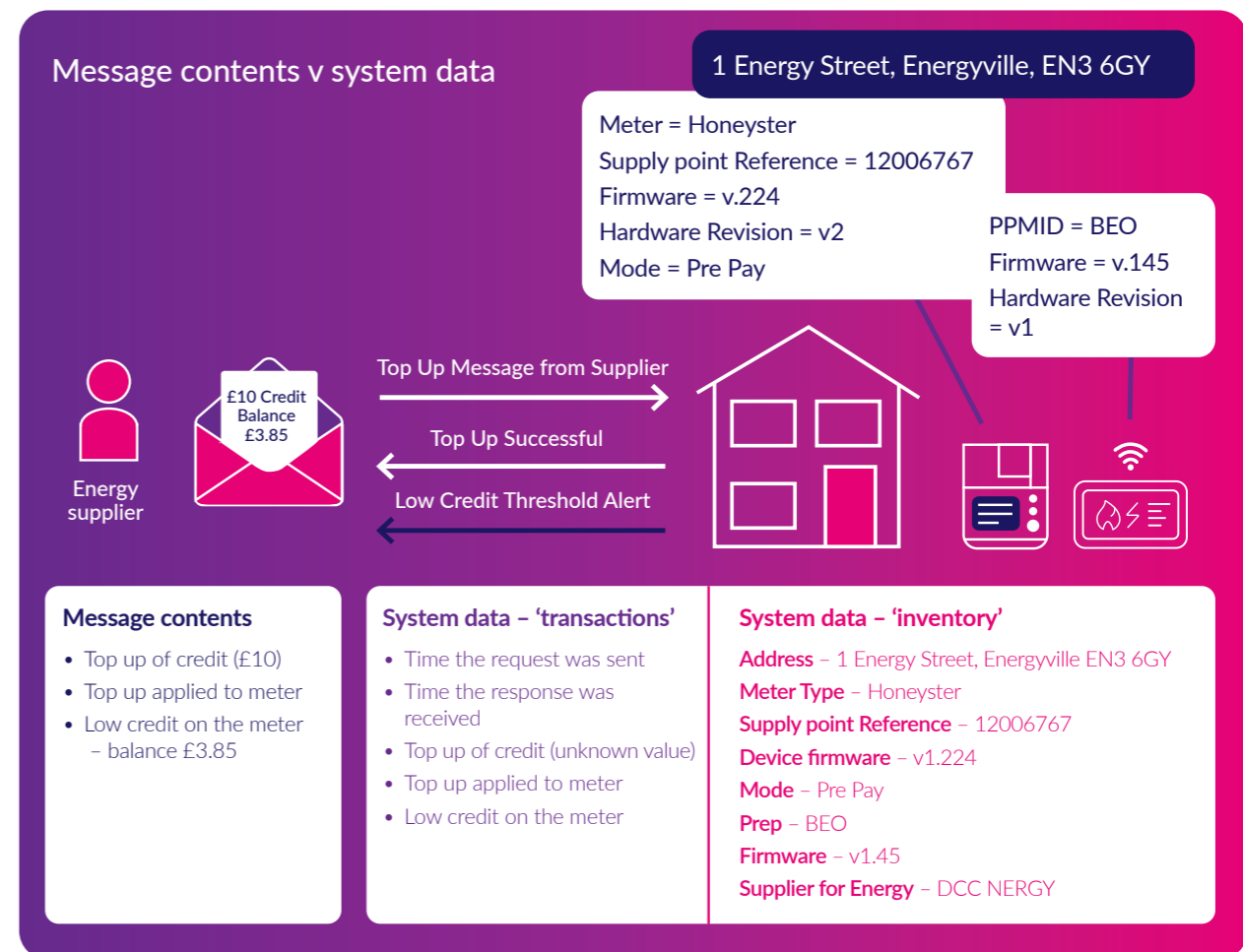|	
Prepayment	The prepayment service allows end consumers to add credit to their meters through an over-the-air top-up over our network, keeping the lights on for millions of people. This service is the most critical that DCC provides, supporting some of the most vulnerable consumers in the country.
Install and commission	The install and commission service allows new smart meters to be installed within homes and then join the DCC network. This provides the end consumer with full smart functionality and the benefits that come with that.
Change of supplier	For smart meters on the DCC network there is full interoperability between energy suppliers meaning the meter does not need to be replaced when switched. The Change of Supplier service allows fast, simple switching between energy suppliers for end consumers.
Meter reads	The most utilised message on the DCC network is meter reads allowing energy suppliers to remotely read energy usage and remove the need for a regular house visit or manual meter readings by consumers. The service provides frequent, accurate billing of energy at the time of use and is one of the main benefits of having a smart meter.
Firmware	The firmware service allows for remote upgrades of meters unlocking new functionality and benefits as innovation is created.

The security model creates an important distinction between the types of data generated within the smart meter system. At the most simplistic level, two categories exist: message contents and system data.

Smart meter data defined

At the simplest level, smart meter data is commonly described as either 'message contents' or 'system data'. A letter sent by post provides a useful analogy to explain the difference.

The letter – the message content sent to or from devices connected to the system within premises, eg the amount of energy consumed (consumption data) or amount added to a prepayment meter.

The envelope – system data or information about the message, eg where it was sent and to which device, at what time and whether it arrived safely.

Message contents v system data

1 Energy Street, Energyville, EN3 6GY

Meter = Honeyster
Supply point Reference = 12006767
Firmware = v.224
Hardware Revision = v2
Mode = Pre Pay

PPMID = BEO
Firmware = v.145
Hardware Revision = v1

Energy supplier

£10 Credit Balance £3.85

Top Up Message from Supplier
Top Up Successful
Low Credit Threshold Alert

Message contents
- Top up of credit (£10)
- Top up applied to meter
- Low credit on the meter – balance £3.85

System data – 'transactions'
- Time the request was sent
- Time the response was received
- Top up of credit (unknown value)
- Top up applied to meter
- Low credit on the meter

System data – 'inventory'
Address – 1 Energy Street, Energyville EN3 6GY
Meter Type – Honeyster
Supply point Reference – 12006767
Device firmware – v1.224
Mode – Pre Pay
Prep – BEO
Firmware – v1.45
Supplier for Energy – DCC NERGY

We believe that universal sharing of data, in line with the principles laid out in the Government's National Data Strategy, can help industry to develop new business models and propositions designed to tackle the social challenges of today, including the drive to reach net zero.

Building on the work of the Energy Digitalisation Taskforce and DCC's preceding Data for Good vision, the forthcoming Data for Good paper seeks to move the dial from discussion to further action providing recommendations to industry on measures that can be implemented to maximise the public interest benefit of smart meter data. It explores the full array of benefits that can be unlocked through enhanced data access and establishes the considerations that need to be addressed if the true potential is to be realised.

Over the course of the following years, we expect to interact with new market entrants delivering new business models and services. These organisations will all use the smart metering system to deliver a highly varied portfolio of products and services to both consumers and energy providers. The success of the Demand Flexibility Service over the course of winter 2022/23 has shown the vital role smart meters will play in a more flexible energy system that delivers benefits for both consumers and the grid.

3. Our Operating Context

The DCC operates at the intersection of energy, secure technology and telecoms, and government policy. Across these domains, the speed of change is increasing, albeit to varying degrees, which places an increased importance on the DCC's ability to understand them and identify the implications. This section assesses some of the key trends that impact our broader operating context.

These challenges are of course not unique to DCC. As a licenced monopoly at the centre of an evolving energy ecosystem, we continue to look for ways to work collaboratively with all our stakeholders to anticipate, respond to, and manage changing requirements.
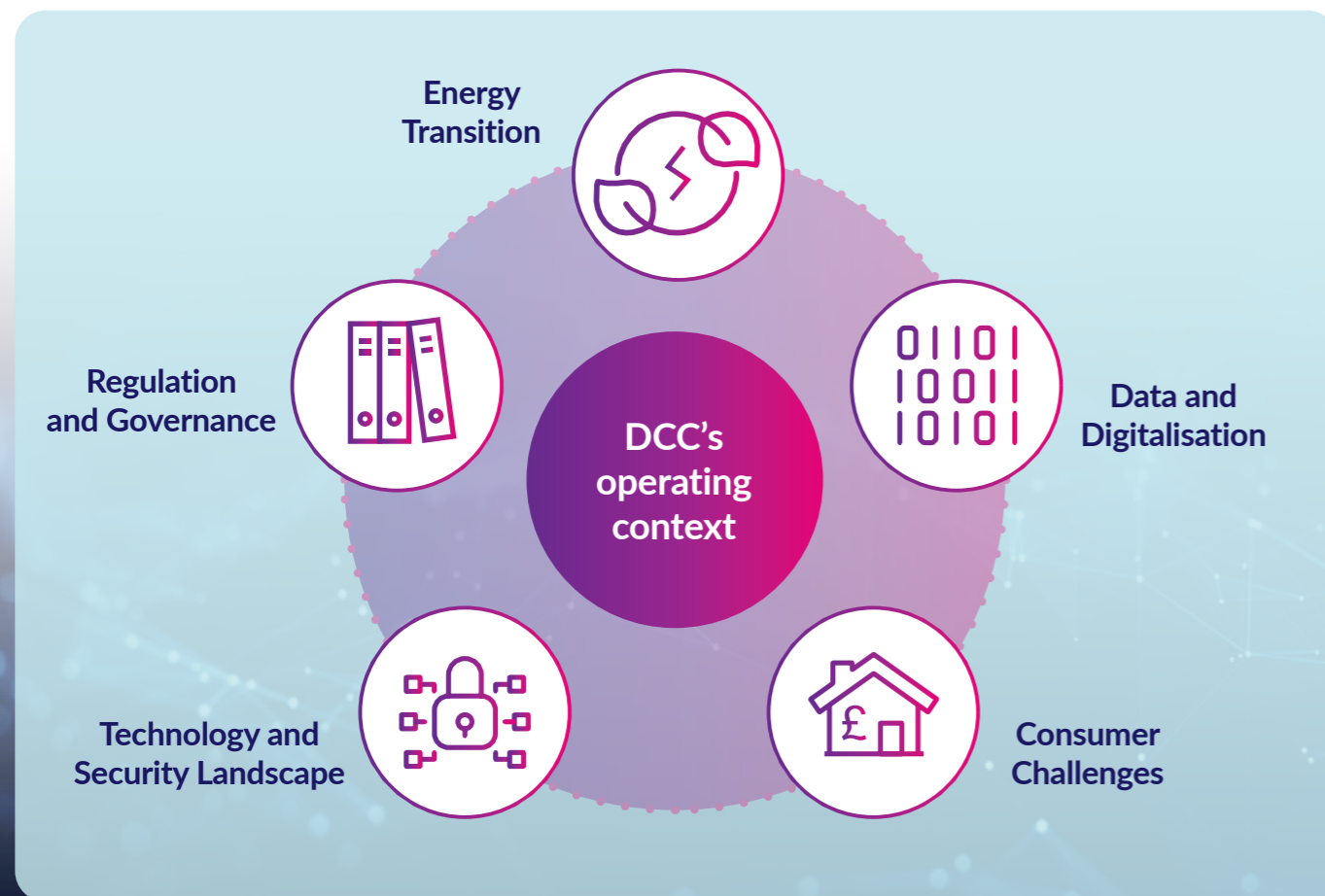
The Energy Transition

The Government's Fourth Carbon Budget, which is part of its plan to achieve net zero carbon emissions and runs from 2023-2028, requires a step change in decarbonisation measures compared to previous carbon budgets. Increasingly, the '3Ds' – decarbonisation, decentralisation and digitalisation – are reshaping the way our energy system works and have the potential to drive the energy transition at a much faster rate than previously anticipated.

Electricity demand is forecast to increase by 50% by 2035 [1], driven by the adoption of low carbon technologies such as electric vehicles and heat pumps. From 2025, no new build homes will be fitted with gas boilers, and the government is aiming to install 600,000 heat pumps annually by 2028.

To help offset this increase in demand, and the associated impact on energy bills from high prices, there is a growing focus on energy efficiency. At a national level, the Energy Efficiency Taskforce, has been established to support the reduction of energy demand through accelerated delivery of energy efficiency across the economy. At a regional level, the Greater Manchester Retrofit Task Force, is designed to support this ambition.

In parallel, there is an increasing acceptance of the role demand-side flexibility will play in balancing supply and demand and mitigating peak demand increases, especially as Market-wide Half Hourly Settlement launches in 2025. During winter 2022/23 National Grid Electricity System Operator (ESO) launched the Demand Flexibility Service (DFS), which paid consumers for reducing their electricity usage during peak times. This was the first national deployment of a demand-side response (DSR) smart energy policy in the UK and was dependent on smart meter data.

This greater level of system-wide flexibility is required in part because of the increasing proportion of low carbon generation. As outlined by the ESO, integrating large volumes of renewables, especially offshore wind, will require strategic whole system planning and increased levels of regional coordination.

Key to the planning and management of an evolving energy system will be the creation of the Future System Operator, and the transition from Distribution Network Operators (DNOs) to Distribution System Operators.

[1]   Sixth Carbon Budget - Climate Change Committee (theccc.org.uk)

Energy Transition

Regulation and Governance

DCC's operating context

Data and Digitalisation

Technology and Security Landscape

Consumer Challenges

What does this mean for DCC?

- Absolute focus on ensuring stable and reliable network performance as greater numbers of consumers adopt and use smart meters to influence and manage energy usage

- Ensuring our systems and infrastructure are sufficiently flexible and scalable to support ongoing evolution of the energy system and the changing nature of requirements of the DCC, from customers, system bodies and new entrants

- Continued engagement with industry and the ESO on the delivery of future editions of the Demand Flexibility Service and timely progression of Market wide Half Hourly Settlement to support innovative flexibility propositions and effective management of local networks

- Continued engagement with government and the regulator on proposals around future flexibility services and protocols, including the provision of a secure, central register of assets

- Supporting innovators with the capability to use our secure network to enable load control, the balancing of distributed energy, and flexible assets such as solar, EVs, heat pumps and storage

- Engagement with national and regional stakeholders to identify how greater use of system data can support fuel poverty and energy efficiency initiatives, from more targeted identification through to more enduring solutions

Data and Digitalisation

Decentralisation of the energy system will not be possible without digitalisation, which is 'integral to all aspects of the future energy system' [2].

In the energy sector, a multitude of initiatives – policy making, market stimulation, industry-led activity – are uniting around digitalisation and data exchange to enable the energy system transition and deliver a low carbon future. The impending Data Protection and Digital Information Bill, the 'Digital Spine' feasibility study and various ongoing innovation programmes will all reinforce the government's drive for a pro-innovation, pro-growth data landscape.

Smart meter data is at the heart of the energy sector transition and critical to achieving net zero targets. With more than 27m smart meters now installed, the smart system is already generating over 1.5bn data transactions every month. Democratising access to smart meter data can unleash the transformative potential of the system, allowing existing and new organisations alike to innovate, engage consumers and deliver system benefits.

