



DCC Business &
Development Plan
2024/25



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1. Chief Executive's Foreword

From the outset, smart meters were always seen as a key enabler on the journey to a smarter, greener system.



The Data Communications Company (DCC) is responsible for designing, building, and running the communications infrastructure that underpins the smart meter roll out. After almost 8 years as Chief Executive, it is clear to me that this role is more important than ever before.

The new Government has ambitious plans to accelerate decarbonisation and drive social good. This will require a smarter energy system; to help balance intermittent supply with increasingly electrified demand; to identify and coordinate the many millions of decentralised assets and connected devices in consumers' homes; and most importantly to do all this in the most cost-effective way for those who need it most.

The smart meter network is a strategic national asset, offering unparalleled reach and inherent security. It can play a central role enabling the policy implementation and market innovation required to achieve these goals.

Today, the network supports over 30m meters in almost 19m premises. Operational performance is exceptionally strong, and we have made significant progress maturing as an organisation.

Our progress has only been possible through close collaboration with our customers, our suppliers, the Government and Ofgem. Our recent IoT Breakthrough

Award, for Alliance of the Year with Vodafone, is testament to the power of collaboration in solving our collective challenges, with the 4G Communications Hubs and Networks programme most evident. Due to go live in 2025, it is essential this is delivered on time, as the industry seeks to mitigate the impact of switching off 2G and 3G.

In support of DCC's efforts to deliver right first time, there will be an increasing focus on the adoption of common standards across the service lifecycle. This will be complemented by clearer links between and across different service families, from first-generation SMETS1 meters to SMETS2 and beyond, driving greater understanding and transparency.

As more of the current programmes move into in life operations and updated technology architecture enables a greater pace of change, DCC will be able to offer faster and more flexible services. Central to this is the continued progress on the procurement of the Data Service Provider (DSP), the smart metering network's

core messaging platform. This will enhance customers' experience of the network and ensure they, and others, can unlock its transformative possibilities.

Secure and stable performance is the bedrock on which this experience is built. Operational performance in both smart metering and switching has consistently surpassed industry and internal targets, with 99.6% and 99.98% availability respectively. DCC's security posture continues to be recognised as leading class, with the Security Operations Centre (SOC) now one of fewer than 50 such operations in the world to have CREST security certification.

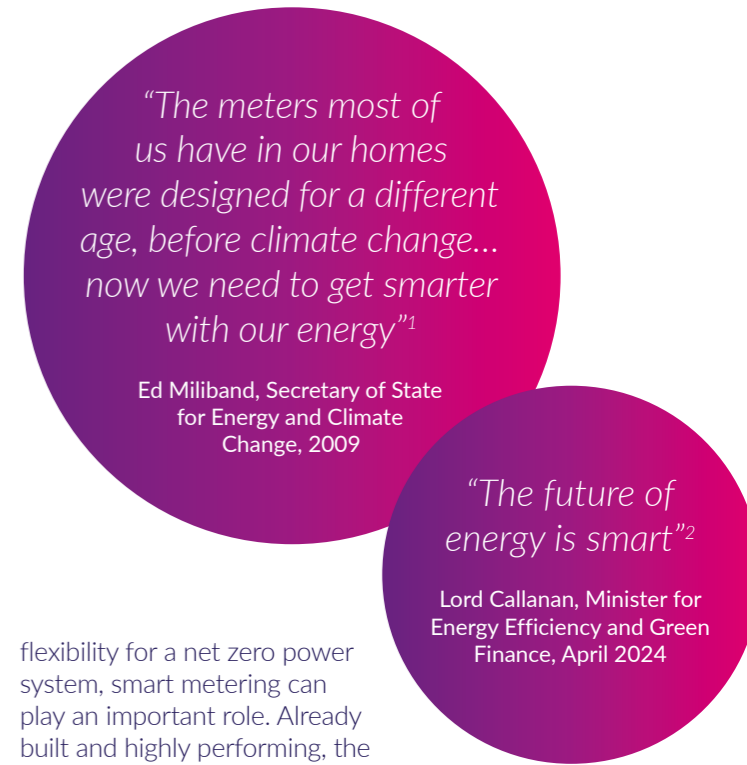
Yet there is further work to be done. For example, further development of a future connectivity strategy to address the less than 1% of premises not covered by the Wide Area Network and to deliver sustainable connectivity into the 2040's and beyond.

DCC will need to deliver all of this while driving further efficiency. As a licensed monopoly, it is imperative DCC demonstrates value for British consumers. In parallel, to continue delivering strong performance, DCC employees need and deserve a compelling and engaging career choice, for which I'm delighted that the DCC was named among the Top 10 most inspiring workplaces in the UK & Ireland.

The next five years will mark a change in the DCC, with Ofgem working through the details of the future licence. While still consulting, the regulator has made clear the core principles that will underpin the future DCC, including a move to an ex-ante cost control.

DCC strongly support these changes. Some of these, notably the move to ex-ante, will mark a fundamental change in the way DCC operates. Importantly, Ofgem is clear that the DCC's mandate and operational model will remain in place, ensuring that smart metering can continue to act as a platform for policy implementation.

The past year has seen increasing calls for smart metering, and the data it generates, to enable greater public value. From helping to combat fuel poverty, to accelerating retrofit of cold and damp homes, and enabling system wide



flexibility for a net zero power system, smart metering can play an important role. Already built and highly performing, the smart metering network can accelerate delivery when we need real change and do so cost effectively when household and public finances remain tight.

With my time as CEO now almost at an end it will fall to a new chief executive to lead the organisation as it transitions through licence renewal and to continue the realisation of a smart energy system.

If we are to realise the true promise of smart metering, then we need to build on the ideas first conceived in the 2000's, and initiated and acted upon during the 2010's. Only then, will we have a digital energy system capable of sustaining the smarter, greener lives of the 2020's and beyond.



Angus Flett, Chief Executive Officer



1 [ARCHIVED CONTENT] 11 May 09 - Press Release - GB Smart Meter Roll Out Moves Forward - Department of Energy and Climate Change (nationalarchives.gov.uk)
2 Smart Secure Electricity Systems Programme consultation: Summary Document - GOV.UK

2. The DCC and the Smart Metering Network

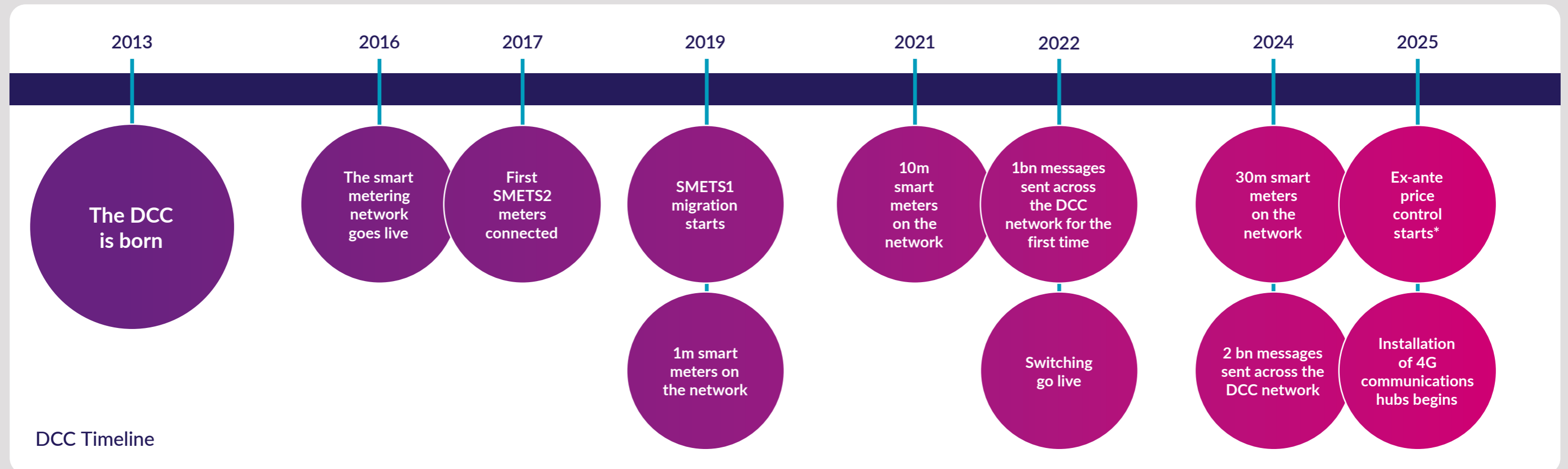
Since being awarded the licence in 2013, the DCC has designed, built, and now manages the telecommunications technology infrastructure that underpins the smart meter roll-out. At scale, the smart metering system will support secure data communication across 100 million devices in 33 million premises.