Unlocking greater use of smart meter data requires consideration of complex, broad ranging issues which relate as much to the regulatory and governance framework for data access as the technical mechanisms through which data can be obtained. Changes to the current smart metering regulatory framework – and particularly as new data protection legislation is adopted – must retain and ideally enhance trust for the end consumer that their data will be used in a secure and lawful manner. Deploying mechanisms to control access whilst creating the environment where public good use cases can flourish is complex, but critical.

Energy Systems Catapult, supported by DCC, will be shortly publishing a white paper that sets out a number of recommendations to help ensure that public good benefits of smart meter data can be realised more effectively in the short, medium, and long term.

[2] Future Energy Scenarios 2022, ESO

What does this mean for DCC?

- Absolute focus on secure and stable network performance to ensure customers receive the data they need to develop innovative products and services, and are able to test these safely in a controlled environment

- Continued engagement with interested 3rd parties to support and enable innovation projects seeking to leverage the power of smart meter data

- Continued engagement with Ofgem to support and inform ongoing regulatory considerations regarding data and the digital regulatory landscape

Consumer challenges

During 2021 and 2022 there were unprecedented increases in the energy price cap, which led the government to introduce the Energy Price Guarantee in October 2022 to protect consumers from the significant increases in wholesale gas prices. Energy price rises have had a significant impact on household bills and consumers' engagement with energy usage. 92% of energy bill payers said they made changes to their energy use to save energy between October 2022 and February 2023 [3].

Price rises have placed millions of households at risk of falling into fuel poverty and sharpened the focus on protecting vulnerable consumers. Figures from National Energy Action show that as of April 2023 7.5million UK households are in fuel poverty, meaning they are unable to afford to heat their homes to the temperature needed to keep warm and healthy. This is up from 4.5million in October 2021 [4].

The rise in fuel poverty has placed an increased focus on the role of prepayment meters within the energy system. Ofgem recently announced a new Code of Practice regarding installing prepayment meters for vulnerable consumers. Furthermore, there is increasing discussion for more substantive measures to support vulnerable consumers, notably through a social tariff.

[3] Attempts to save energy fail to prevent bills shock – KPMG United Kingdom
[4] National Energy Action

What does this mean for DCC?

- It is imperative that the DCC operates efficiently and responsibly, continuing to deliver value for money so that we do not add unnecessarily to the pressure on household energy bills. Through our cost benchmarking exercise, we are continuing to scrutinise our cost base and look for further efficiencies

- Explore the most economic and efficient means to prioritise network traffic for the most time critical messages, adopting a 'never fail a pre-pay' mindset to drive focus and support to prepayment messages

- Continue engagement with government and industry to explore how the smart metering infrastructure and smart meter data can be used to help consumers in fuel poverty

"There is a case for examining, with urgency, a social tariff that limits the impact of extremely high prices and reduces volatility for a defined set of vulnerable groups."

Jonathan Brearley, Ofgem CEO

Technology and security landscape

The UK will sunset 2G and 3G services by 2033, with some 3G networks already in the process of shutting down. This is in part driven by the continued adoption of newer 4G and 5G technologies. The UK Wireless Infrastructure Strategy set an ambition to deliver nationwide coverage of standalone 5G to all populated areas by 2030 and increase 4G coverage to 95% of the UK landmass by 2025.

In parallel, the roll-out of fibre gigabit broadband continues to progress, with the £5bn Project Gigabit programme seeking to expand coverage to at least 85% of premises by 2025 and over 99% by 2030. 74% of UK premises now have gigabit broadband, up from 6% in 2019.

As the number of connected devices grows, the importance of ensuring a secure and resilient network has also increased. The war in Ukraine and broader geopolitical security context has led the National Cyber Security Centre to issue a warning that critical national infrastructure (CNI) and CNI-like organisations should be on high alert due to the increased threat from state-aligned groups. These groups are typically less motivated by financial gain, nor subject to control by the state, and therefore their actions can be less predictable and their targeting broader than traditional cyber-crime actors.[5]

Coupled with this is an increasing proliferation of commercial cyber tools, lowering barriers to entry for state and non-state actors and leading to a more unpredictable threat landscape over the next five years. The increasing power of advanced technologies, such as artificial intelligence and quantum computing provide both a significant opportunity and new threats. For example, quantum computers can potentially put in jeopardy most of the mechanisms commonly used to encrypt information and will become an increasingly important topic.

[5]   National Cyber Security Centre

What does this mean for DCC?

- Ensure continued progress and timely delivery of our Communications Hubs & Networks Programme to address impact of 2G and 3G sunsetting

- In line with the UK Wireless Infrastructure Strategy, continued engagement with government, our customers and suppliers, Ofgem and Ofcom to support the digitalisation of the energy sector

- Continued focus on ensuring our security capabilities remain appropriate and commensurate to the threat, working closely with our stakeholders and suppliers to maintain vigilance across the supply chain

Regulation and governance

The path to net zero must be underpinned by appropriate regulation and governance that enables change at the pace required to meet ambitious decarbonisation targets. One element of this is the proposed Energy Code Governance Reform which seeks to develop an institutional governance framework that is forward-looking, agile, easy to understand, and able to accommodate a growing number of market participants.

There are important dependencies between the code reform agenda and DCC licence renewal. The DCC Licence was originally awarded in 2013 and is due to expire in 2025. Ofgem are currently consulting on the principles and scope of DCC's Licence and regulatory arrangements for the 2025-2040 period, with the objective to put in place an effective regulatory framework for a future DCC.

What does this mean for DCC?

- As a SEC and REC Party and central delivery body the DCC is involved as a stakeholder sharing our experiences to inform the code reform proposals

- We recognise there is considerable change coming across the industry alongside the energy code reform ie The Future System Operator (FSO) and delivering a Smart and Secure Electricity System (SSES) which will require resource and input from DCC

Licence renewal

At the time of writing this plan, we do not yet know the outcome of Ofgem's review of regulatory arrangements for the DCC during the 2025-2040 period. Irrespective of the regulatory model, we are committed to working with Ofgem to support the detailed design process and procurement for the next licence holder.

We are already making some changes ahead of the licence renewal, including greater customer and consumer representation on the Board. Once we know the outcome of the Ofgem review, we will be in a better place to plan for the work required over the next few years. In the meantime, we have a responsibility to deliver our programmes and operational services through to the end of the licence but also then to ensure continuity into a new licence period in whatever form that takes. So, this Business and Development Plan reflects that approach and assumes that at an operational level, activities such as contract renewals and programme delivery will continue into a new licence period.

It is our intention to mobilise a team to:

Work with Ofgem and industry on the detailed design of the future model

Support the Ofgem led procurement for the next licence holder

Ensure a seamless transition to the new model, including early adoption of key changes

4. Our Strategy

The DCC, together with its customers, connects homes and businesses to a single, secure, smart metering network.

Purpose

We believe in making Britain more connected, so we can all lead smarter, greener lives.
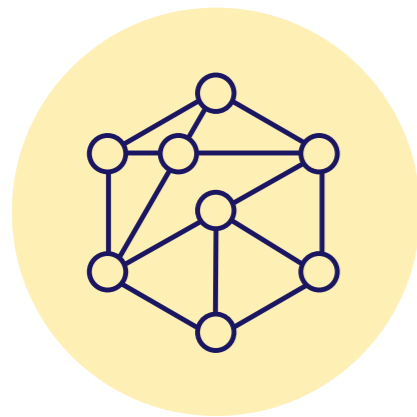
Mission

Our mission is to digitalise Britain's energy system, enabling innovation and re-use of the DCC network to accelerate decarbonisation and drive social good.

Values

How we achieve these is guided by our three core values. They help us to work consistently and collaboratively, both internally and with our diverse set of external stakeholders.

Our three core values:

MAKE A
Difference

ACT WITH
Integrity

BE
Accountable

Our strategic outcomes

Given our mandate and the evolving context in which we operate, we have outlined a series of strategic outcomes for our organisation to help align our activities and measure our performance. It is our intention to revisit these at the next licence period to ensure they reflect future considerations. The strategic outcomes are the rationale for why we do what we do to deliver value for our customers, and GB consumers.

We will be:

Secure and stable: delivering reliable network performance, nationwide, while maintaining a security posture and resilience expected of an asset deemed 'Critical National Infrastructure'

A responsible and efficient business: operating efficiently and responsibly in a manner that recognises our obligations to our people, our customers and ultimately consumers

Right first time: delivering our services to the time, cost and quality expectations of our customers and wider stakeholders

Flexible and fast: delivering an accessible and flexible platform, enhancing our capabilities to provide a swift and seamless experience for current and future customers

What we operate

We operate and maintain the smart metering network on a 24/7 basis, securely transferring energy data from homes and businesses to our customers. We do this by supporting the roll-out of second-generation (SMETS2) smart meters and the migration of existing first generation (SMETS1) meters onto our network, for domestic premises and small businesses across Great Britain. We are currently undertaking a programme of work to prepare for the roll-out of next generation, 4G smart meters expected to be deployed onto the network from 2025 onwards.

Our customers are energy retailers, Distribution Network Operators (DNOs), Managed Service Providers (MSPs) and a growing number of other innovative businesses.

The DCC has delivered additional services beyond the original scope of its role at the licence award in 2013, notably providing the Central Switching Service (CSS) which went live in 2022. This makes switching energy suppliers faster, more reliable and more efficient. It has supported more than 8m energy switches since it went live.

Given our position as the digital backbone of the GB energy system, and an already established national asset,

the DCC may be asked by the government or Ofgem to deliver future policy initiatives. The reach, scale and inherent security of our network provides a platform for policy implementation.

For example, the government is currently considering the role of the DCC as part of its broader consultation on a Smart & Secure Electricity System (SSES). We are also actively participating in government and industry-led innovation projects to identify additional use cases for the smart metering network which could accelerate decarbonisation and drive social good.

DCC Public   DCC Public

How we deliver

In operating these services, the DCC delivers a unique set of activities from engaging with a varied set of stakeholders, to designing, procuring, and securing new technologies, through to assuring and operating these as part of managing our network. Any changes to existing services are managed through our Lifecycle Management approach. The following sections outline this approach and our efforts to designing (Technology), procuring (Commercial), securing (Security) and assuring and operating (Operations) our network.

Lifecycle management approach

We manage any changes to existing services and the implementation of new services provided to our customers through our lifecycle management approach. This provides an ongoing process to ensure that services are managed proactively and efficiently through the course of their lifecycle, with clear accountability at each stage. It seeks to support our shift to increased in-life management of services and builds on lessons learnt from activity such as in-life maintenance.

New sources of change, such as instruction from government or our customers will funnel through the 'Front Door' that will act as a single point for change initiation. This enables enhanced foresight on future activity and ensures delivery impacts and risks can be flagged at the earliest opportunity.

At the 'Concept to Contract' stage, for programmes and procurements that cover core service provision or where the contract value is greater than £10m, the DCC follows the HM Treasury Green Book Business Case approach. This enables us to articulate and demonstrate how the change will meet customers' needs and provide value for money.
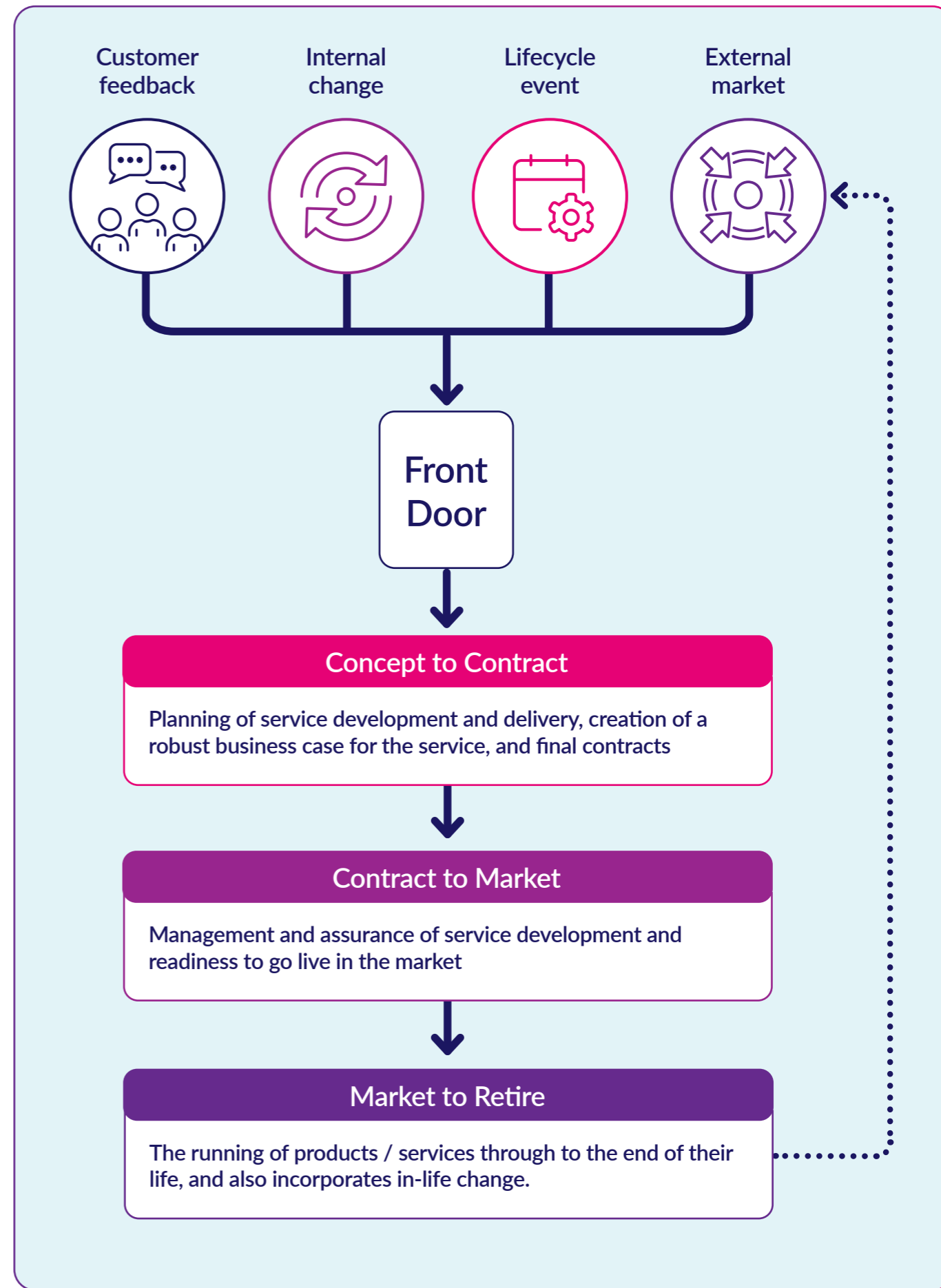
As the activity moves from 'Contract to Market' to 'Market to Retire', and transitions into the live environment, our service assurance process will ensure

a smooth go-live that protects customer operations. We do this by controlling all change through quality gates into the live environment, so that service risks are identified and mitigated, and key quality standards are met.

To support our efficiency efforts, a process improvement team is being mobilised to gradually improve and mature our core processes over the next 12-18 months. As we develop and refine these further, we will engage with stakeholders to ensure they can input where appropriate.

Lifecycle management supports appropriate stakeholder engagement throughout the process. The DCC operates in a complex and changing stakeholder landscape. We want to be recognised as a trusted partner - by our customers, our regulator, our suppliers, and other ecosystem participants. Therefore, engaging and collaborating with our stakeholders is fundamental to the way we operate, with regular engagement from across the business.

We recognise that as a licenced monopoly we have a duty to be an economic, efficient, and responsible operator, delivering value for money for our customers, because this ultimately delivers value for money for end consumers. We're committed to continuing to seek opportunities to enhance our cost efficiency.

Customer feedback   **Internal change**   **Lifecycle event**   **External market**

Front Door

Concept to Contract

Planning of service development and delivery, creation of a robust business case for the service, and final contracts

Contract to Market

Management and assurance of service development and readiness to go live in the market

Market to Retire

The running of products / services through to the end of their life, and also incorporates in-life change.

Technology

The Office of the CTO is accountable for the design decisions that will enable DCC's role as a key enabler of the digital backbone of the future energy system. It is the design authority, responsible for the integration and assurance of technology systems associated with our licence.
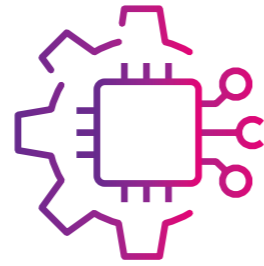
Technology vision

Our vision is to ensure that the DCC network operates efficiently and securely at scale. We will leverage virtualised, secure and scalable infrastructure to ensure we meet our service obligations. Our plan is to simplify the design of our infrastructure and where practical push functionality towards the edge of the network. As we evolve our solutions we will reduce complexity, deliver change faster and drive improved interoperability across end devices to ultimately drive efficiency for our customers and to offer the flexibility to support future policy to deliver a net zero energy system.

We have adopted four key principles by which we will evolve our technology infrastructure:

- Flexibility: The DCC network should be flexible to account for differing technology lifecycles, with configurable and scalable architecture as traffic on the system increases

- Enduring contested change model: Technology should be designed and built to allow for in-life

contestable change so that innovation or change to existing services is not limited to the incumbent supplier

- Standards-based design: Technology designs should be standards based to avoid "lock-in" to proprietary technology with specific suppliers and intellectual property rights

- Near-zero downtime: The DCC network is crucial national infrastructure. While nominated critical services, such as prepay vend, must be available and cannot have any sustained period of network disruption, all DCC services should have minimal downtime

We will work towards this vision gradually, recognising the need to balance ongoing performance and continuity of service with improvement and future-proofing of the network, while taking advantage of new developments in infrastructure to harness the benefits of server-less, multi-cloud solutions and evolution in the connectivity solution for the end devices.

Commercial

We rely on external partners to deliver many of our mandated obligations in a manner that ensures secure and stable network performance, resilience, and value for money for customers and ultimately end consumers.

Our Commercial team leads on our procurement activities, contract management efforts and ongoing supplier relationship management with an overarching aim to drive commercial excellence with our external partners to digitalise the energy system.

Commercial focus

As part of our commitment to deliver commercial excellence, to support our broader approach to disaggregate and ensure contestable change, and keep pace with the evolving technology landscape we are focused on:

- Improving and streamlining our core commercial processes to ensure robust yet pragmatic approaches to identifying, delivering, and sustaining value and business outcomes

- Enhancing our digital capabilities to better support the execution of commercial strategies, improve end-to-end operational efficiency and enable proactive identification of risks and opportunities

- Uplifting DCC's Supplier Relationship and Contract Management, embedding industry best practice into DCC's standard processes

- Promoting a culture of continuous improvement across our supply base that goes beyond contracted levels of performance to support the wider DCC's delivery of service excellence and value for money

- Strategy and policies that align to Government Procurement Policy (ie Chartered Institute of Procurement and Supply, Government Commercial Organisation) and deliver a quality experience, for our partners and our people

Security

2022 served up several reminders of why security remains a key focus for all businesses operating in and around Critical National Infrastructure sectors. The DCC is no exception to this. The war in Ukraine has intensified the need to make sure that energy security and resilience remain top of mind, and we are exploring a range of opportunities to ensure that our cyber defences are robust and commensurate with the threat we face.

We have laid out five strategic objectives that build on our threat-led approach and are designed to increase the security of our supply chain through enhancement of our cyber defences and further development of our compliance activities.

In 2023/24 we will:

1. Set revised integrated security baselines that take into account changing economic conditions and the developing threat landscape

2. Provide clear reporting on compliance with our baselines, along with well-defined mitigations where required

3. Continue to integrate and centralise our cyber defences, creating a single 'pane of glass' to monitor the security of Britain's smart metering network

4. Develop our cyber risk maturity and target an overall reduction in cyber security risk over the next 36 months

5. Invest in our people to ensure that we have the skills needed to secure the digital energy system of the future

Cyber Fusion Centre

After the progress made over the past two years, the Security Operations Centre is now fully functional and operating on a 24/7 basis supporting the DCC internal estate and the faster switching service. The next step is to bring security feeds in gradually from all service providers to create a new Cyber Fusion Centre, based at Brabazon House, which will cover all aspects of the smart metering ecosystem.

Ultimately, this will give us a single view of the entire GB smart metering network, across SMETS1 and SMETS2 meters and switching. This will not only allow us to detect any attacks rapidly at any point in the system, but also and most importantly to identify those sophisticated attacks that use parallel entry points in different parts of the system.

We are seeking CREST security testing accreditation for the Cyber Fusion Centre, which means it will be formally certified as capable of meeting the size and types of challenge that lie ahead in our industry.

Supply chain visibility

The Cyber Fusion Centre, coupled with initiatives to allow for easier portability of core services will place the DCC network at an enhanced level of security and in line with National Cyber Security Centre (NCSC) recommendations. This is vitally important as the threat landscape moves increasingly towards supply chain attacks as being the preferred route to compromise large scale systems.

Summary

Maintaining the speed of our progress will depend on machine learning and artificial intelligence that is agile enough to respond to emerging threats, while ensuring that we have the right skills and best people deployed across our security teams. Our combination of rapid threat identification, mitigation and response follows best practice within the security community and will position the system well for the next decade. We intend to measure and monitor our progress through regular independent audits, including the National Institute of Standards and Technology Cybersecurity Framework (NIST CSF).
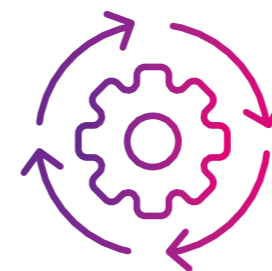
Operations

We have shifted from a programme-focused organisation tasked with building the smart metering network, to operating and maintaining one of the largest networks in Great Britain. Our Operations team is at the core of this, ensuring that the network continues to run smoothly as we scale, from the timely supply of communications hubs, to 24/7 monitoring in our Technical Operations Centre (TOC), to partnering with our suppliers to drive continuous improvement for the benefit of our customers, to assuring that any new change lands safely.

Areas of focus

To deliver this, Operations are focused on three key areas:

1. Reliable, right first-time levels of service

   • We are continuing to work with our suppliers to ensure we deliver stable, reliable, expected levels of performance, working together to identify where incidents are impacting our levels of service

   • We are fully embedded within our programme delivery teams to ensure our key programmes, eg 4G communications hubs are being designed with in-life operations front of mind and we have the right acceptance-into-service governance and controls in place to enable effective go-lives

   • Finish the job on SMETS 1 migrations, transitioning the remaining meters to a stable service ahead of switch out to 4G

2. Ensuring our people, processes and technology reflect the criticality of our services

   • To support the continued growth and complexity of the network, we're committed to delivering our Next Generation Technical Operations Centre TOC and Service Centre. This will be delivered in phases as part of our DCC Service Management System (DSMS) programme

   • As our network has grown, the volume and complexity of data has increased significantly. We will improve overall reporting, insight and intelligence which will allow us to enhance our data visualisation and self-serve capability

   • We want our Operations team to be a great place to work, for and with. In line with our broader people strategy, we're putting in place the right coaching, training and support to ensure we continue to deliver a quality experience, for our people and our customers

3. Driving collaborative customer and partner outcomes

   • Our suppliers are critical to our success. Without them we couldn't do what we do. Respect, trust and collaboration must sit at the heart of our supplier relationships. In line with our commercial strategy, we are introducing new contracting frameworks and seeking to embed better partner relationship management to build mutual understanding and collaboration

   • The energy and cost of living crisis has focused greater attention on the support provided to vulnerable customers, particularly those on prepayment meters. We are committed to ensuring we do everything we can to support vulnerable customers. We are adopting a 'never fail a pre-pay' mindset to drive focus and support to prepayment messages

Our capabilities

Since the DCC was established, we have built an organisation capable of delivering complex, technology-enabled change programmes. As we have evolved, and the smart meter roll-out has progressed, we have shifted to become a more stable operating business, capable of ensuring reliable network performance on a 24/7 basis, while maintaining the security and resilience of a vitally important element of national infrastructure.

Our core capabilities as an organisation include:

Technical and service operations
We proactively monitor our network on a 24/7 basis using best practice to maintain availability of our systems, while also providing operational insights to our customers, the government, and the regulator

Security operations
We have a built a 24/7 Security Operations Centre (SOC), which actively monitors security threats and operates to NCSC standards

Procurement and contract management
We have significant expertise in designing, procuring, and managing complex, high value contracts

Device management
We have had to develop highly technical processes and systems to support thousands of device model combinations in use across the industry

Design, programme delivery, test management and assurance
We have designed and built one of the most complex pieces of digital infrastructure in the world

Measuring performance

The DCC's performance and financial incentives are assessed by Ofgem through our annual price control submission and the Operational Performance Regime (OPR).

The three areas of focus for the OPR are:

- System performance
- Customer engagement
- Contract management

5. Strategic Outcomes

In line with a more outcome-focused approach across the organisation, we have set out to articulate the business outcomes we are seeking to achieve, and the associated key programmes and initiatives that fall within each one. Inevitably, many of the activities we undertake deliver multiple business outcomes, but this approach seeks to provide a better overview of why we do what we do.

Secure and stable

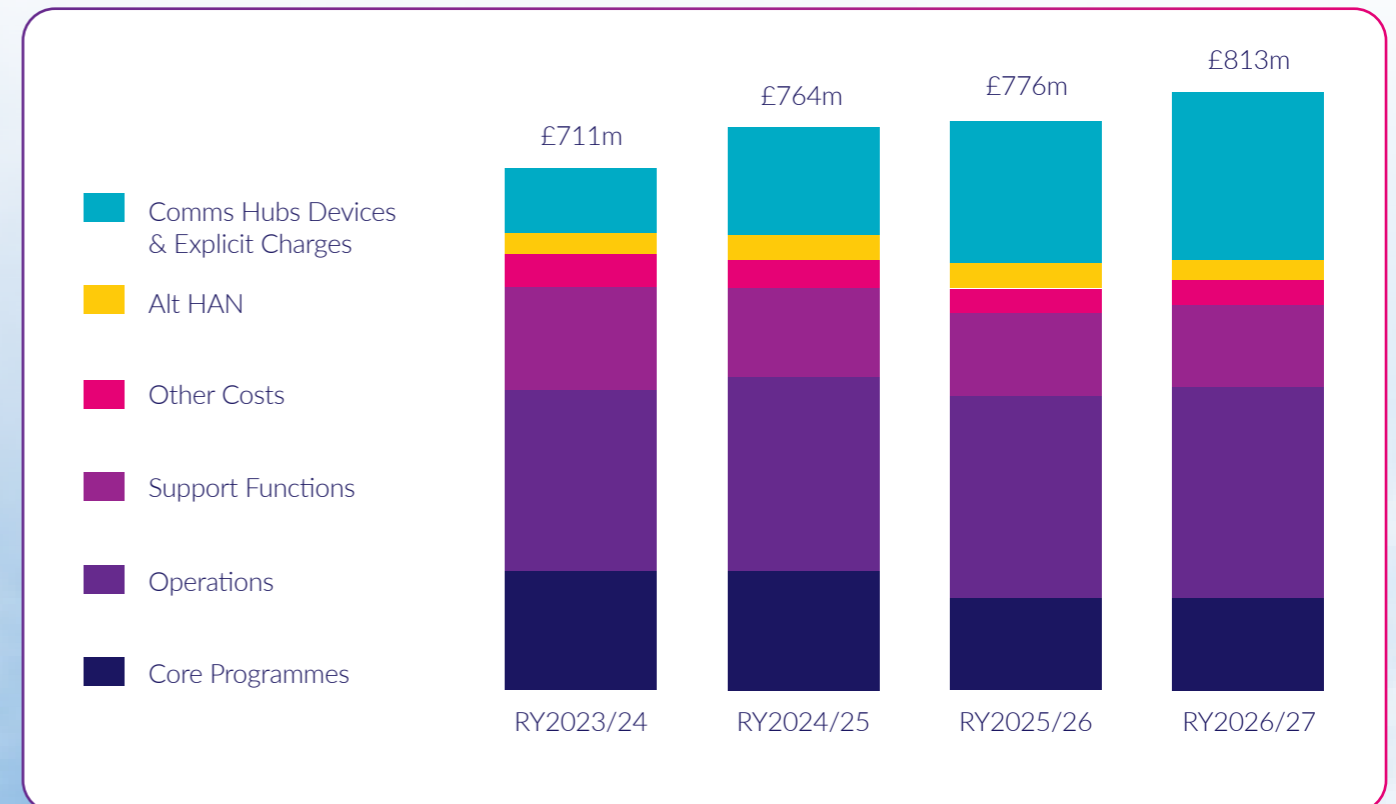**A responsible and efficient business**

Right first time

Flexible and fast

Activity summary

Programmes and Key Initiatives	Delivery timelines				
Secure and stable	2023	2024	2025	2026	2027
SMETS 1 Enrolment and Adoption					
Great Britain Companion Specification (GBCS)					
In-life maintenance		*Ongoing*			
4G Communications Hubs and Networks (CH&N)					
PKI Enduring Services (PKI-E)					
Secure Publish Subscribe (SPS)		*Under review*			
Enduring Change of Supplier (ECoS)					
CSP.N Scaling and Optimisation		*Under review*			
Network Traffic Management (NTM)					
No WAN connectivity project		*Under review*			
SEC and REC In-Life Change		*Ongoing*			
A responsible and efficient business	2023	2024	2025	2026	2027
Responsible Business Framework					
Our people strategy		*Ongoing*			
Cost efficiency programme		*Ongoing*			
Right first time	2023	2024	2025	2026	2027
Business Accuracy Programme					
Project Management Methodology		*Ongoing*			
Flexible and fast	2023	2024	2025	2026	2027
Data Service Provider (DSP) Data System					
Market-Wide Half-Hourly Settlement (MHHS)					
Test Automation Framework (TAF)					
DCC Service Management Systems (DSMS)					
Cloud Blueprint					

DCC total cost summary

As the DCC's core programmes are delivered and move into live operations, we see spend on operational and support function costs increase. As our operational costs increase, we must ensure we continue to deliver value for money by reducing our operational cost per communications hub. Below is the current trajectory of spend, in accordance with the Indicative Charging Statement published in July 2023. Cost forecasts for further years will be visible in the Charging Statement as required.