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 DCC network
- ✓ **Maintain and operate the network**
Develop, operate and maintain the smart meter network, with a dedicated team monitoring its performance 24/7 365 days a year
- ✓ **Secure the network**
The smart meter network was designed with security at its core, alongside the National Cyber Security Centre (NCSC) – part of GCHQ.¹ We protect the network from malicious actors and any unintended consequences
- ✓ **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**
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



¹ <https://www.smartdcc.co.uk/our-smart-network/protecting-data-on-the-smart-meter-network/>
*Subject to confirmation from Ofgem

Smart Energy House – The benefits of a connected home



Smart appliances

Consumer devices that connect to smartphone or tablet for better control, convenience, and information



In-home display

Displays near-real time information on energy usage, cost, and greenhouse gas generation for both gas and electricity. This allows consumers to make more informed choices on energy usage



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 electricity meter

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



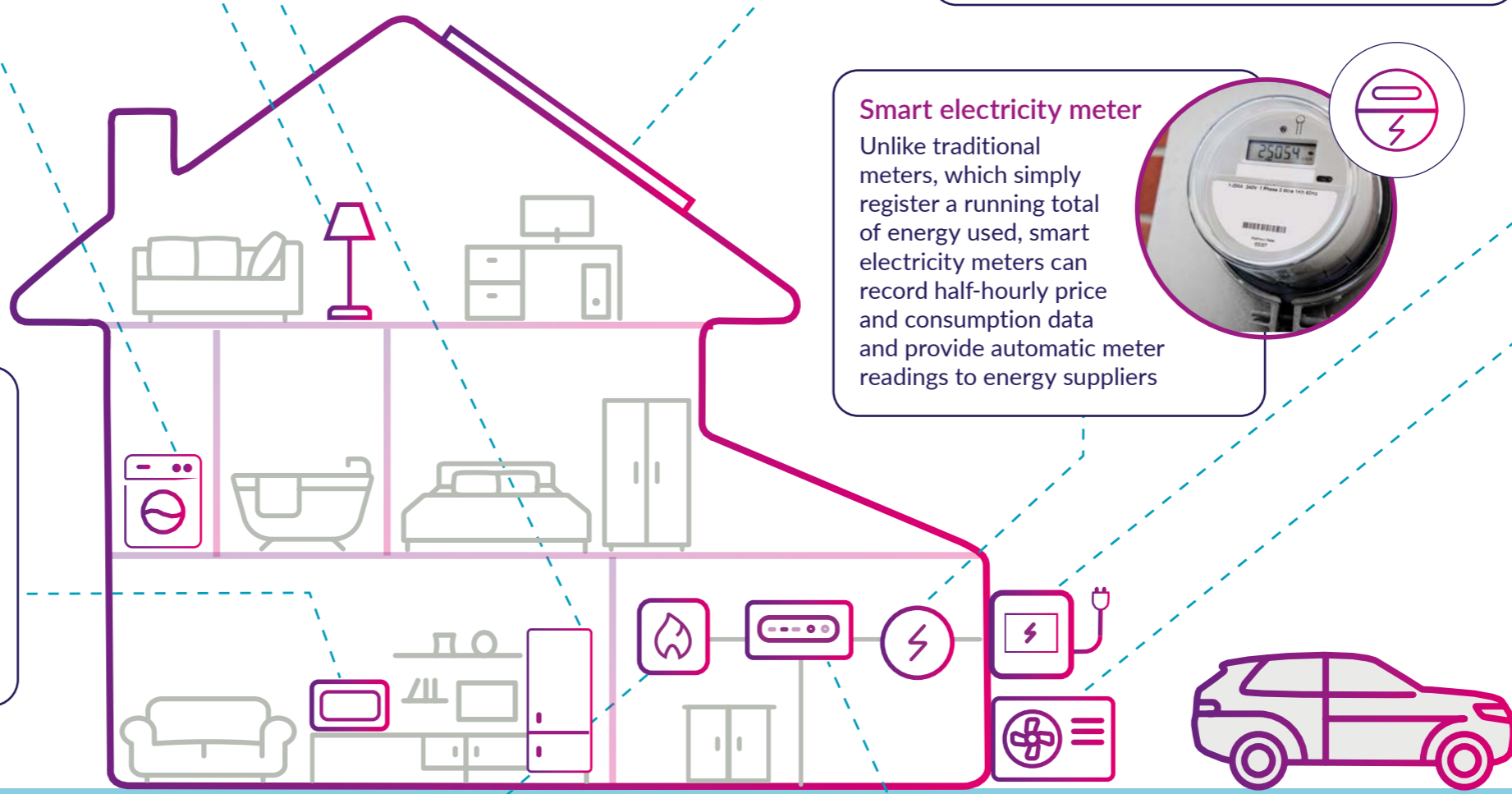
Smart gas meter

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

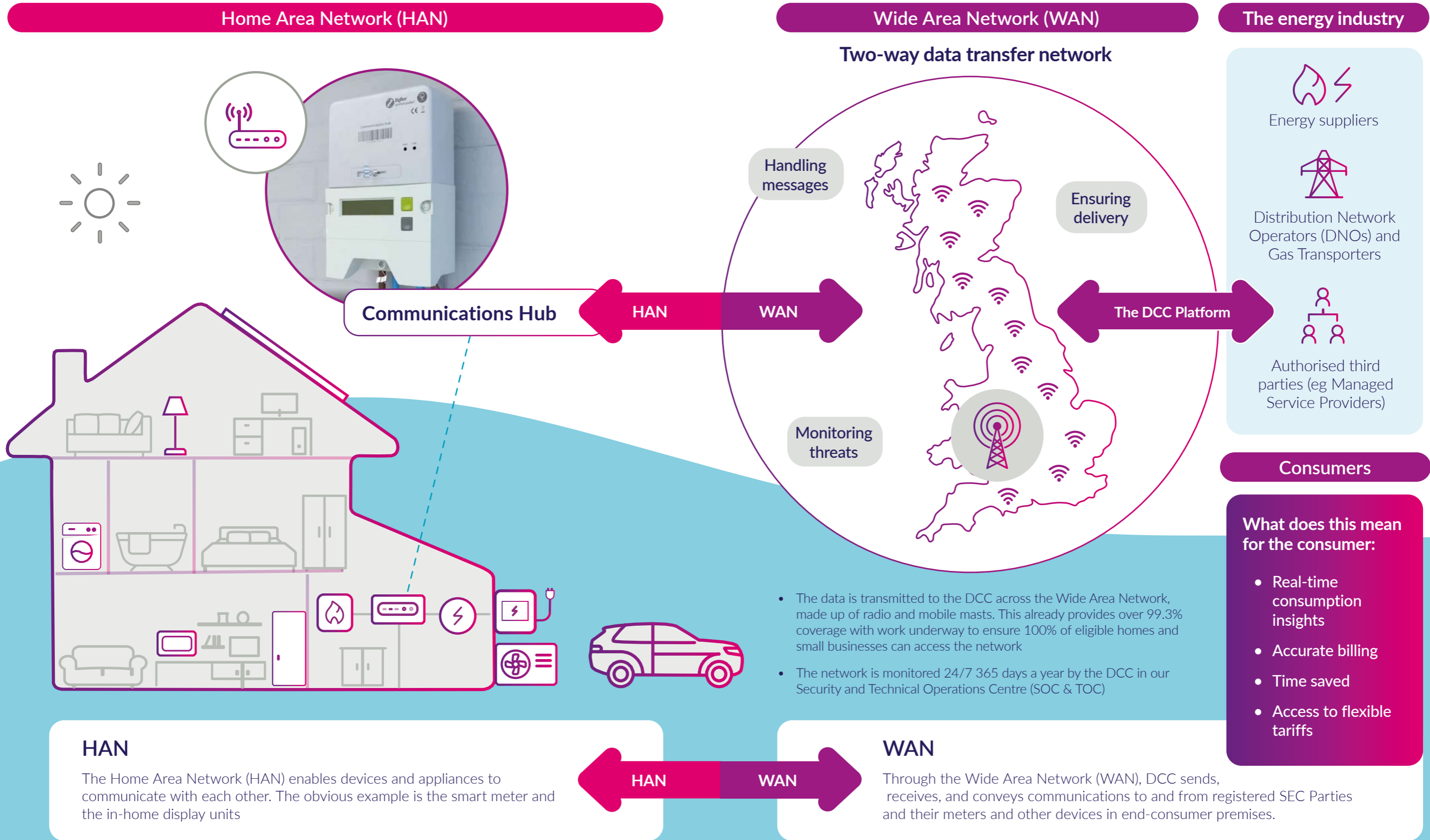


Communications hub

A small device which sits next to or on top of the smart meter and transmits data to and from connected devices by creating a Home Area Network (HAN), completely separate to home broadband, and sitting outside the public internet



Home Area Network and Wide Area Network

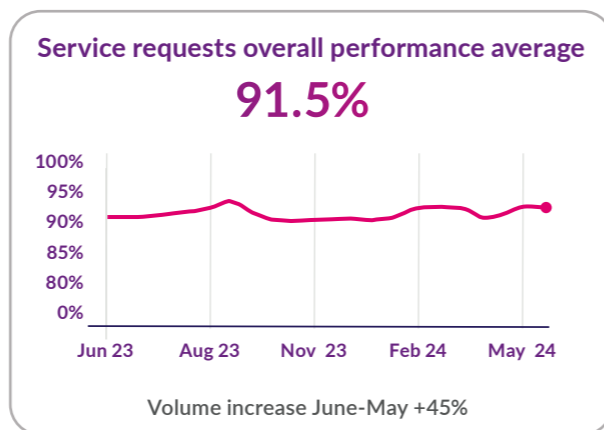
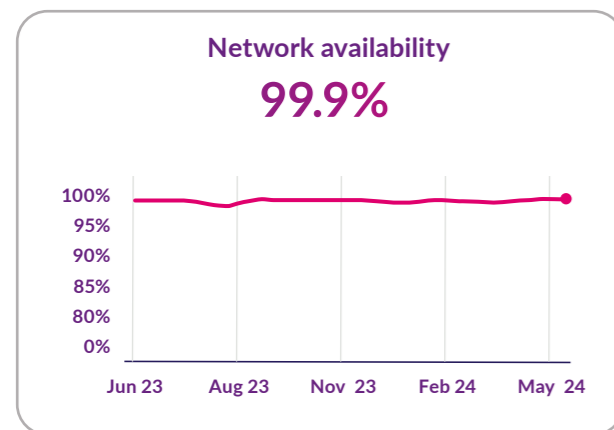


Managing the network

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.

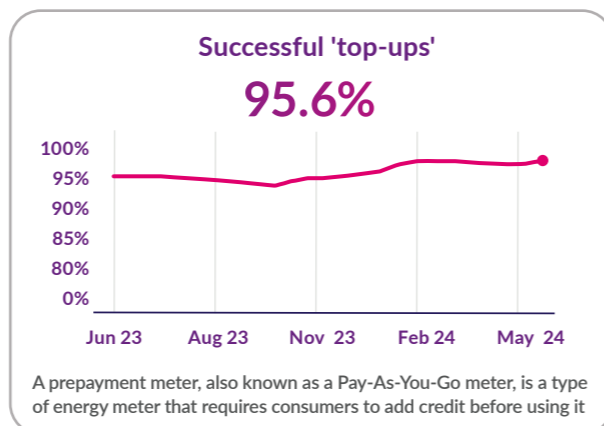
Through the DCC's TOC and SOC we monitor and manage the network 24 hours a day, 7 days a week 365 days a year. It helps us to track the progress of the smart meter roll-out, manage issues on a day-to-day basis and plan for and forecast future growth and demands.

Operational performance

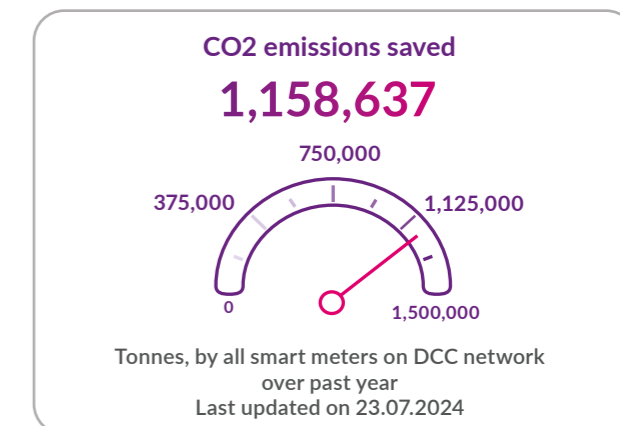
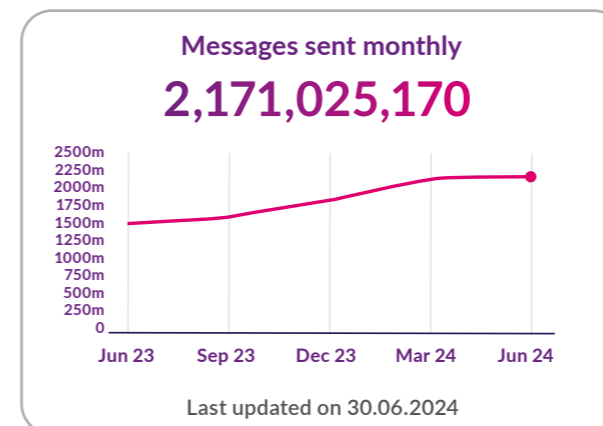
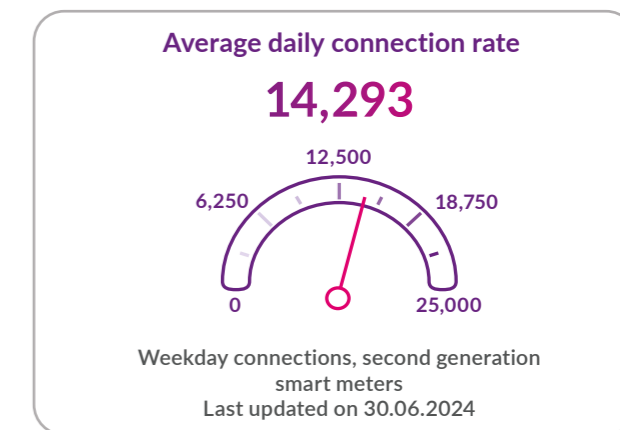
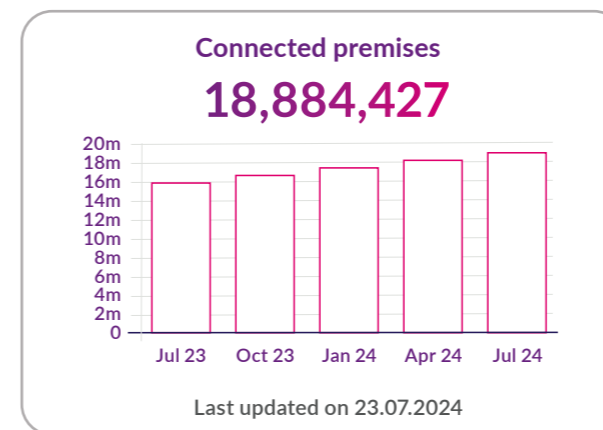
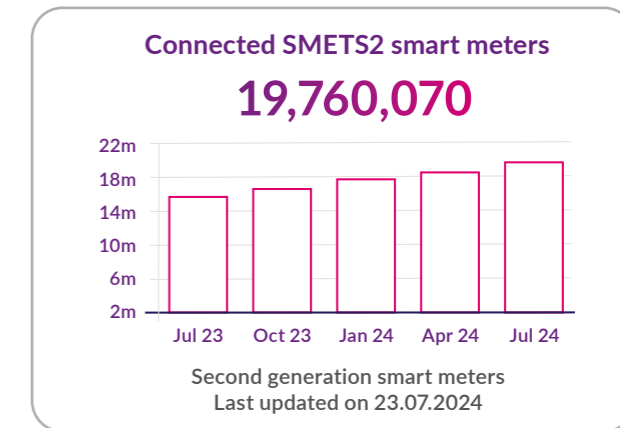
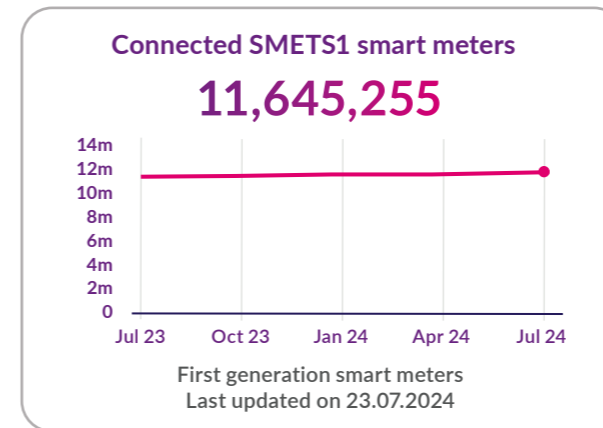