Legend:
- Comms Hubs Devices & Explicit Charges
- Alt HAN
- Other Costs
- Support Functions
- Operations
- Core Programmes

Bar chart values: £711m (RY2023/24), £764m (RY2024/25), £776m (RY2025/26), £813m (RY2026/27)

More detail on our cost forecasts and budgets is available in our Indicative Charging Statement, published in July 2023, which can be accessed on the DCC website.

Programme summary

In this section we provide further detail for each programme and initiative. For our programmes, this includes an overview providing the key information, according to the following dimensions:

Outcomes
Icon demonstrating which outcomes this programme is contributing to

Lifecycle stage
Which stage of the lifecycle this programme is currently

Cost
Indicates programme implementation costs. Cost scale represents

££££: >£100m
£££:   £50m - £100m
££:   £10m - £50m
£:   <£10m

End date
Current timing for programme to completion and handover to enduring operations

Secure and stable

Provision of a secure and stable network and switching platform is fundamental.

We recognise that we are responsible for the maintenance and operation of this unique network which at scale will support secure messaging across 100 million devices in 30 million homes. Given its increasingly important role at the heart of an evolving energy system, ensuring stability and reliability across the entire network is critical. Furthermore, while we have made significant progress to enable over 99% of eligible premises to access the network, we recognise there remain areas without access. To ensure all consumers can take advantage of the benefits from smart metering, we are investigating efforts to address this, seeking to deliver a stable network nationwide.

The smart metering network was designed with security at its heart. As the security threat continues to evolve we need to ensure we have the right security controls in place.

The following section covers our key programmes which enable us to deliver this and some key elements of business as usual activity.

Continuously improving our in-life operations

Network capacity planning

The DCC Demand and Capacity management team continuously assess intra-day and inter-day demand to predict and prevent capacity constraints across the DCC network. The team use this intelligence to develop the demand forecast and actively engage with DCC suppliers to ensure that the right capacity is available at the right place and at the right time to service demand for DCC users and industry.

DCC has observed an increase in emerging use cases for smart metering related data, across user groups and programmes. We are mindful of the emerging needs

of DNOs, as well as consumer-focused innovations within industry and energy suppliers. DCC has also seen an emerging increase in demand from the SEC 'Other User' category and will continue to engage with the relevant parties to qualify the timing and impact of their emerging use cases to the network.

To support the increased, varied and emerging demand trends of the network, scalability of existing solutions and the evolving technology landscape, DCC is in the process of restructuring and strengthening the internal Demand and Capacity Management function.

Our approach centres on three key sub-domains coupled with a stronger governance wrap designed to identify the risks and opportunities within them. These are:

Strengthen user and industry engagement to secure future demands insights

To support the future capacity needs of the network, DCC will strengthen its collaboration with users and industry to secure a better understanding of the timing, demand characteristics and usage profile of future customer demands. With increased uncertainty of demand on the DCC system, in terms of time-of-day usage, peak traffic profiles and short-to medium term demand through emerging use cases, this intelligence is a key input to model and develop our

future demand forecast with a higher degree of accuracy and therefore right-size network capacity.

We also expect that an important value-add by-product of the enhanced relationship will be to provide customers with DCC insights to further enhance and optimise the usage patterns, thus increasing service stability, and improving value for money.

Capacity assurance

This domain will be empowered to work with our commercial team and suppliers to ensure that the Demand Forecast 'Plan of Record' can be delivered over the short, medium and long term and that any risks to capacity delivery by our suppliers are captured and mitigated. This team will be responsible for forming and monitoring the plan of record of capacity and the utilisation over time within it.

The development of this renewed capability will be critical to DCC and industry success. We are therefore seeking support from both the DCC customers and our suppliers to help evolve the demand and capacity management landscape, governance structure and benefits for all parties in a more controlled and deterministic manner over the coming 12 months and beyond.

Demand forecasting capability

The demand forecasting capability is the central analytics engine of the team. It is charged with interpreting industry demands including future use cases and programmes requirements (eg MHHS) and translating these demands into the short, medium and long-term demand forecast. In addition, we

expect to be able to undertake scenario planning and what-if analysis to determine the risk profile and capacity impact as the demand profile changes over time. The team will also own the Plan-Of-Record and the quarterly publishing of the demand and insights to industry.

SMETS 1 Enrolment and Adoption

Enabling the migration of more than 15 million first generation SMETS1 smart meters onto the DCC network

Outcomes	Lifecycle stage	Cost	End date
	Market to Retire	£	2024

Why are we doing this and what benefits will this programme deliver?

This is enabling the migration of millions of first generation SMETS1 smart meters onto the DCC network where they will become fully interoperable between energy suppliers. This will allow consumers to switch energy suppliers seamlessly without losing smart functionality and will also deliver significant savings to the industry through the consolidation of commercial contracts. The objective is to support competition in the retail market and allow consumers to enjoy the full benefits of products and services which depend on smart metering. Migration extends the operating life of first-generation metering assets, contributing to reduced waste in electronic goods and improved sustainability. It also reduces costs to customers from a swap out programme.

As part of this programme, key workstreams and the benefits they deliver are covered below:

SMETS1 enhancements

While the Final Operating Capability (FOC) was delivered in February 2021, there have been ongoing operational deployments as part of a SMETS1 Enhancements workstream. The objective of this programme is to stabilise the FOC platform, maximise the total number of migrations for each cohort to enable the subsequent close-down of Requesting Parties and deliver a Device Swap Out service in FOC.

There are residual activities ongoing for devices that became eligible for migration after January 2022, which the DCC is prioritising, and device migration will occur as soon as the retail suppliers make them available.

Migration performance

As of April 2023, more than 11 million SMETS1 meters across our three cohorts have been successfully enrolled on the DCC network. We have prioritised migrating the dormant meters we are able to identify and enrol onto the network. The migration of active SMETS1 meters depends upon energy suppliers offering the meter to the DCC and we are continuing to work with customers to ensure remaining meters are migrated.

Post migration

Our customers have welcomed our Migration Control Centre (MCC) and Hypercare capabilities, which help the industry to coordinate meters in readiness for migration and provide real-time monitoring after migration. It is imperative that energy suppliers make the meters operational as soon as possible post-migration to ensure that consumers can benefit fully from smart functionality. We are working closely with our customers, the Department, and Ofgem to make sure this happens.

Why is it important to DCC?

DCC has a regulatory obligation to provide this service in an efficient and economical manner and to take all reasonable steps to progress migrations as quickly as possible. It is also DCC's stated and accepted purpose for people in Great Britain to stay connected and live smarter, greener lives, and the SMETS1 migration programme is a centrepiece of achieving this.

Additionally, DCC has an ongoing obligation to assess SMETS1 installations presently blocked for migration and unblock where possible. If this service is not provided, then energy suppliers will be required to visit a significant number of premises to replace working SMETS1 devices with SMETS2+ devices incurring material additional costs.

What's next?

We are preparing for the closure of the DCC's Migration Service and the transition to in-life operations. Energy suppliers have a licence enrolment obligation to have taken all reasonable steps to enrol SMETS1 meters onto the DCC network by 31 December 2022 or within 12 months of the meter becoming eligible. Separately they have a complementary replacement obligation to replace any un-enrolled SMETS1 devices with SMETS2 devices by 31 December 2023.

Enrolled Meters	Initial Operating Capability (IOC)	Middle Operating Capability (MOC)	Final Operating Capability (FOC)	Total
Active	2,312,460	3,184,039	1,733,589	7,230,088
Dormant	1,058,288	1,461,061	1,461,621	3,980,970
Total	**3,370,748**	**4,645,100**	**3,195,210**	**11,211,058**

Figures accurate as of 19 April 2023

Great Britain Companion Specification (GBCS)

DCC is making sure all operational communications hubs are in line with the updated GBCS

Outcomes	Lifecycle stage	Cost	End date
	Market to Retire	££	2024

Why are we doing this and what benefits will this programme deliver?

The GBCS sets out data security and other operational standards for communications hubs. The Department continually reviews GBCS standards to ensure that data security is maintained in line with new and emerging threats.

Why is it important to DCC?

The DCC is mandated by the Department to develop, test, and deploy new firmware (FW) to all operational communications hubs in line with each update of GBCS. This is important because these changes ensure that the communications between smart metering devices in consumers' premises and DCC are effective and enables continuity of the service. Furthermore, the changes include Issue Resolution Proposals (IRPs) which are requirements to fix problems identified by SEC parties with communications hubs.

What's next?

Currently we are working with the CSPs to deliver the GBCS version 3.2 and version 4.1 compliant communication hubs. The delivery timetable for 2023 and 2024 is shown below:

Timeline	Status
GBCS 3.2 FW North Dual Band and Single Band CH	Expected production deployment Q3/4 2023
GBCS 3.2 FW Central and South Single Band CH	Toshiba Communication Hubs production deployment complete May 2023. WNC Communication Hubs production deployment Q4 2023
GBCS 4.1 FW North Dual Band and Single Band CH	Expected production deployment early 2024
GBCS 4.1 FW Central and South Dual and Single Band CH	Toshiba CH production deployment Q3 2023. WNC Communication Hubs production deployment Q4 2023

In-life maintenance

A programme of maintenance and refresh to key architecture components to ensure security and stability of the network

Outcomes	Lifecycle stage	Cost	End date
	Contract to Market	££	Ongoing

Why are we doing this and what benefits will this programme deliver?

The DCC architecture has been in operation for over seven years, its scale and complexity has grown significantly, and some key components are now approaching end of vendor support. DCC needs to maintain and refresh its key architecture components so that the agreed levels of service and security are provided.

The successful delivery of the In-life maintenance programme will support continuity of the DCC service for our industry users and their consumers, while minimising any risks to the security or performance of the network as experienced by our customers. This will be achieved through effective scheduling and co-ordination of in-life maintenance work.

Why is it important to DCC?

The DCC must maintain an efficient, coordinated, and secure system. Operating and maintaining the core network while adding new functionality and undertaking proactive essential maintenance will become increasingly challenging as technology evolves so it is important that we make targeted interventions in the infrastructure to ensure it does not rely on unsupported hardware or software.

What's next?

DCC intends to continue with the improvements made in 2022 and will provide full justification and visibility of planned outage schedule to TABASC and SEC Operations Group, together with regular updates on progress this year.

4G Communications Hubs and Networks (CH&N)

Design and procurement of next generation communications hubs and networks

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	££££	2025

Why are we doing this and what benefits will this programme deliver?

The current Customer Service Provider 2G and 3G Wide Area Network ('CSP 2/3G WAN') contract for the Central and South region expires in 2028 with an option to extend until 2033. Furthermore, 3G sunsetting in the UK has already started with the technology now largely replaced with 4G. Whilst our 3G network will remain available for use until 2033, it is essential that we prepare to migrate from 2G/3G to a 4G network. As a result, the 4G Communications Hubs & Networks Programme has procured a new long-term 4G connected communications hub service that will provide secure, flexible connectivity and replace current 2G and 3G services.

Why is it important to DCC?

SMETS1 and SMETS2 assets have a 15-year economic life, so the earlier an enduring technology can be made available, the more we can ensure that comms hubs fulfil their lifespan. Whilst we cannot control the speed of broader technological evolution, including sunsetting of 2G and 3G, we are committed to delivering a high quality smart meter network to support our customers.

The DCC currently delivers smart metering services over 2G and 3G to enable both SMETS1 and SMETS2 hardware. Each has its own arrangements for CSPs, covering the provision of network services and the communications hubs. Maintaining smart functionality over the longer term will require the introduction of new communications hubs covering both SMETS1 and SMETS2 meters. This will allow them to access the newer 4G network. The CH&N Programme has entered into commercial agreements with several vendors to provide new communications hubs and supporting technology which will collectively provide a 4G smart metering solution. This solution will be upgradable (5G+) without the need to replace the comms hubs.

The programme will ensure that the DCC continues to meet the needs of our customers in the medium and long term, using a flexible commercial model that supports effective change and drives value for money.

The CH&N Programme aims to deliver the following outcomes:

- Ongoing secure connectivity, capacity, and longevity of devices as cellular technology advances
- Protection of investments already made and promotion of future value for money for customers
- Flexibility to allow ongoing change to support industry evolution

An efficient transition to 4G communications hubs while maintaining a smooth and continuous roll-out of smart meters is important to the industry and to us. It will also be desirable to minimise the risk of a surplus of 3G communications hubs and to avoid complexity for installers. These considerations require input from across the industry and we are currently engaging with stakeholders to develop a new Communications Hub Transition plan.

Overall, the programme allows DCC to deliver against its General Licence Objectives through the delivery of an economical, efficient, and future-proof service for smart metering communication services that will allow service continuity and reliability over the long-term.

What's next?

We are currently designing and building the new solution and will start testing during 2023. We anticipate go-live for pilots using the new communications hubs in Q3 2024 and supply at volume of the new communications hubs in Q2 2025. We will be engaging closely with customers and the Department for Energy Security and Net Zero throughout this period to ensure that the requirements of all parties are met.

PKI Enduring Services (PKI-E)

Provides cryptographic services to the smart metering infrastructure to ensure security

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	££	2025

Why are we doing this and what benefits will this programme deliver?

The Trusted Service Provider (TSP) Public Key Infrastructures (PKIs) provided by BT, provides cryptographic services to the smart metering infrastructure. TSP is currently running a "tactical" solution that was deployed during September 2022 and will run until April 2025 with the option to extend a further year to 2026. The PKI-E (PKI Enduring) Programme has been launched to ensure that at that point a "strategic" solution will be available to take over on an enduring basis. PKI-E will also rationalise the approach to the major PKIs operated by DCC, according to the direction set by the DCC Strategy.

The new solution will be delivered with minimal impacts to our customers and DCC's live services and programmes, whilst rationalising the PKI ecosystem and providing uniformity to the management layer of the PKI services where possible.

In establishing the programme, the DCC will mitigate the end-of-life risk but will also develop an enduring public key infrastructure platform that will provide the required levels of security, flexibility, and cost-efficiency to support both core services and future enhanced DCC capabilities. The new services will be designed to respond to emerging security needs over a ten-to-fifteen-year time horizon.