We keep this information regularly updated on our website, including monthly incident reporting. For more information please see:

[Smart meter statistics and network coverage](#)

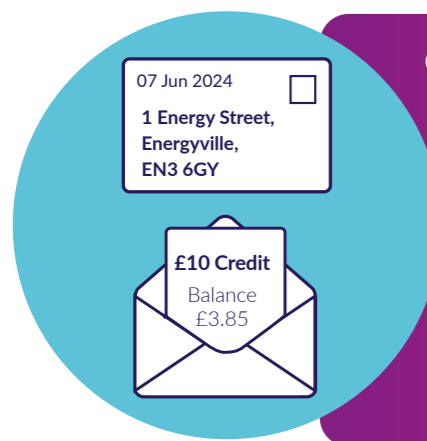


The scale of smart metering



The scale and reach of smart metering data

There are now more than 30 million smart meters installed and enrolled onto the network. The smart meter system currently supports over 130 distinct types of messages (known as Service Request Variants or SRVs) and this generates over 2 billion messages sent across the network each month.



07 Jun 2024
1 Energy Street,
Energyville,
EN3 6GY

£10 Credit
Balance
£3.85

Our security model creates an important distinction between two distinct categories of data that flow through the system – message content and system data.

The message content data (the letter) is encrypted and only accessible to energy suppliers, distribution network operators or 'Other Users' to whom consumers have given their consent. Whereas system data (the envelope) is retained centrally within the DCC's system and is used to maintain and manage the performance of the network.

Greater uses of smart metering data

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 latest 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.

We help any organisation to access data appropriately by assisting them through a robust onboarding process which contains a range of administrative, technical and security stages. Access

"Access to smart meter data is a critical enabler of a just transition, consumer control and system stability. Smart meter data will help promote energy efficiency, empower consumers, and support new solutions for the energy transition."

Laura Sandys CBE, Chair, Energy Digitalisation Taskforce

to granular data is proving beneficial to organisations in a broad variety of ways – from supporting the delivery of accurate energy efficiency retrofit, unlocking green finance, and even enabling new health and wellbeing services.

Some of the most common messages include:

<p>Prepayment</p> 	<p>The prepayment service allows end-consumers to add credit to their meters through an over-the-air top-up via the DCC 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.</p>
<p>Install and commission</p> 	<p>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 all the benefits of smart functionality.</p>
<p>Change of supplier</p> 	<p>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.</p>
<p>Meter reads</p> 	<p>The most commonly used message on the DCC network is meter reads, which allows energy suppliers to remotely read energy usage – thereby removing 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.</p>
<p>Firmware</p> 	<p>The firmware service allows for remote upgrades of meters unlocking new functionality and benefits.</p>

Faster and more reliable switching

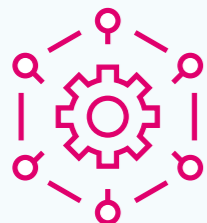
The delivery of faster, more reliable switching was a significant milestone in the transformation of the retail energy market. It delivered a foundation for increased competition and innovation leading to improved consumer value, experience, and engagement with the market.

As Ofgem’s key delivery partner, we designed and built the Central Switching Service (CSS), which has been in operation since July 2022. DCC managed the consolidation of 28 existing and new systems and the integration of around 200 licensed parties into the CSS.

Benefits



It used to take up to three or four weeks to switch gas and electricity supplier, but now with CSS the switch can happen within five working days, and as quick as 24 hours, improving the consumer experience



A simple and robust system architecture that harmonised business processes, driving efficiency savings for energy suppliers



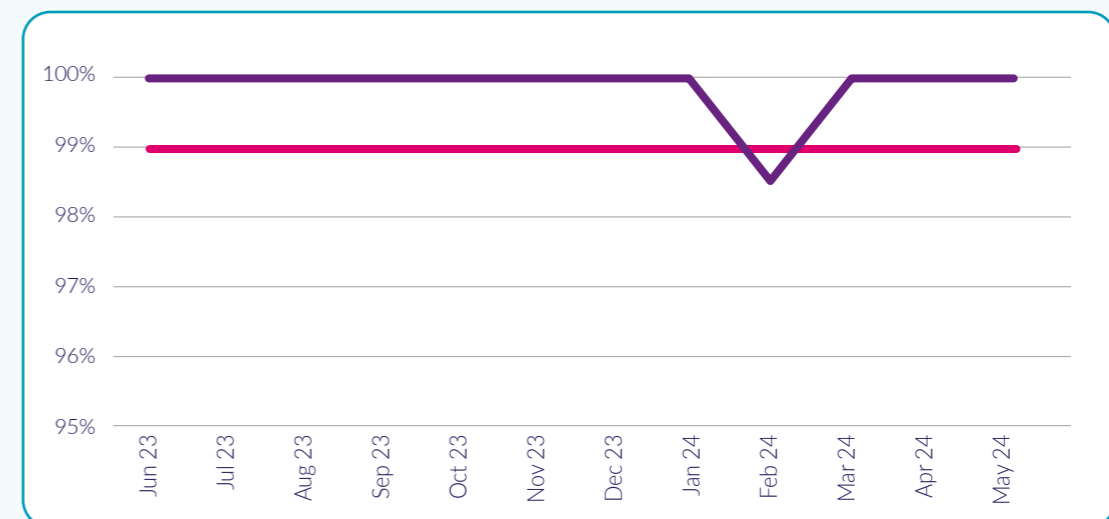
Encourages effective competition, by minimising barriers to entry for new players and enabling consumers to reliably switch supplier

DCC will continue working in close partnership with RECCo and the REC Manager to maintain and enhance the very strong performance of the Switching service in the interest of our customers and consumers. This collaboration takes place at all levels of DCC and the REC organisations and spans a broad range of topics, including operational management of the service, change management of the code and systems as well as future development of the service.

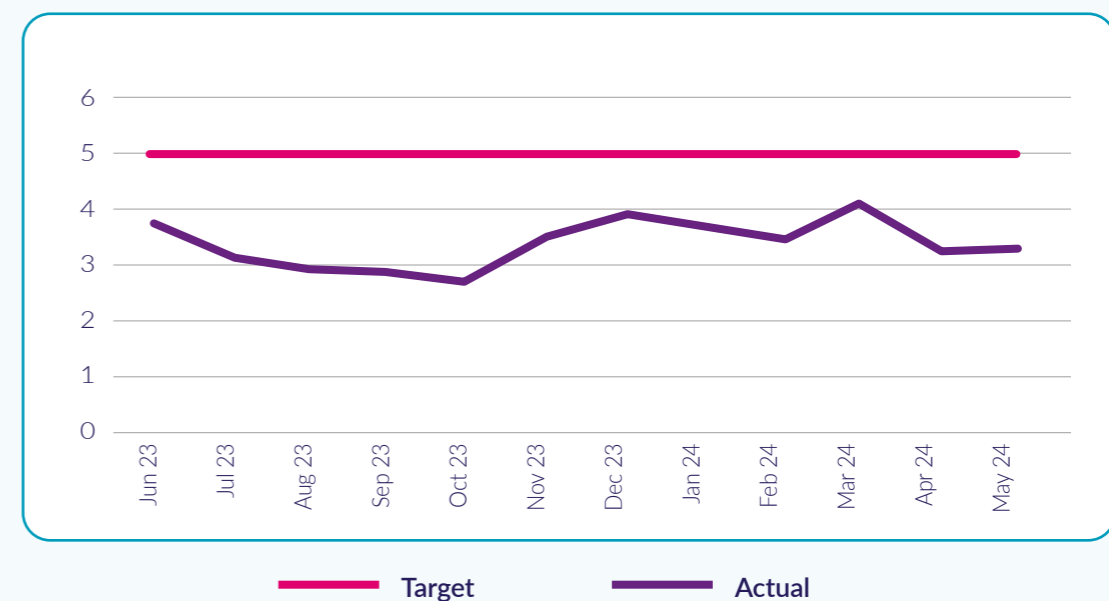
Operational performance

- Since we launched the CSS in July 2022, we have processed over 28.7 million switches
- The CSS benefits from economies of scale through operation by the DCC, leveraging our Technical and Security Operations Centre to monitor its performance 24/7 365 days a year.

Switching success rate



Average days to switch



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, identify the implications and plan accordingly. 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 licensed 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 transition to a net zero energy system will chiefly rely on the decarbonisation of supply and the electrification of demand. As the power sector decarbonises and integrates more variable renewables into the system, the need for flexibility from demand to match variable supply becomes paramount. The Fourth Carbon Budget requires a step change in emissions reduction, reducing the amount of greenhouse gases by 50% between 2023 and 2027¹.

The Labour party has set a target of 2030 to decarbonise the energy grid. Therefore, continued growth in renewable energy will be essential, with a particular focus on offshore wind power. The previous Government set a target of 50GW for offshore wind capacity by 2030, with the Labour manifesto outlining plans to double onshore wind and quadruple offshore wind by 2030², and Labour Party plans to invest in building floating wind farms off Britain's coast as part of its commitment to reduce reliance on foreign energy³.

In parallel, solar energy is becoming increasingly widespread. In the domestic sector in 2023 there were more than 183,000 solar panel installations across the UK, a third higher than the previous year⁴, with Cornwall Insight outlining a further 12GW of solar in planning permission, and an additional 10GW submitted but awaiting permission⁵.

On the demand side, decarbonisation of heat and transport continue to progress, although with headwinds to wider adoption. While, the UK saw the millionth electric vehicle registered in January 2024, a recent survey suggested 47% of consumers have a preference for an internal combustion engine (ICE) as their next vehicle, up from 42% last year, with only 9% considering a pure Battery Electric Vehicle⁶. This may be a consequence of the Government's decision, in September 2023 to delay the ban on new sales of ICE vehicles.

In heating, the previous Government committed to a target of 600,000 heat pump installations annually by 2028, increasing the grant level for the Boiler Upgrade Scheme to £7,500.

A market-wide strategy, including Government targets, policy support and market reform is required to facilitate significant growth in distributed flexibility, essential to balancing supply and demand.

Increased flexibility from demand side response (DSR), storage and interconnection, provides significant cost savings in a decarbonised electricity system. Government estimates that 30GW⁸ of flexibility capacity is required by 2030 to balance the system and cost-effectively integrate high levels of renewable generation. The successful delivery of Market-wide Half-hourly Settlement (MHHS) will enable consumers to participate more readily in demand flexibility as it spurs greater adoption of time of use tariffs.

In the interim, the Demand Flexibility Service (DFS), operated by the Electricity System Operator (ESO), has built on the success from last winter with greater participation and demand reduction. Over 2.4m households and small businesses signed up to participate last winter, with over 3.7GWh of electricity reductions⁹. Smart meters were a prerequisite for participation. The Government's ongoing Smart and

Energy-efficient devices enhance safety and empower consumers to adopt smart products, enabling better control over energy consumption and reduced bills. An intelligent power grid could save up to 10 billion pounds annually by 2050.⁷

Secure Electricity System (SSES) programme is seeking to build the blueprint and framework for a smart and flexible electricity system.

For Distribution Network Operators and Distribution System Operators (DNOs/DSOs) to effectively manage supply and demand in a future smart grid, it is imperative they understand the installed base of low carbon technologies (LCT). However, today there is a lack of visibility of what is installed and where. It is estimated that roughly only 40%¹⁰ of new domestic LCTs are currently visible to the electricity networks.

To address the problem, DESNZ created the Automatic Asset Registration (AAR) Programme, an innovation project aimed at identifying technical solutions for a simplified domestic asset registration process and a Central Asset Register (CAR).

1 UK proposes Fourth Carbon Budget – GOV.UK (www.gov.uk)
 2 Offshore wind net zero investment roadmap – GOV.UK (www.gov.uk)
 3 Labour targets floating wind farms to boost energy security – BBC News
 4 2023: A record-breaking year for MCS and small-scale renewables – MCS (mcs-certified.com)
 5 Landowners cover countryside with solar panels in 'sunrush' (thetimes.co.uk)
 6 2024 Global Automotive Consumer Study | Deloitte UK
 7 New laws passed to bolster energy security and deliver net zero – GOV.UK (www.gov.uk)
 8 DESNZ, Electricity System Flexibility Modelling
 9 Electricity System Operator <https://www.nationalgrideso.com/document/319876/download>
 10 LCT Connect <https://es.catapult.org.uk/wp-content/uploads/2023/04/AAR-Final.pdf>

What does this mean for DCC?

- Continue to deliver a reliable and stable system, enabling consumers to understand and engage with their energy usage. DCC collaborates with service providers and energy suppliers to enable all eligible premises to receive a smart meter should they need or want one and investigate options for those who cannot
- Ensuring our systems and infrastructure are sufficiently flexible and scalable to support continued growth in the volume of transactions across the network. This will be driven by absolute volume increase, and a change in request patterns as the DCC customer base and associated behaviours change. This places an increased emphasis on demand forecasting and network traffic management
- Continued engagement with the wider industry to support and enable flexibility propositions and effective management of local networks. Smart meters are key enablers to unlocking the value of flexibility from DSR. Secure communication of half hourly data from meters, facilitated by the DCC network, allows customers to be rewarded for shifting energy usage in a way that wouldn't be possible with traditional meters
- 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. DCC is collaborating with GreenSync and Energy Systems Catapult on the AAR innovation project ensuring lessons learned from the smart metering system can support future policy objectives
- Continue supporting DESNZ and industry in shaping Smart and Secure Electricity System (SSES) proposals ensuring existing industry assets can be leveraged to accelerate and de-risk delivery, cost effectively for consumers



Data and Digitalisation

Accelerating the digitalisation of the energy system will enable the emergence of net zero compatible business models, markets, and industry structures.

The roll-out of smart meters across households and small businesses in Great Britain is the cornerstone of the industry’s ongoing digitalisation efforts. As outlined in the Department for Business and Trade’s Smart Data Roadmap, “Smart meters are an example today of how digitalisation is empowering consumers to change their behaviour to support decarbonisation; and in the future will enable consumers to access a broader range of products and services, better tailored to their needs”¹. Smart metering infrastructure not only provides real-time data on energy consumption, enabling more accurate billing, improved energy management, and greater visibility into usage patterns; but also offers system capabilities that can be leveraged to meet the urgent need for progress against our net zero objectives and obligations.

With over 30 million smart meters installed, the smart metering network is generating billions of data transactions every month. As outlined in ‘Data for Good: Smart Meter Data Access’ greater transparency of, and accelerated access to, smart meter data can promote energy efficiency, effectively target those in need, empower consumers, and support new solutions for the energy transition².