Why is it important to DCC?

We have a licence objective to maintain a "secure system for the provision of Mandatory Business Services". TSP provides the fundamental public key infrastructures for the GB smart metering infrastructure and ensures that the Smart Metering Total System can operate with the required level of security and efficiency.

What's next?

DCC Security has commissioned an independent strategic review of the options available in the market. An RFI was issued in February 2023 and responses are currently under review. The outcome of the independent review and the RFI results will support DCC in the next phases of procurement for the PKI-E programme.

Secure Publish Subscribe (SPS)

This programme is aimed to reduce the volume of duplicate SRVs crossing the network over the same 24-hour period

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	Under Review	Under Review

Why are we doing this and what benefits will this programme deliver?

Service request volumes (SRVs) are forecast to increase significantly over future years. This is driven through a combination of an increase in the installed base of smart meters, and the concurrent development of new use cases driving increased SRV volume for the same SRV data across SEC parties.

There are SRV requests that occur where the same response is carried multiple times in the same day, week, or month, adding potential contention and congestion to the system. These requests may be made either via the scheduled read approach or on-demand.

"Secure, Publish and Subscribe" is an option the DCC is investigating which will reduce the volume of duplicate SRV reads traversing the network over the same 24-hour period. The proposed solution is expected to hold data for 25 hours in cache and serve three to four SRV requests from data held in cache and avoid the duplicate SRV requests over WAN.

Benefits of implementing SPS

- Reduces the transactions over WAN network estimated circa 2.5 times by 2030

- Reduction of 2.5 times transaction traffic on WAN network evades an immediate and future need for expensive scale-out of physical CSPs/S1SPs infrastructure

- Minimal impact to the service users

- Mitigate un-forecast growth of duplicate reads which offers a protection mechanism to the core data reads for smart metering and mitigates localised congestion for aspects of the install base

- An enabler to support the growth of future innovative meter data-based use-cases and especially for specific DNO use-cases without incurring additional WAN cost driven by increased capacity needs

Why is it important to DCC?

DCC needs to be able to manage the demand across its network components in a cost-efficient manner, and at the same time ensure operational performance service levels are being maintained. Avoiding duplicate traffic via this method is an extremely cost-efficient approach which has already been adopted by several industries such as broadband network providers in the UK.

In addition, as the solution reduces contention over the network, multiple attempts (retries) are likely to be reduced and therefore the success rate is likely to increase and degradation reduced. This is particularly relevant to time critical and priority messages.

What's next?

We are still in early stages of investigating this option and will continue to engage with the SEC Sub-Committee and the Department to formalise any next steps.

Enduring Change of Supplier (ECoS)

Programme to enhance the security when customers are switching from one energy supplier to another

Outcomes	Lifecycle stage	Cost	End date
	Market to Retire	££	2023

Why are we doing this and what benefits will this programme deliver?

Ensuring that consumers can change energy supplier securely is one of the primary purposes of the smart metering roll-out. An essential part of this is the change of the security certificates on smart devices (primarily meters) that identify the responsible supplier. This is achieved through the ECoS programme. In August 2019, the DCC was mandated by the Department to deliver an ECoS solution and the corresponding Service Provider procurement process was concluded in 2021.

Why is it important to DCC?

ECoS is a Mandated Programme in accordance with Condition 13A.1 of the DCC's Smart Communication Licence. The DCC is directed to establish efficient, economical, coordinated, and enduring arrangements for the changing of Device Security Credentials on or following completion of a supplier transfer in respect of premises at which there is a smart metering system.

What's next?

- User Integration Testing is now live

- TCoS to ECoS migrations will commence in a very controlled and low volume environment in July

- The manufacturing of new ECoS devices will commence early 2024 to allow other certificates eg ACB, Recovery to be updated and combined into a single manufacturing pack update

CSP.N Scaling and Optimisation

Identify, address and mitigate risk of capacity shortfalls in the North region

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	Under Review	2025

Why are we doing this and what benefits will this programme deliver?

The CSP.N Scaling & Optimisation project is part of the Continuity of Service (CoS) initiative which has been established to ensure that the smart metering network has the capacity to support the full scheduled roll-out and the ongoing operation of smart meters. The CSP.N Scaling & Optimisation project is focussed on the North Region, identifying and addressing the gaps between the original contracted design and the current and known future requirements which have evolved materially over time.

The project is currently mitigating the risk of capacity shortfalls (as the installed based continues to grow) in the near-term by increasing the number of RF Channels used across the network. In addition, the project will deliver a medium-long term development roadmap for the Arqiva Network in the North Region, along with a supporting business case.

Why is it important to DCC?

Ensuring that the network has the capacity to support the continued roll-out of smart meters and the forecasted demand is essential in enabling the DCC to meet its licence and SEC obligations, whilst maintaining a critical service for its customers and end consumers.

The CSP.N Scaling & Optimisation will identify and assess the work that is required to ensure requirements are met at scale and will deliver a plan to deliver approved solutions over time. The project will work closely with the DCC Commercial team to ensure the project outputs are clearly aligned to and support the CSP.N Contract Extensions.

What's next?

The project is currently overseeing the delivery of additional RF Channels to support scaling in densely populated areas. In addition, DCC is working closely with Arqiva to fully assess a number of scaling options with a view to creating a medium-long term development roadmap, whilst in parallel DCC will be discussing with its customers some opportunities to optimise the use of the network and minimise future investment in technical solutions.

Network Traffic Management (NTM)

Support the management of the increasing demand on service request volumes over the coming years

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	£	2024

Why are we doing this and what benefits will this programme deliver?

Service request volumes (SRVs) are forecast to increase materially over the next six years, driven by the growing number of installed and migrated meters; more SEC parties requesting metering data; SEC parties being given access to metering data by consumers; improved services such as the Central Switching Service; and new SEC Modifications. All this will create a large increase in system demand. The changes proposed in the Network Traffic Management (NTM) Programme are designed to address this issue.

To help support the management of this demand, changes are needed in the way traffic is managed across the network both between the DSP and Users (Gamma links), and between the DSP and the Communications Hubs (the Smart Metering Wide Area Network). It is DCC's intention to utilise the existing capacity of the network wherever possible and avoid the incremental cost associated with increasing capacity of the network.

Why is it important to DCC?

DCC needs to be able to manage the demand across its network components in a cost-efficient manner, that also supports operational performance service levels being maintained.

What's next?

- Northbound Prioritisation (NTM-NP-A) initiative is intended to align delivery of service responses and alerts to end service users by prioritising delivery of on demand service responses over DSP scheduled service responses. This also includes prioritising delivery of agreed high priority alerts over other alerts. Planned to be delivered via the MHHS Programme – Forecast October 2023

- Plans are in train to deliver Northbound Response Delivery (NTM-NRD). This would be an efficient enduring solution to manage delivery of responses and alerts to end service users by creating user queues and connection pools specific for each service user – Forecast July 2024

- Further opportunities are being explored related to Service Request Management and Prioritisation, Alerts Management and Optimisation of Intraday Demand to further enhance the delivery of demand in an optimal fashion

No WAN connectivity project

Why are we doing this and what benefits will this project deliver?

At present, 99.3% of premises in Great Britain are covered by the Smart Meter Wide Area Network (SMWAN) and are therefore capable of having working SMETS2 smart meters.

This leaves 0.7% of properties, or approximately 200,000 homes in Great Britain where it is not possible, with the current infrastructures in place, to achieve a SMWAN. As such, these properties are unable to connect gas and electric smart meters via a communications hub (CH) to the DCC network.

There are also properties in which the smart meter is unable to connect to the SMWAN, despite there being sufficient WAN coverage within the local area. This is often due to physical restraints of the location of the smart meter within the premises creating a physical barrier to connecting to the WAN.

The following main benefits are expected to be realised through successful delivery of No-WAN connectivity:

- Smart meter connectivity for all homes and small businesses in Great Britain

- The use of identified alternative WAN connectivity to provide additional network capacity and coverage across all regions, reducing risks arising from capacity and performance issues of the existing SMWAN networks

Why is it important to DCC?

DCC is obliged to provide a smart capability to every home in Great Britain, which is done by installing and operating smart meters in the home. Alternative WAN connectivity for the No-WAN properties will enable smart meter connectivity for all homes and small businesses in Great Britain and support the continued smart meter roll-out. This is aligned with the wider DCC vision of enabling us all to lead smarter greener lives.

What's next?

We are currently producing the Strategic Outline Case which seeks to identify alternative WAN connectivity for the No-WAN properties and in discussions with the Department on how best to proceed.
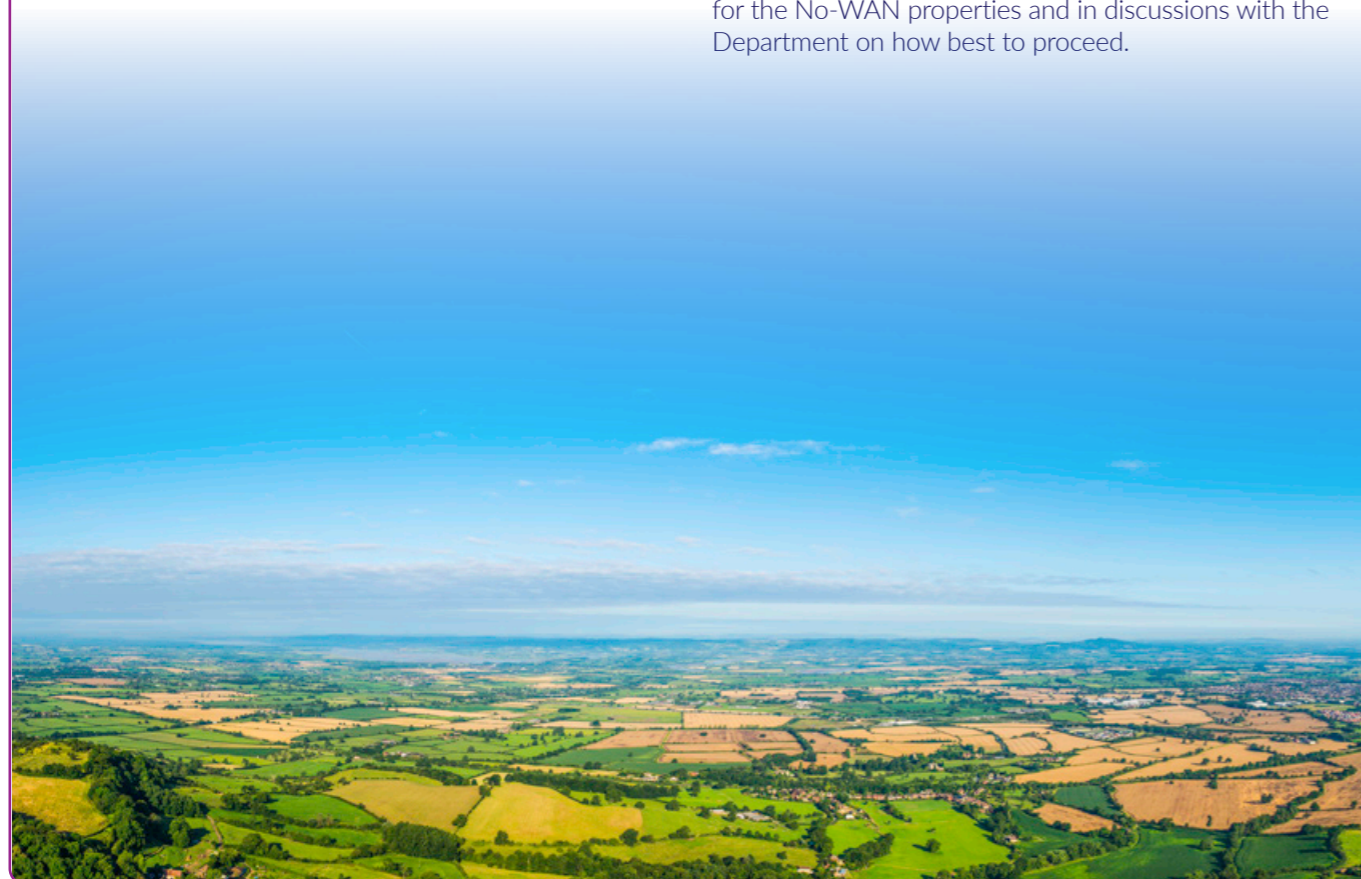
Smart Energy Code (SEC) and Retail Energy Code (REC) – In-Life Change

The DCC operates under two industry codes – the Smart Energy Code (SEC) and Retail Energy Code (REC). These govern the end-to-end management of smart metering and the operation of the retail market respectively.

Our In-Life Change (ILC) team focuses on delivering high volume low-cost change, in a repeatable, controllable, and scalable way. Our experience of delivering SMETS2 SEC change is now being leveraged more widely.

The objective of the ILC team is to deliver technical system changes as requested and approved by SEC and REC parties. Our approach focuses on learning the lessons from previous releases, allowing these parties to realise the full benefits of their respective changes.

SEC and REC Modifications are industry-wide requests for changes to our services and we are required to deliver two SEC System Releases and two REC System Releases each year in June and November. Following the successful go-live of the Central Switching Service we delivered the first SEC release in June 2023.

SEC Releases delivered in 2022 and a look ahead

The June and November 2022 SEC releases were delivered on time, at the agreed cost, and with no defects after go-live. The SEC Release went live in June 2023 and the next REC release is in December 2023.

In addition, Market-Wide Half Hourly Settlement (MHHS) changes have been approved by Ofgem and are aligned to be delivered in the June 2024 SEC Release.

In the coming year, we are carrying out a review of the efficiency of our SEC Release delivery, so that we can not only demonstrate year-on-year efficiencies but also identify further improvements in our delivery methodology.

Improving processes and governance

There are several improvements planned which will increase the pace of delivery and provide cost efficiencies, for example, the introduction of the Test Automation Framework.

Through our SEC Releases we have learned the benefits of engaging early in solution design with our contracted Service Providers. With the SEC Modification required for the MHHS Programme, we involved our Service Providers at an early stage which allowed us to resolve emerging issues (for more information see Market-wide Half-Hourly Settlement in section 5). We will apply the same successful collaboration approach we have used on the MHHS solution design to future SEC and REC Releases.

Working in partnership with the REC

We recognise the importance and value of working collaboratively and in partnership with the REC. Since Switching Go live, in July 2022, we have been working together to move to a smarter, greener energy system that delivers for consumers. Below we set out some examples of this:

- **REC changes:** DCC continue to work closely with the Code Manager and RECCo in developing and implementing REC changes raised by other parties.

- **In-life management (Central Switching Service):** the DCC Switching Operations team run a Switching Operation Issues Forum (SOIF) where DCC work with industry to understand and agree a way forward for operational issues. Any formal changes are raised via the REC change route.

- **Market Wide Half Hourly Settlement**: working in collaboration with Elexon, RECCo and SECAS to deliver against the Market Wide Half Hourly Settlement requirements.