As the energy industry becomes more digitalised and interconnected, data management, including considerations around access, privacy and standards, become critical. A significant volume of policy activity is seeking to carefully advance progress in this area including consumer consent, data sharing Infrastructure and data best practice.

Further, as part of the new Government’s plans for cyber security, digital and data, a Digital Information and Smart Data Bill will enable new innovative uses of data to boost the economy.

In the 2023 Autumn Statement, the Chancellor set out his ambition for the Government to kickstart a Smart Data big bang. The Department for Business and Trade’s ambition is to realise a world-leading Smart Data economy, empowering consumers and small businesses, and turbo charging competition, innovation, and growth³. Energy will be critical to realising this vision, with smart meter data at the heart of this journey.

The ultimate goal for all parties, therefore, should be to get data safely into the open and make sure it is easy to find, while balancing security, data subject privacy and ensuring compliance where relevant with the Smart Metering Data Access and Privacy Framework.⁴

What does this mean for DCC?

- Absolute focus on secure and stable network performance to ensure customers receive the data they need to deliver existing services, develop innovative products and services, and are able to test these safely in a controlled environment
- Continued engagement with interested 3rd parties to support understanding of and access to smart meter data, including upgrades and enhancements to the DCC onboarding process, in line with the first and second recommendations from Data for Good
- Continued engagement with Ofgem to support and inform ongoing regulatory considerations regarding data and the digital regulatory landscape eg consumer consent



¹ The Smart Data Roadmap (publishing.service.gov.uk)
² Data for Good, Smart Meter Data Access – Energy Systems Catapult
³ The Smart Data Roadmap (publishing.service.gov.uk)
⁴ Strategy and Policy Statement for Energy Policy in Great Britain



Consumer Challenges

Unprecedented increases in wholesale energy prices from mid-2021 caused significant and prolonged volatility in the energy retail market. Consumers faced several challenges, ranging from concerns about affordability, under-heated homes, piling debt and self-disconnection.

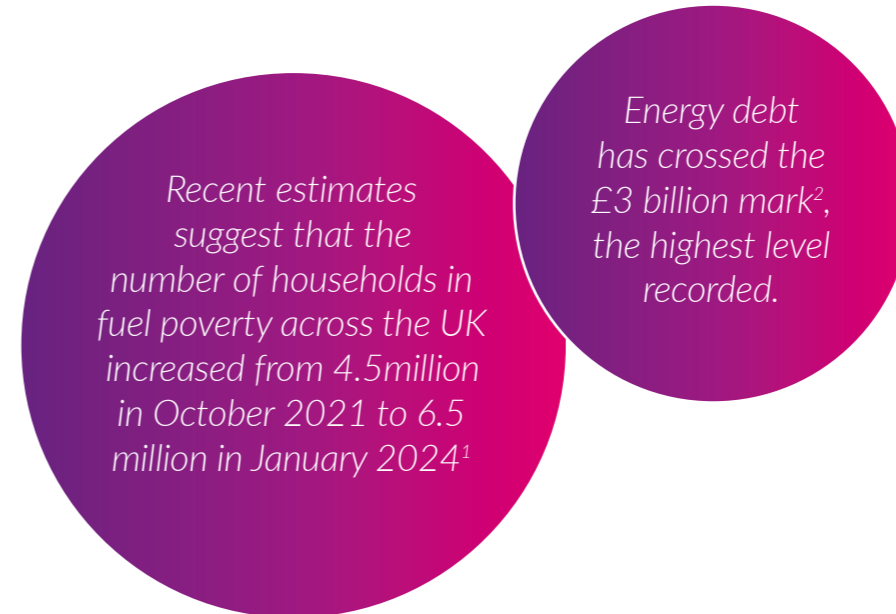
At the height of the crisis, the Government implemented various rebates and payment schemes including the Energy Price Guarantee, the Energy Bills Support Scheme and council tax rebate to protect consumers from the impact of energy price shocks, in addition to existing schemes such as Warm Home Discount and Cold Weather Payment.

While these schemes have accounted for one of the largest support packages³ to help consumers, there remains scope to improve efficiency of such schemes with better targeting thereby allowing allocation of funds to the consumers most in need. As of June 2023, £130 million of vouchers for prepayment meters were available to be claimed⁴.

The Government, as part of its 'Smarter Regulation' consultation, is considering a proposal on multi-sector Priority Services Register which would mean that consumers need to disclose their vulnerability only once.

At the same time, Ofgem is reviewing regulation in place to support vulnerable consumers. These include calls for input on examining issues around affordability and debt in the energy market, on reviewing standing charges and more recently on the Future of Domestic Price Protection (Price Cap).

There is also an increased focus on prepayment meters within the energy industry and Ofgem intends to periodically review the rules to check that they



are succeeding in their objective of protecting the most vulnerable without unsustainably increasing bad debt, which would add to customer bills. So far Ofgem has taken steps to address the issue of involuntary installation of prepayment meters and compensate affected customers, with compensation totalling more than £340,000 already paid out⁵.

Labour has committed to invest an extra £6.6 billion over the next parliament to upgrade five million homes and cut bills for families. The Warm Homes Plan will offer grants and low interest loans to support investment in insulation and other improvements such as solar panels, batteries and low carbon heating, working with combined authorities, local and devolved Governments, to roll out this plan.

What does this mean for DCC?

- Ensuring 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. We are continuing to increase cost controls across the organisation and are on track with our efforts to drive £30m of cost efficiencies out of the business by 2026
- DCC continues to focus on delivering programmes in a timely and cost-efficient manner
- Continued focus on a secure and stable network so that consumers can have access to clear, accurate, and timely information about their energy usage, tariffs, and billing
- Continue to support efforts to leverage the smart metering system to tackle fuel poverty. Enabling efforts to understand how system data can help identify areas at risk of fuel poverty and deliver targeted support schemes, including supporting delivery of the Warm Homes Plan

1 Fuel poverty in the UK - House of Commons Library (parliament.uk)
 2 Debt and Arrears Indicators | Ofgem
 3 Accounting for £94 billion (Spring Budget 2023 speech - GOV.UK (www.gov.uk))
 4 <https://www.independent.co.uk/news/uk/home-news/energy-bills-support-scheme-vouchers-b2354395.html>
 5 Compensation paid for force-fitting of prepayment meters - BBC News



Technology and Security Landscape

Technology, including connectivity, will be critical to a smarter and greener energy system. With a growing number of connected devices, and the importance of the messages they transmit, there will be an increasing necessity to ensure cyber security in the face of rapidly evolving threats.

The mobile network operators have confirmed to the Government that they do not intend to offer 2G and 3G mobile networks past 2033 at the latest. 3G mobile networks in the UK are gradually being switched off over the next five years, to make room for more advanced 4G and 5G networks.

4G will continue to play a critical role in providing mobile connectivity across the UK. Through the £1 billion Shared Rural Network Programme, Government is moving to push 4G coverage to 95% of the UK's landmass and reduce the digital divide. The UK Wireless Infrastructure Strategy set out an ambition for 5G to reach all populated areas by 2030¹.

The fibre broadband roll-out continues to progress, with 6 in 10 households now having access to full fibre². Openreach is aiming to reach 25 million premises by December 2026³, with alternative networks continuing to invest in infrastructure, either as part of Government's Project Gigabit or independently. The Government's ambition is to provide gigabit broadband to at least 85% of premises by 2025 and over 99% by 2030⁴.

In its most recent Annual Review, the National Cyber Security Centre (NCSC) warned that the threat to the nation's critical infrastructure was 'enduring and

significant', with the continued rise of state aligned groups, an increase in aggressive cyber activity and ongoing geopolitical tensions⁵.

Evolving techniques enabled by new technologies will make the threat detection and response challenge even greater. Earlier this year, NCSC warned of state sponsored actors using "living off the land" techniques to persist on critical infrastructure networks, while the rise of Artificial Intelligence (AI) is expected to heighten the global ransomware threat over the next two years⁶.

Recently Ofgem has issued a Call for Input on using AI in the energy sector to gather feedback from industry players, technology firms, consumer groups, and academics on how the UK energy system can responsibly and innovatively integrate AI. Although in its early stages, the incorporation of AI into energy grid management is expected to enhance grid flexibility, efficiency, and reliability.

More broadly, the UK Government estimates that AI could enhance up to a third of public sector tasks. Embracing AI could yield annual productivity improvements of £40 billion, totalling £200 billion over a five-year projection⁷.



What does this mean for DCC?

- DCC is deemed critical national infrastructure, with security obligations inherent in our licence. We have a 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
- Ensure continued progress and timely delivery of our Communications Hubs & Networks programme to address impact of 2G and 3G sunseting
- Continue to explore and test a range of possible future connectivity solutions and how these support customer requirements of the network in an efficient and economical way
- 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
- DCC has responded to the recent Ofgem Call for Input on using AI in the energy sector. In our response, we shared our perspective on existing guidelines and offered recommendations for future exploration providing our view on how AI can be used within our ecosystem and how to mitigate any underlying risks

1 UK Wireless Infrastructure Strategy – GOV.UK (www.gov.uk)
 2 UK Broadband Report – January 2024 | thinkbroadband
 3 <https://www.openreach.com/news/openreach-rolling-out-full-fibre-to-36-new-locations-as-network-reaches-more-than-seven-million-homes/>
 4 Gigabit broadband in the UK: Government targets, policy, and funding - House of Commons Library (parliament.uk)
 5 NCSC warns of enduring and significant threat to UK's... – NCSC.GOV.UK
 6 Global ransomware threat expected to rise with AI, NCSC warns – NCSC.GOV.UK
 7 <https://www.institute.global/insights/politics-and-governance/governing-in-the-age-of-ai-a-new-model-to-transform-the-state>



Regulation and Governance

Policy and regulation play a crucial role in shaping the energy landscape, affecting both consumers and the environment.

There are several ongoing regulatory and governance changes across the sector, including Energy Code Reform, a critical initiative aimed at ensuring energy codes can adapt effectively to the rapidly changing energy sector.

The passing of the Energy Act 2023, will address several critical aspects of energy policy, including energy security, net zero emissions, and affordability for households and businesses. It updates Ofgem's remit so that it considers net zero targets as part of its policy making and everyday decisions.

Energy policy is again going to be at the forefront of political considerations following the recent general election. One of Labour's five missions is to transform Britain into a green energy superpower. Included within the Labour manifesto were commitments to drive forward investment in clean, home-grown energy through the creation of a new publicly owned company, "Great British Energy" in support of the ambition to have a zero carbon electricity system by 2030.

It also outlined plans to ensure a robust regulatory framework that prioritises consumer interests and encourages necessary investments to reduce energy costs. Labour will work with the regulator to minimise the impact from standing charges and strengthen Ofgem to ensure it can hold companies to account, require higher standards of performance and ensure there is automatic customer compensation for failure.

Finally, Ofgem continues to consult on the future of DCC. Since publication of our Business and Development Plan last year, Ofgem has concluded on the key features of our new regulatory model, including conducting core mandatory business on a not-for-profit basis, operational model remaining primarily outsourced. It will also result in the transition to an ex-ante cost control process, for costs deemed sufficiently stable.

What does this mean for DCC?

- Continue to collaborate with Ofgem on the design of the future DCC and support any procurement process
- Engage on broader governance and regulatory reform across the sector, including code governance, to ensure the regime remains fit for purpose for the future
- Enable the smart metering network and the DCC to be able to act as a platform for policy implementation

¹ DCC review: Phase 1 Consultation (ofgem.gov.uk)

Smart metering and smart meter data are crucial for the success of key ongoing and future transformation initiatives needed to decarbonise our energy system.

Ofgem¹ 2022



4. Our Strategy

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

Purpose

At DCC, we are driven by our purpose.

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



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:



Our strategic outcomes

As a regulated monopoly, we are clear on the obligations on and expectations of the smart metering network to Ofgem and the Department for Energy Security and Net Zero.

Today our network is supporting 31 million smart meters in nearly 19 million premises, helping over half of British households save money and carbon emissions.

As the scale of the network continues to grow and DCC's role in delivering a smarter, greener energy system evolves we must drive flexibility, speed, and cost-effectiveness for our customers. Operating the network every day helping to keep consumers' lights on, homes warm and bills down.

We must deliver in an efficient and economical manner, providing value for money for all our customers and ultimately end-consumers.

Given our mandate and the evolving context in which we operate, we have a series of strategic outcomes for our organisation to help align our activities and measure our performance. These have never been more important.



We will be:



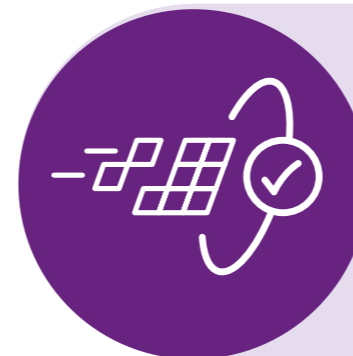
Secure and stable

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



Flexible and fast

Delivering an accessible and flexible platform, enhancing our capabilities to provide a swift and seamless experience for current and future customers



Right first time

Delivering our services to the time, cost and quality expectations of our customers and wider stakeholders

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.

Our customers are energy retailers, DNOs, Managed Service Providers and a growing number of other innovative businesses.

We provide a range of service offerings, supported by common capabilities.

Services



Smart Energy

We are continuing to support 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.

The DCC is working on future connectivity solutions to ensure all consumers can access the benefits of smart metering. We are currently undertaking a programme of work to prepare for the roll-out of next generation, 4G communication hubs

expected to be deployed onto the network from 2025 onwards and are working closely with industry and Government to address the gap where there is no WAN coverage.

The CSS went live in 2022, making switching energy suppliers faster, more reliable, and more efficient. It has supported more than 28.7m energy switches since it went live, offering 99.98% availability over FY23/24.

Aligning to service families supports the needs of our customers and provides the following benefits:

- Effective, efficient delivery and running of services providing value for money
- Effective engagement and input of our customers' needs and requirements in the delivery of services
- A greater understanding, visibility, and certainty of the costs of the services we provide

Supporting Government policy

Given our position as central to the digitalisation 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 capabilities DCC has developed, provides a platform for policy implementation and market innovation.



Testing

The DCC network relies on smart meters and communication hubs operating efficiently. We make sure that they do. We provide a range of services and support environments designed to test device operability, which lets us ensure functionality, and lets our customers ensure their smart metering systems work seamlessly on the network.



Data Services

The DCC provides reporting and analytics for our external stakeholders, every year c.60,000 individual regulatory and customer reports are generated.

The DCC has also seen an increase in emerging use cases for smart metering related data, across user groups and programmes and specifically 'Other Users' to provide services for example consumption advice and industry-wide innovation purposes.

Common Capabilities



Enabling technology and operational services

Meter data management services involve the collection, storage and processing, and analysis of data gathered from smart meters that enables the continued provision of a stable and secure system.

Connecting our customers to devices at consumers' premises; ensuring consumers can change energy suppliers securely; and providing the required levels of security, flexibility, and cost efficiency to meet future needs.

Working closely with customers to ensure the logistics to transition to 4G are in place to enable smart metering to continue to provide an efficient and effective service for energy providers and consumers ahead of closures of 2G and 3G networks.

In the Technical Operations and Security Operations Centres, our dedicated teams continually monitor the performance and security of our network, providing peace of mind and deeper insight into our customers' smart meter operations.

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 the network.

Any changes to existing services are managed through our Lifecycle Management approach. The following sections outline this integrated approach and our efforts to designing (Technology), procuring (Commercial), and securing (Security) 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 ensures that as deemed CNI*, we have the processes, controls and standards in place through the lifecycle of our services.

New sources of change, such as instruction from Government or our customers, funnel through the 'Front Door' that acts as a single point for change initiation. This enables foresight on future activity and ensures delivery impacts and risks can be flagged at the earliest opportunity and cost benefit analysis is undertaken.