- **Maximising use of the network**: DCC and REC continue to work in partnership to explore ways in which system data from the smart meter network and data held by REC can contribute to solving some of the energy systems key challenges, including energy theft.

A responsible and efficient business

The DCC is a unique organisation, operating at the heart of a changing energy landscape to enable a fundamental shift in energy usage and engagement on the path to net zero. We take this mandate very seriously, striving to continuously improve how we operate for the benefit of our customers and ultimately end consumers. We want to operate an efficient and responsible business that recognises our obligations to our people, our customers and ultimately consumers.

We recognise this responsibility is even more important at a time when energy bills are high and cost of living pressures continue to impact household spending.

It also means we need to be sustainable in our approach as we have a responsibility to limit our emissions and support the pathway towards decarbonisation. Ultimately, as with

many organisations, we believe it is important to embody our purpose, and ensure the decisions we make internally reflect the impact we strive to make and the value we seek to deliver. The following section covers our key programmes and BAU activity which enables us to deliver this outcome.

Responsible Business Framework

The DCC is a purpose-led responsible business which is focused on serving its customer community and is held to high standards of performance and value for money. During 2022-23, we developed a Responsible Business Framework to formalise our efforts to be a sustainable business on a more structured, long-term footing.

The framework draws together an array of environmental, supply chain and social aspects of how we work, based on the principles of 'ESG', into a coherent whole. It encompasses all aspects of DCC's carbon footprint and sustainable behaviour, including our supply chain, our people, and the contribution we make to communities.

A set of core principles have informed the level of ambition we set in the framework. We will:

- Decarbonise our operations progressively to live our purpose, make a difference, and help deliver Britain's net zero targets
- Create a responsible business framework for the DCC drawing on best practice, complying with all legislation and mandatory reporting across our operations
- Achieve our ambitions in the most efficient manner possible, with a continued focus on delivering value for money for our customers
- Make this personal as well as corporate – so every DCC employee knows how they can contribute with the greatest impact
- Encourage greater diversity at all levels and create an inclusive environment which attracts the best talent to support our company goals

	Our **ambitions**	**The target outcomes for DCC's responsible business activity fall under four ambitions, which are at different levels of maturity and development:**
	Our **environment**	Progressively reduce our environmental footprint, using robust, validated science-based measures
	Our **supply chain**	Lead a collective effort across our supply chain to achieve, embed and evidence high standards of sustainability in all activities
	Our **people**	Build a diverse, inclusive business which prizes equality and fosters employee engagement and pride
	Our **communities**	Leverage our unique skills and expertise to accelerate our purpose and drive social good

Much of the initial year of the Responsible Business Framework will centre on data gathering to set appropriate baselines against which to set credible targets for the future. In parallel, we continue to measure, audit and validate our carbon emissions and aspire to maintain carbon neutrality for the period before we have agreed science-based targets. We look forward to sharing progress with our customers as we evolve and implement the framework.
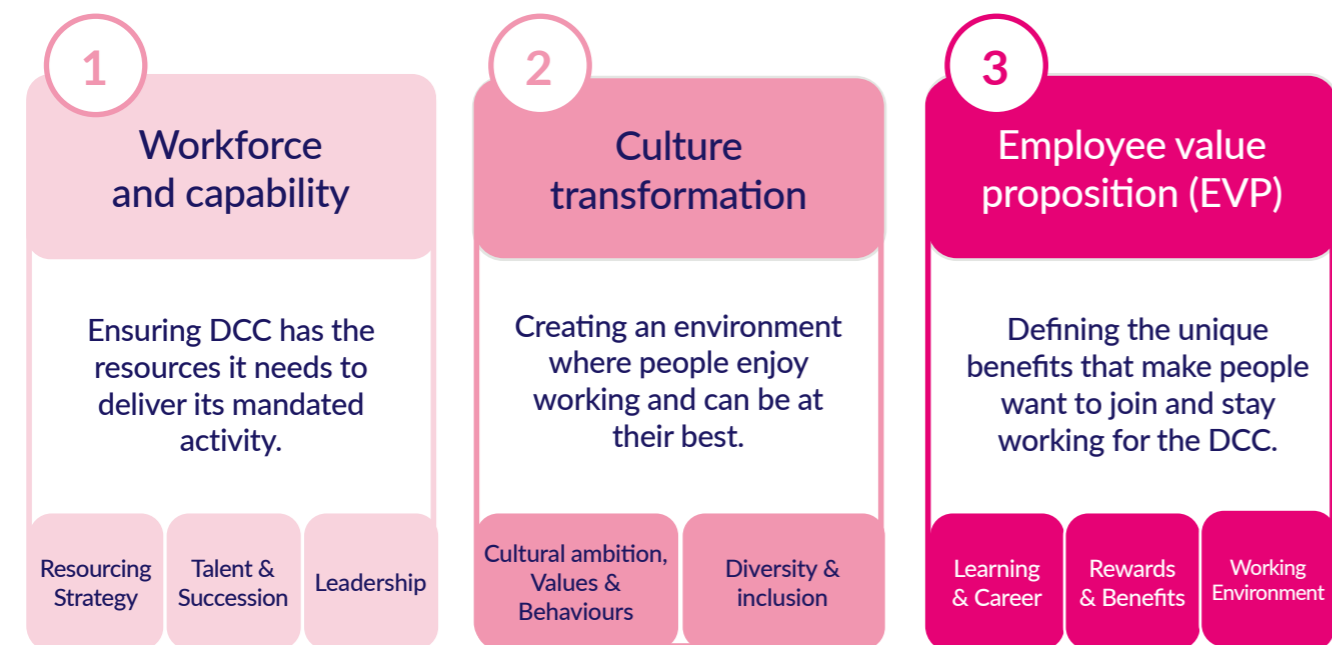
Our people strategy

The people who work at the DCC are pivotal to the success of our business and delivering our mandate. We want to ensure we continue to deliver our services as efficiently as possible; it is therefore critical we attract and retain the best quality talent.

We continue to implement against our agreed people strategy, which aims to deliver the following outcomes:

- Improved employee retention leading to reduced recruitment costs, better knowledge retention within the business and improved efficiency

- Improved customer experience through better qualified, more engaged DCC staff

- Greater flexibility and the ability to respond to changing business needs

- More predictable programme delivery through improved availability of necessary skills

The delivery of our strategy remains through our three key people pillars that will be the enduring focus for the future.

1 Workforce and capability

Ensuring DCC has the resources it needs to deliver its mandated activity.

Resourcing Strategy | Talent & Succession | Leadership

2 Culture transformation

Creating an environment where people enjoy working and can be at their best.

Cultural ambition, Values & Behaviours | Diversity & inclusion

3 Employee value proposition (EVP)

Defining the unique benefits that make people want to join and stay working for the DCC.

Learning & Career | Rewards & Benefits | Working Environment

1 Workforce and Capability

We continue to refine our workforce strategy which will ensure that we have access to the right resource at the right time. As part of this, we are focusing on identifying the skills and capabilities that will help us deliver the five-year plan.

In developing this strategy, we have considered the following:

- Enhancement of our employer brand through a dedicated DCC careers website

- Optimising our resourcing approach with a focus on improving time to hire and reducing cost to hire through direct hiring

- Taking a proactive approach to building talent pipelines and addressing longer-term resource demand

We have also strengthened our leadership bench strength this year through enhanced focus on succession planning, development of our senior leadership team and acquisition of talent needed to deliver on our mandate.

One of the key areas of focus this year is developing our wider leadership capability. We have designed and started to deploy a leadership programme to provide our leaders with the skills they need to deliver the best outcomes for our customers and our people. We have developed a new leadership profile setting clear expectations of our leaders aligned to our values and behaviours. The development programme is designed to enhance the capability and confidence of leaders to achieve the best outcomes from their people and ensure consistency of leadership across the business. It includes a range of different modules developing areas central to the achievement of our cultural ambition ie driving accountability, collaboration and coaching.

Our people strategy

② Culture transformation

Earlier this year, we commenced a culture programme to evolve the culture of DCC as we continue our journey of maturing as an organisation. During the last year, we have spent time analysing the culture of DCC, understanding the strengths and opportunities to enhance our effectiveness for stakeholders, customers and colleagues. A new cultural ambition and values and behaviours were co-created with colleagues at all levels of the business.

Since then, communication to colleagues of the new values and behaviours has commenced, introducing our cultural ambition as an important foundation in achieving our purpose and goals. Positioned as the first step in our cultural evolution, we have committed to a programme of embedding these values and behaviours in the fabric of our processes and ways of working, which will be a sustained focus for the next 18-24 months

③ Employee Value Proposition (EVP)

Our Employee Proposition is an important part of our people strategy, to ensure we create an environment that attracts and retains the best talent for our business.

We continue to run quarterly engagement surveys with our people to understand how they feel about working at DCC and we're looking at the development of our employee engagement champions across the business enabling us to understand what matters most to our people and adjust our employee value proposition accordingly.

Important elements of our EVP include:

- Offering enhanced learning opportunities for our people

- Ensuring our rewards and benefits remain efficient yet competitive

- Implementing initiatives focused on recognition, wellbeing and inclusion.

This will continue to be a priority for the business this year to ensure we retain an engaged and capable workforce.

Cost efficiency

DCC is maturing from a business focused largely on programmes with incremental, transactional value for money decisions, into a stable operating business with a longer-term view of its cost base. To proactively drive further efficiency and demonstrate value for money, we have undertaken a cost benchmarking exercise to provide greater visibility across our cost base and identify mechanisms for further efficiency. This has been made possible by the improved transparency of our cost base delivered through the Business Accuracy programme.

Acknowledging DCC's unique context and operational landscape requiring specific skills and managing legacy contracts and legacy technology, many of the initial outcomes from this exercise were expected, with significant opportunity identified to drive further efficiencies.

A number of activities are currently underway to address known areas and we are identifying further

differentials in our cost base that can identify additional short-term opportunities but will largely inform mid-to-long term efficiency targets.

We have set ourselves the target of delivering £30m of enduring cost efficiencies over the next three years with a focus on automation, contract management and optimised resourcing.

Right first time

We will deliver our services to the time, cost, and quality expectations of our customers and wider stakeholders.

We continuously look for ways to decrease our cycle time across key lifecycle stages, recognising the increasing pace of change across the industry. With improved assurance across delivery phases, we will reduce the number of change requests required, ensuring quality and expectations are designed and agreed from the outset. In doing this, and with an increasing benchmark of historical data behind us, we will be able to more accurately forecast costs.

The following section covers our key programmes and BAU activity which enables us to deliver this outcome.

Success story

DNO programme completed

The DNO Transformation Programme was established to ensure there is a focus on meeting DNOs' specific requirements in relation to smart metering and in particular, consistent and accurate reporting of power outage alerts.

The DNO Transformation Programme completed successfully in November 2022. DNOs can leverage DCC services as an enabler to deliver a cost-effective and quality service to their customers improving fault response and assisting in targeting network investment.

The DNO Customer Relationship Management Team in Operations now own the day-to-day relationship with DNOs to ensure that DCC continues, and where relevant, improves the service we offer to this customer base.

We have made significant progress over the last year and driven a step change in our performance through regular Service Reviews and Senior DNO stakeholder bilaterals, ensuring we work collaboratively together to align priorities, challenges and both tactical and strategic plans.

Looking ahead, the key focus for DCC is to:

- Provide continuity of service and demonstrate value of smart metering data to DNOs

- Capture DNOs' requirements and demand of the DCC Network/Data, especially as DNOs transition to DSO

- Synergies across DNO/DCC strategic plans

- Capacity management – obtain DNO requirements and demand

"Overall, we feel that good progress has been made towards reporting on key issues that DNOs face. This allows us to understand the scales and impacts in greater detail. We are keen for DCC to continue to focus on assisting with the resolution of core issues that surround meter behaviour. Alongside this, assisting with key industry issues and restraints that impact the speed and successfulness of alerts and service request delivery."

**Matthew Alexander
Smart Metering Process Manager
Scottish and Southern
Electricity Networks**

Business Accuracy Programme

Delivering cost efficient processes and driving value across the DCC's operations

Outcomes	Lifecycle stage	Cost	End date
	Market to Retire	£	2023

Why are we doing this and what benefits will this programme deliver?

The scope of DCC's work has grown significantly over the past nine years, as highlighted in this document. The volume of activity we are now being asked to undertake by the government and the industry is at its highest since DCC was established. We have quadrupled the amount of programme activity and we are managing a growing installed smart meter base.

As a result, the Business Accuracy Programme was established in 2022, with implementation spanning across 2023. The programme ensures that DCC has a core set of processes, systems and data which can support this level of complexity and provide integrated business plans and performance reports to track progress.

The Business Accuracy Programme delivers the enhancements we need to create a business planning and performance management framework providing the following core benefits:

Improved transparency of reporting
Improves our ability to respond to customer information needs while providing an improved framework for reporting and monitoring business performance

Better governance of activities
Quicker and more agile processes which span the organisation

Accuracy of delivery and costs
Through better ability to provide resource at the right time, quality, and cost

Increased staff engagement
This allows teams to access data more effectively and efficiently, provides clarity of process, clear understanding of roles and responsibilities, improves collaboration and the ability to manage workloads proactively

Performance metrics
Enable us to focus on continuous improvement and build benchmarks that can identify efficiency opportunities and improve delivery of value for money for our customers

Since initiating the Business Accuracy Programme, we have already delivered many of its core objectives. These include an improved business planning framework via a new Financial Planning Tool, transparency of reporting with a new Time Sheeting system, documentation of core processes and development of a 'Change Roadmap' and 'Front Door' to create a single point of entry for new programmes.

Why is it important to DCC?

Given the significant increase in scope of work, we need to ensure we remain fit for purpose as the work we are tasked with grows and customer needs evolve. The Business Accuracy Programme allows us as an organisation to adapt and run an effective business through better reporting, accurate delivery, performance metrics to make relevant efficiencies, and an engaged workforce. The Business Accuracy Programme has provided the foundation for our shift from a more 'programme' centric operation into a mature, well-planned, and governed organisation.

What's next?

- Final drill down reports to complete the suite of performance management reporting

- Enduring support established for the data lake outside the programme in the Enterprise IT team

- New Commercial Lifecycle Management Tool - managing the 3rd party engagement process through procurement and contract management due in October 2023.

- The programme will deploy its final deliverables in FY 23/24

Update: The Business Accuracy Programme team have provided improved guidance on how to use the new Purchase Order tool, and have also issued a reminder to Goods Receipt your orders.

Scan QR code for more information.

Project management methodology

Following feedback from our customers and the findings of an independent assessment of DCC's programme delivery capabilities, DCC intends to adopt PRINCE2 as our standard project management method.

This is designed to support our lifecycle management approach, notably the Concept to Contract and Contract to Market stages, with an internationally recognised, process-based method helping to ensure we deliver right first time and operate as efficiently as possible. In addition, the adoption of PRINCE2 will support a common language across our customer and supplier base, reducing unnecessary misalignment, while also helping to attract and retain staff through the support of internationally recognised certifications. Combined we believe this will help us to deliver an improved experience for both our customers and our people.

We intend to work with a recognised delivery partner to support us on this journey and ensure the handover from our Change Delivery Methodology (CDM) is as seamless as possible. Subject to detailed planning, we expect the transition to be complete by Spring 2024. We recognise there has been discussion on the use of alternative project management methodologies in the past and are confident that while CDM was the right approach for the early days as an organisation, PRINCE2 is now the right choice to support us on the next stage of our journey as we scale and shift to a more stable operating business.

We are also exploring opportunities to adopt a greater product/ service family approach, utilising international best practice. We will share more information on this as we progress.

Flexible and fast

We want to deliver an accessible and flexible platform, enhancing our capabilities to provide a swift and seamless experience for both current and future customers.

We know we have a wider role to play in enabling the transformation of Great Britain's energy system as both a platform for policy implementation and market innovation. To do this effectively, we need to ensure our network remains fit for purpose, offering our customers, current and future, the capabilities they need to deliver on their priorities at the pace needed to bring innovative services to market.

The following section covers our key programmes and BAU activity which enables us to deliver this outcome.

success story

Faster and more reliable switching

Deliver faster and more reliable switching

The delivery of faster, more reliable switching was a significant milestone in the transformation of the retail energy market. It delivered a foundation for increased competition and innovation leading to improved consumer value, experience and engagement with the market. As Ofgem's key delivery partner, the DCC designed and built the Central Switching Service (CSS), which has been in operation since July 2022. This service provides the capability for energy consumers to switch energy supplier on a next-working day basis. The DCC managed the consolidation of 28 existing and new systems and the integration of around 200 licenced parties into the CSS.

Since the CSS went live in July 2022 our focus has been on ensuring the stability and resilience of the service. The consistent stability of the new systems and processes within CSS gave Ofgem the confidence to close the Switching Programme in late 2022, with governance oversight moving to the Retail Energy Code (REC).

Since go-live, there have been over 10 million successful switches. DCC performance has generally been very strong (99.8% success rate) delivering improved consumer outcomes.

Customers shaping our enduring approach

To ensure that the DCC continues to meet its obligations within the REC and help improve switching reliability, DCC has consulted on the approach it intends to adopt for the Regulatory Year commencing April 2023. This approach focuses on improving the quality of address data it has received which cannot be found on the standard address list from Ordnance Survey (OS). The Ordnance Survey address data is a standard set of address data that covers Great Britain. The OS data has been used in order to ensure there was a comprehensive and consistent set of addresses being used for switching purposes. Customers were actively encouraged to participate in that consultation, and this will help shape the address improvement activities within the coming Regulatory Year.

"Ofgem has been really impressed with the way in which parties have engaged collectively with each other throughout the Programme in an open and fair manner. Our expectation is that this approach will continue throughout go-live and into operations, and ultimately be delivered for consumers"

Ofgem

Data Service Provider (DSP) Data Systems

Design and procurement of a data services platform to ensure continuity of service

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	£££	2027

Why are we doing this and what benefits will this programme deliver?

The present DSP contract sets out the delivery of several systems and services that sit at the core of our smart metering infrastructure. These data services connect DCC Users (DNOs, energy suppliers and others) to devices at their consumers' premises. This flow of messages between consumer premises and DCC users enables critical functions to take place such as prepayment meter top-up and allows for the collection of data needed in energy supplier billing/settlement or for other industry-wide innovative purposes.

The DSP Data Systems Programme will ensure continuity of service beyond the lifetime of the existing contract, which is due to expire on 31 October 2024. We need to ensure any change is managed in a way that minimises risk to continuity of the service and the security of smart metering.

In doing so, the programme will provide the benefits below:

The DSP Data Systems Programme will provide the following core benefits:

- Greater resilience and reduced service downtime and outages
- Self-serve enabling authorised customers improved data access, diagnostics and development of elective services
- Contested in life change to reduce time and cost for testing, modifications and new feature development
- Greater security and ability to cope with increased volume

Why is it important to DCC?

As a regulated business, the DCC is required to ensure the maintenance and continuity of this critical service, whilst securing value for money for our customers. The DSP Programme will ensure this continuity with a reliable service that meets the needs of our customers, for example by improving the pace and cost of delivering industry change. The use of more flexible technology will also lower the cost of operation for our customers and enable future re-use of the network for new services.

What's next?

Following the HM Treasury Green Book Business Case approach for the Programme, the DCC is required to obtain a non objection to proceed from the Department ahead of certain procurements that cover core service provision. The department will provide confirmation to proceed in relation to the following milestones in the plan. The Outline Business Case was issued to the Department in June 2023 and the Full Business Case submitted to the Department in January 2025.

Market-wide Half-Hourly Settlement (MHHS)

Capturing and transmitting half-hourly data

Outcomes	Lifecycle stage	Cost	End date
	Contract to Market	££	2026

Why are we doing this and what benefits will this programme deliver?

Electricity settlements and trading works using half-hourly interval data today. However, most domestic and smaller non-domestic meter points are settled on a non-half hourly basis. MHHS will mandate energy suppliers to settle all consumers with capable meters on a half-hourly basis. This opportunity has only been made possible by the roll-out of smart meters which can capture half-hourly data and transmit it back to the supplier.

Through MHHS, energy suppliers will be exposed to the exact half-hourly costs of customer consumption patterns, rather than this being estimated, as it is today. This will encourage electricity suppliers to offer time-of-use tariffs, which in turn will incentivise customers to shift their consumption to times when energy is cheap or to support protecting the electricity networks. New and innovative tariff options will help to increase competition for the benefit of consumers and support the government's ambitions for decarbonisation.

The industry changes for MHHS centre on the Balancing and Settlement Code (BSC), although other electricity codes and agreements are affected, including the Smart Energy Code (SEC) and Retail Energy Code (REC), to both of which the DCC is a party.

Why is it important to DCC?

DCC is a key participant of the industry-wide MHHS Programme and works closely with Elexon as the programme owner/manager and Ofgem as the overall sponsor. DCC is required under licence to comply with the overarching MHHS Governance Framework and cooperate with other participants to implement MHHS without undue delay. In doing so, DCC can support market benefits and innovation that will ultimately reduce energy costs thus providing more benefits for the end consumer.

What's next?

The MHHS SEC Modification MP162 has been approved by Ofgem to introduce a new DCC User (Meter Data Retrieval Agents - MDRA) and Party to the SEC who can retrieve the data on behalf of electricity suppliers for settlement purposes. Additionally, DCC is working with its contracted service providers to fulfil the MHHS requirement of additional capacity to accommodate over 17,000 half-hourly readings per year per meter. The DCC's MHHS required changes are planned to go-live in the June 2024 SEC Release. This supports the wider programme timings, with migration of consumers to half-hourly settlements due to start in April 2025 and complete in October 2026 (subject to MHHS re-plan consultations).

Test Automation Framework (TAF)

Achieve faster and lower-cost testing with additional enhancements that will allow DCC to confirm the efficiency of change

Outcomes	Lifecycle stage	Cost	End date
	Contract to Market	£	2023

Why are we doing this and what benefits will this programme deliver?

The Test Automation Framework (TAF) programme will support DCC's commitment to increase the speed of Regression and User Integration Testing (UIT) and so deliver 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.

Why is it important to DCC?

The Test Automation Framework will deliver significant economies of scale to DCC and our customers through:

- Reducing lead time from test preparation into Execution for SIT Regression and UIT Proving test phases

- Moving to a 24/7 test operation using robotics executing a fully automated test suite

- Improved defect identification through use of increased Device Model Combinations and Test Scenarios

- Fixed cost per test cycle providing greater certainty over cost to customers

What's next?

The programme is now in design and identifying the most appropriate technical release in Q1 2024, so that we can carry out parallel testing to prove the capability.
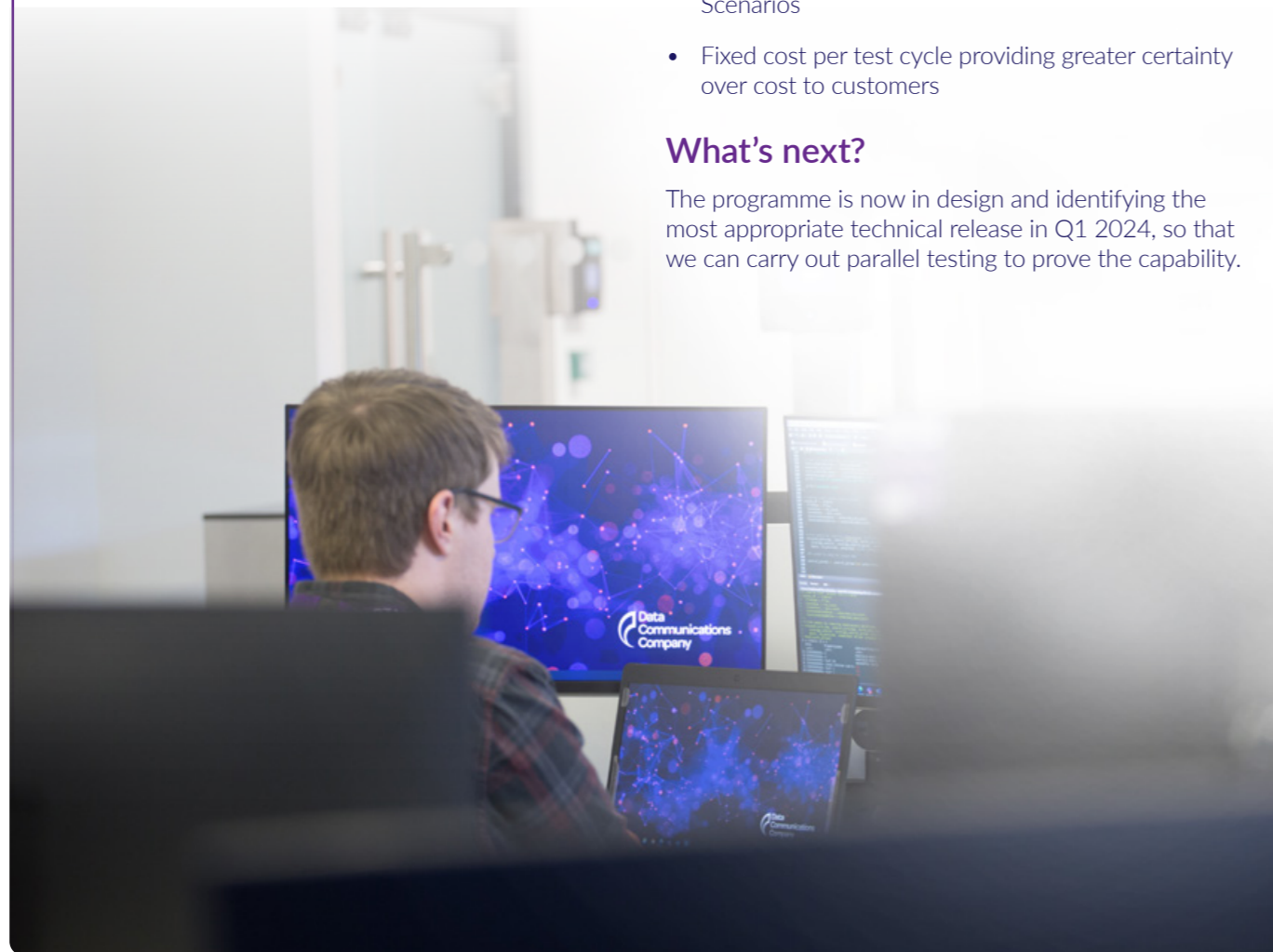
DCC Service Management Systems (DSMS)

Replacement IT Service Management System by procuring a new Service Management System

Outcomes	Lifecycle stage	Cost	End date
	Concept to Contract	££	2026

Why are we doing this and what benefits will this programme deliver?

This programme will provide a replacement IT Service Management System (ITSM) and ensure continuity of our Service Management capabilities when the current system ends its service life. Whilst rolling out this capability, we will simplify the ITSM landscape and make use of new technology – enabling efficient change and automation to improve operational efficiency and provide a better overall customer experience.

Why is it important to DCC?

Procuring a new Service Management System allows the DCC to maintain its regulatory service obligations, enable efficiencies and deliver a better customer experience.

What's next?

DCC is now reviewing the schedule for business case submission and delivery schedule.

Cloud Blueprint

Why are we doing this and what benefits will this deliver?

The DCC infrastructure footprint has increased significantly over the last three years and comprises a mix of private hosting and private cloud, with greater adoption and use of public cloud services. The DCC Technology Function is preparing a strategy roadmap which presents DCC with the opportunity to cultivate a secure infrastructure estate designed to deliver improved infrastructure use while improving security, operations, compliance, and system governance. This will also ensure the delivery of improved business outcomes and solution availability, resilience, and scalability. The business accuracy through a service framework will create a more competitive, and more cost-efficient infrastructure estate, following best practice and public sector policy.

These opportunities build momentum towards a structured infrastructure-agnostic cloud strategy aligned to critical national infrastructure best practice. As the DCC network scales, adopting the right capability now will allow these opportunities to be leveraged more fully, more quickly, and at lower transformational cost and risk.

Why is it important to DCC?

DCC can leverage cloud native data to **improve business accuracy by stepping away from black-box service assurance** combining application design and management with infrastructure provisioning. With access to rich data from infrastructure environments, DCC can better understand:

What makes up the DCC network	Spend on infrastructure	Service performance and efficiency	Environmental impact of infrastructure

DCC can cultivate an aggregated, standardised infrastructure estate, **moving away from siloed infrastructure contracts**, broken up by service. This will enable

Cost optimised licence management	Leverage of economies of scale	Cost effective transformation

By leveraging well-architected public cloud hosted services, DCC can **move away from always-on, on-premises hosting**, enabling greater:

Availability	Access to non-prod environments	Reduced lead times	Reduced supplier lock-in

What's next?

The DCC Technology function has laid the foundations for its platform solution (infrastructure agnostic hosting). We will commence consolidation of environments based on business needs and required outcomes through the next few years working with key service partners, and where appropriate through transparent and open industry consultation and business case development. Go-live is forecast for the end of 2023.

Customer-led system enhancements

One of our key objectives is to help our customers improve the efficiency of their systems and processes, to improve the customer experience of working with DCC and enable the development of innovative products and services for the end consumer.

Our customers have told us that they need a more agile development capability, alongside better designed and more cost-effective mechanisms to support change, new products, and propositions. We have been able to help them by providing them with tools such as the smart meter Interoperability Checker and DCC Boxed, as well as through our extensive test lab facilities.

DCC Boxed has been developed with input from our customers. The product was launched in April 2022 and is designed to emulate the smart metering network. It offers a suite of testing tools that enable authorised users to better understand, enhance or develop their own solutions.

The primary role of our test labs is to support our customers' core business testing needs. However, they can also be used to demonstrate additional functionality within the smart metering system, such as load control, or to facilitate innovation using new devices and applications. We would welcome the opportunity to work with our customers on enhancing these services so that they can derive maximum value from them.

We intend to run regular engagement activities with customers to identify opportunities for improving the infrastructure and providing complementary services. As part of these discussions, customers can indicate whether they would prefer any new service to be provided on a 'pay-for-use' basis, or whether it should be delivered through a code modification and therefore become available to all customers as part of the DCC's core services.

Re-use the network for public good

The climate is changing and there is an urgency to deliver net zero commitments through the transition to a digital, flexible energy system. This is core to enabling the decarbonisation of energy and allowing us all to lead smarter, greener lives. The energy crisis has also highlighted the impact energy has on vulnerable customers and the need to support them through the energy transition.

Working with our key stakeholders, we want to ensure our vision is fully aligned with the energy transition. We want to support, enable and accelerate government polices to reach net zero, deliver greater benefit to society and reduce unit costs for DCC's existing customers, all in line with our vision and licence obligations.

We aim to do this through maximising use of our infrastructure. We have a unique combination of network and system capabilities, run by an expert organisation providing programme delivery and in-life operation that can be used as a platform for policy interventions and market innovation in support of the energy system transition.

For our customers, we are focused on ensuring the smart metering network provides them with what they need to develop innovative new products and services, while also seeking to help off-set operating costs of the total system through onboarding new customers and potential new services. To support this we are exploring opportunities to improve the onboarding process and reviewing our current charging structure.

Platform for policy and innovation

Working with our customers and partners, the DCC has delivered one of the most complex examples of secure digital infrastructure in the world. This infrastructure is operational and has already been paid for by consumers.

The government's initial vision of a secure, nationwide smart metering network included the potential for its wider use. Given the sums invested, it is prudent to seek to use its core capabilities for wider public benefit. We are therefore exploring several opportunities in which the end-to-end system and its features might be used to facilitate the delivery of government policy objectives.

Since our 2022 Business and Development Plan was published, activity in several policy areas has progressed. Significant industry initiatives such as the Market-wide Half-Hourly Settlement Programme are continuing to advance and will provide the foundation for the next wave of energy system propositions such as Time-of-Use Tariffs, while the Demand Flexibility Service provided significant benefits to consumers and the grid.

In addition, we have responded to the government's policy proposals for a Smart & Secure Electricity System which

identified the potential role that DCC and its cybersecurity capabilities could play in underpinning the interoperable demand-side response services that will be needed to support the energy system transition.

We will also continue to participate in several government-funded innovation competitions – particularly under the Flexibility Innovation Programme (part of the government's £1bn Net Zero Innovation Portfolio).

In parallel, DCC's own data access initiative, termed 'Data for Good' is seeking to increase access to smart meter data particularly for public interest purposes – in alignment with the work of the government and the regulator to explore the potential of this vital data set.

We continue to support these opportunities to help our stakeholders and industry understand the potential of the system in contributing towards key policy priorities and the viability of doing so, while remaining cognisant of the absolute priority to focus on our mandated obligations.

A summary of these activities is provided on the next page.

The Demand Flexibility Service (DFS)[1]

Domestic demand flexibility – shifting energy consumption away from peak times, can enable effective grid balancing, facilitate integration of renewable energy and electrified assets, and help to avoid costly infrastructure investments.

Led by National Grid Electricity System Operator, the DFS ran from November 2022 through to March 2023 and provided GB consumers with the choice of a discount (payment) from their electricity supplier for opting into reducing their electricity usage during peak times (e.g 17:00 - 21:00). The national smart meter network, operated by the DCC, played an important role in facilitating consumer participation, and we worked closely with the ESO in the lead up and throughout to ensure successful delivery.

The DFS demonstrates the important role the smart metering network and DCC can play in future flexibility services and demand flexibility as a whole as we move to a cleaner, smarter energy system. We look forward to collaborating with the ESO, our customers and wider industry as we approach this winter and future iterations of the DFS.
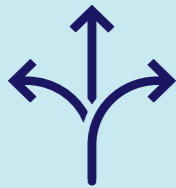
>1.6m households and small businesses participated

3,300 MWH of electricity saved, equivalent to powering nearly 10m homes

c.£11m paid to consumers for shifting usage

Policy priorities	Summary	Timescales
Vulnerable consumers, in particular fuel poverty	Following successful participation in the Modernising Energy Data Applications (MEDApps) competition we are seeking to increase appropriate access to smart system data at an aggregated level to enable further support services to those at risk of fuel poverty. We will also continue discussions with Ofgem and government on the potential insights from this data set and other means through which the smart metering network can support broader efforts to combat fuel poverty	• Potential 'Permitted Purpose' extension to 2025/26
Flexibility	Continuing to support the Department with proposals for the potential use of DCC capabilities to deliver 'Common Systems' for cybersecurity including Public Key Infrastructure and Anomaly Detection. We will continue to support the Automatic Asset Registration into prototype phase. The project is seeking to develop an automatic secure data exchange process for registering energy smart appliances consolidating data on those assets in a central registry. We will also support industry, as requested, on the Interoperable Demand Side Response programme (IDSR). The Demand Flexibility Service (DFS) led by the Electricity System Operator over the winter of 2022/23 offered the first glimpse into a future flexibility market. The DFS also aims to change consumer attitudes towards energy usage via smart meters and DCC's communication systems.	• Working groups expected throughout 2023 • Government decision making and implementation of common systems proposals expected 2024 • Government decision on Phase 2 project (s) Spring 2023 which concludes at the end of 2023/24 • IDSR Phase 2: June 2023-March 2024 and Phase 3: April 2024-October 2024 • We are continuing to engage with the ESO to ensure we can support the continued evolution of the DFS
Energy efficiency	We will continue to help determining the feasibility of connecting sensor devices (temperature and humidity) as part of the Smart Meter Internet of Things programme. We are also exploring the potential role energy data when combined with these additional data sets could play in supporting in Green Finance initiatives and the evolution of Energy Performance Certificates.	• Government decision on Smart meter IoT Phase 2 Spring 2023 • Phase 2 concludes summer 2024/24
Data policy and services	We will continue to participate in projects to determine the technical and commercial feasibility of both a smart meter energy data repository and a 'Digital Spine' for the energy industry. We will continue to explore how we can help organisations innovate and develop public interest use cases with smart meter data – both through access to DCC's smart meter 'system data' and through potential enhancements to the access regime for 'message contents'. Further details will be provided in our forthcoming update of the "Data for Good" White Paper.	• Enduring access to anonymised smart meter system data for fuel poverty support – Autumn 2023/24 • Data for Good Paper launched Summer 2023 • Progressing Data for Good proposals through to 2024/25

Non-mandated growth

In the longer term, we also anticipate delivering our licence objective of cost reduction for customers by generating new revenues from 'Value Added Services'. That means enabling non-energy sector customers to develop new products and services by using the capabilities of the smart metering system.

Any non-mandated activity must be without detriment to our core services, deliver measurable benefits, and be supported by our existing customers and stakeholders.

We acknowledge that there is currently a limited appetite for the DCC to diversify into new areas. Accordingly, we do not anticipate any significant activity in areas of non-mandated growth prior to licence renewal in 2025, albeit that we do not exclude it, should a suitable opportunity arise which does not put the delivery of our core regulated services at risk.

We are planning to have mechanisms in place for charging new customers, who did not contribute to the development costs of the DCC network, to use new system enhancements or products developed to support government mandated growth activities. Our aim in doing so will be to offset development costs and drive savings for our current customer base.

Appendix: "You said we did"

This section reflects feedback received at the February 2023 BDP engagement sessions with customers, alongside DCC comments in response.

Breakout Room Topic / Outcome	Questions Posed at Engagement Day	DCC Comments
Operate responsibly and efficiently, delivering value for money	How are the DCC planning to improve commercial transparency?	DCC have actively sought to provide more transparency across business cases in 2022 sharing them via the DCC Quarterly Finance Forum and SEC Panel. In 2023 DCC has committed to the sharing of unredacted business cases with SEC Panel to provide complete transparency of commerciality.
	How can more information and a supplier roadmap be provided in upcoming Customer Reports?	DCC continues to review what information we can provide in all customer reporting.
Re-use the network for public good	Would be good to have somewhere to download all papers, is a more digital friendly document going to be available?	All documents will be uploaded to the website and a PDF version of the BDP will be available for download. In addition, this year, we are also aiming to have a digital and interactive version of the BDP on the website.
	Market wide interoperability is essential to achieve net zero for example through time of use tariffs. In terms of culture, culture of collaboration across marketplace is key. Can DCC highlight collaboration across industry and building a culture of collaboration in BDP?	DCC firmly believes in a culture of collaboration. We exist to serve our customers, and ultimately end consumers, and could not do what we do without our suppliers. The importance of engagement and collaboration with stakeholders and industry participants has been highlighted throughout the document.
Deliver reliable network performance, ensuring security and resilience	Can DCC highlight WAN related projects in BDP and planning information?	This has been included in Section 5 under the "Secure and stable" outcome.
	"What is happening outside the DCC environment over the next 5-10 years to ensure we are ready for the future – eg National Grid ESO future scenarios? "	Section 3 "Our Operating Context" outlines how market dynamics are shaping our thinking and planning.
	What doesn't come across in the BDP is the work DCC is doing to advance technology. What does future technology of the network look like?	Our technology vision is included in Section 4 "Our Strategy" covering the four key principles adopted to evolve out technology infrastructure.
	"Have any learnings on how the DCC systems, network, technology has operated to date taken into account? "	Every project is closed with a lessons learnt and areas to improve report which incorporated in the architecture for future projects.
	Can DCC to highlight Pre-Payment meter (PPM) related projects in BDP and planning information?	Where relevant, information on our efforts to support prepayment meters have been included throughout the document.
	Does the Comms Hubs & Networks (CH&N) section of the BDP include information on 4G transition?	We have included updates regarding 4G in the Communications Hubs & Networks Programme section. A new Long-Term Evolution (LTE) 4G connected communications hub service has been procured that will provide secure, flexible connectivity and replace current 2G and 3G services.
	Focus on anything security related, especially Public Key Infrastructures (PKI) as critical infrastructure is important. Will this information be covered in the BDP?	Section 4, "Our Strategy", has a dedicated section on security. Further, in Section 5, under the "Secure and stable" outcome, we have included updates on PKI-E as a key programme.
	Market-wide Hourly Settlement (MHHS) is estimated to offer consumer 1.5 billion pounds in overall cost benefits, what can DCC do to help deliver those benefits?	The role of DCC in delivering MHHS is set out in Section 5, under the the "flexible and fast" outcome.
Provide a quality experience for our customers and our people	Can DCC highlight more information around customer experience in the BDP?	We want to ensure we deliver a quality service and experience for all our customers and meeting their requirements is central to everything we do. All the activity we undertake inevitably has a degree of customer experience involved.
	What is the progress on Customer Analytics Reporting and SEC Modification 176?	SEC Modification 176 is currently being refined through industry consultation. We are working with SEC governance to identify which 2023 release is most appropriate for the modification to go-live, subject to relevant approvals.
	What will the benefits be for stakeholders until the licence renewal?	The DCC is currently awaiting the outcome of Ofgem's DCC's licence renewal consultation. However, regardless of the decision, the DCC will continue to deliver towards the outcomes outlined in this document, and we have sought to be clear on the benefits of each programme within Section 5.
	Customers keen to hear more on the benefits that DCC is delivering, what benefits programmes will deliver and what benefits are realised against what was promised. Can the link between the Annual Report and the BDP show benefits realisation in the year against what was previously said?	This year we have changed the way we report programmes in section 5 in order to clearly set out the benefits. We will continue to work on and include parallels to the annual report, and track updates in the BDP on subsequent progress and changes.
	What ways can customer feedback be shared with the supply chain?	Our customer engagement team work closely with our commercial and operations team to ensure feedback is cascaded appropriately. We continue to look for ways to drive further transparency and collaboration across all our partners.
	How can DCC Service Management Systems (DSMS) categorise device vs DCC network issues?	We provide further detail on DSMS in section 5 under the "Flexible and fast" outcome.

Appendix: Summary of changes

Section	Changes
Section 2: The DCC and the smart metering network	Last year this section was titled "Who are we and what we do". This year we have expanded on our responsibilities, included a timeline of activity, how the network operates, and the reach of smart metering data.
Section 3: Our Operating Context	Last year this section was titled "Future Market Trends". This year we have refined and updated the key external trends and factors that could impact DCC.
Section 4: Our Strategy	This year we have provided greater detail on DCC's functional strategies and lifecycle management approach.
Section 5: Strategic Outcomes	As the DCC shifts to a more stable operating business, we have taken a strategic outcome-based approach to how we organise our operations and programmes – therefore this year we have categorised our programmes and initiatives within four outcomes, rather than five priorities, as contained in last year's document. We have done this to ensure that the DCC fully delivers the benefits of the smart metering network for our customers and stakeholders.
Section 5: Great Britain Companion Specification (GBCS)	Introduction of the GBCS 4.1 Firmware version.
Section 5: Market-Wide Half-Hourly Settlement (MHHS)	DCC's core MHHS related changes will go-live in the June 2024 SEC Release. DCC, in discussion with our service providers and the SECAS/MP162 workgroup, decided to aim for April 2025 implementation to allow the maximum amount of time for development that would still meet overall MHHS programme requirements completed by October 2026.
Section 5: Data Service Provider (DSP) Data Systems; Communications Hubs and Networks (CH&N); PKI Enduring Services (PKI-E); Test Automation Framework (TAF); DCC Service Management Systems (DSMS)	In last year's document these programmes were being managed under the portfolio "Network Evolution Programme". DCC created the Network Evolution Programme as a wrapper to ensure these programmes were successfully mobilised. As the programmes have grown and developed at different speeds and in different directions it is no longer practical or desirable to manage them as a single body of work but makes more sense to manage them as individual programmes in their own right.
Section 5: Scaling and Optimisation, Network Traffic Management and Secure Publish Subscribe	In last year's document, these initiatives formed part of the "Ensuring Reliability and Stability" and "Network Capacity Planning" sections. More detail is provided in this year's document as the initiatives have developed during the year.
Section 5: Business Accuracy Programme	Refinement of Programme benefits
Section 5: Cloud Blueprint, Responsible Business Framework, No WAN connectivity project	New projects and initiatives
Financial summary	No separate financial summary section in this year's document – financial information can be found in DCC's Annual Report (Document Centre | Smart DCC) and regular information presented at DCC's Quarterly Finance Forum (QFF). However, we have included a cost summary and scale of costs for programmes in section 5 this year.
Key smart meter metrics	The Appendix of smart meter statistics included in last year's document has been removed and a link has been provided in Section 2 to latest statistics on DCC's website:

Smart meter statistics and network coverage | Smart DCC |

Appendix: Business and Development Plan Process