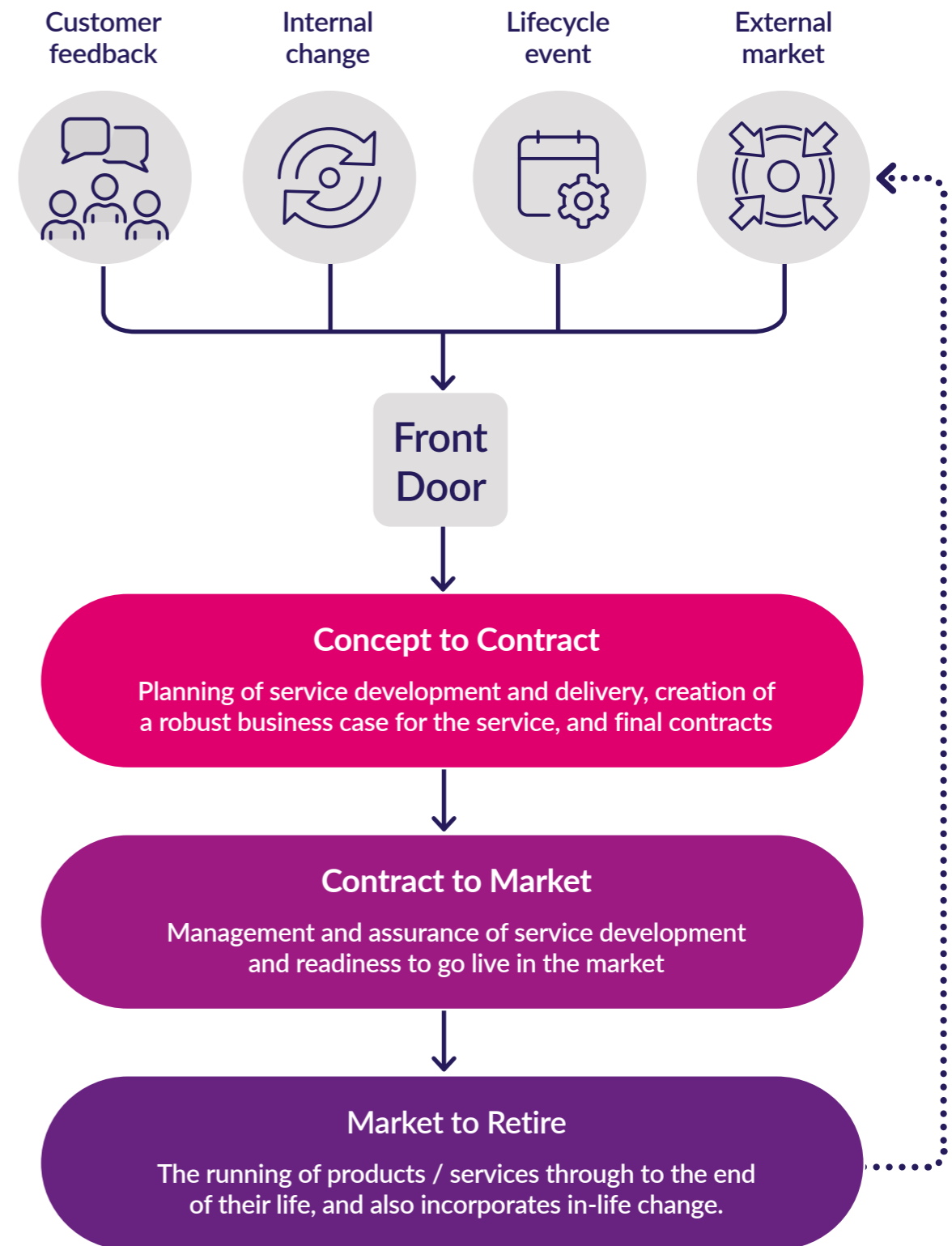
At the 'Concept to Contract' stage, for programmes and procurements that cover core service provision or where the contract value is greater than £10m, the DCC follows the HM Treasury Green Book Business Case approach. This enables us to articulate and demonstrate how the change will meet customers' needs and provide value for money. As we undertake new procurements and design work we are focusing on the adoption of common standards, to drive speed, transparency, and 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 ensures 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. Over 3,700 changes were deployed in FY23/24 with an average success rate of 98.01% change right first time against our target of 95%.

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 licensed 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. We're making good progress against our £30m target, driving efficiency across all areas of the business (see Section 5 for more details).

* DCC is a CNI impacting service in that it can have detrimental impact to Operators of Essential Services in the energy sector



Technology

The Office of the CTO is accountable for the design decisions that will support DCC's central role within an increasingly digitalised 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 against our obligations, we follow these technology and design principles:

- Standards-based design: We design end-to-end solutions that utilise proven, common standards-based technologies and services rather than leading edge and proprietary technologies that are unproven
- "Secure by Design" architecture principles: We ensure our service providers' designs meet or exceed the required security standards in their solutions and will always operate to deemed CNI standards
- Our architecture and designs ensure we can operate to the scale and in-life performance as set by our customers and code bodies – SEC and REC

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.



* DCC is a CNI impacting service in that it can have detrimental impact to Operators of Essential Services in the energy sector

Commercial

Ensuring secure and stable network performance, resilience, and value for money for customers is paramount, and we rely on our external partners to deliver many of our mandated obligations. Our Commercial team are focused on:

- Continued optimisation of core commercial processes, focusing on refinement and standardisation to ensure our processes are not only robust but also adaptable to changing market dynamics
- Following the implementation of our new Sourcing Platform, significantly enhancing our digital capabilities, we will strengthen end-to-end operational efficiency further by leveraging advanced analytics, AI-driven insights, and automation
- New Strategic Supplier Management team will facilitate stronger connections with our external partners working to collaboratively identify opportunities in support of further consumer benefit
- Leverage our enhanced commercial pipeline approach to take a more proactive and strategic approach to ensure optimal outcomes are realised and continuity of service maintained
- Proactively identifying and mitigating third-party risks to safeguard the business against potential threats and disruptions. Enhancing business continuity planning, and building greater resilience to withstand external challenges
- Refine our strategy and policies to drive alignment to commercial best practice (ie Government Procurement Policy, Chartered Institute of Procurement and Supply, Government Commercial Organisation)



Security

To ensure that the DCC stays ahead of new developments such as AI and increasing use of cloud-based services, we are focusing on enhancing our existing initiatives and augmenting them with new techniques.

For example, several significant and well publicised incidents involving ransomware attacks in the last year have confirmed the need for continued work to address this. This type of attack is expected to become more challenging as Artificial Intelligence gathers pace. The DCC already has been running a proof-of-concept trial internally to assess viability of AI as both an enabler and an assistance with defence against the growing sophistication of attacks, this will be taken further during 2024/5.

In 2024/25 we will:

1. Further strengthen our strategic initiative to identify threats and provide strong mitigations using the MITRE ATT&CK threat modelling and cyber defence framework
2. Enhance our security assurance reporting with automated linkage to our latest risk tooling to further ensure that we maintain risks within appetite
3. As with previous years we will 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 24 months
5. Invest in our people to ensure that we have the skills needed to secure the digital energy system of the future, including the launching of our new Security Degree Apprenticeship programme in the autumn of 2024

Cyber Fusion Centre

After our Security Operations Centre (SOC) successfully achieved CREST accreditation, we are set for the continued onboarding of security event logs from all parts of the DCC network to provide an essential second set of eyes over the entire DCC ecosystem. This work will be ongoing in 2024 and 2025 as we add existing suppliers and new ones to the single view.

Supply Chain Risk Management

In alignment to our Commercial initiatives the Security team are planning more effective use of assurance assessment and real-time analysis that will integrate additional control effectiveness data into a new improved risk framework to give a more accessible and concise view of risks.

Summary

The imperative is to ensure that the security mission does not remain stationary but evolves to address the upcoming challenges such as AI and in the slightly longer-term Quantum computing. Both risk areas are already being assessed and tested in readiness to ensure the DCC network remains secure and stable.



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 architecture, operations, and assurance

We have built a 24/7 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 a complex digital infrastructure to support one of the most complex smart meter roll-out in the world.

Inspiring workplace

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.

We have recently been recognised in the Inspiring Workplace Awards Top 50 list, ranking 7th. Achieving special recognition in Inclusion; Employee Voice and Purpose & Culture.

"Overall, this was a really inspiring entry. DCC is inspiring in having ambitious goals and making excellent progress in many different areas, which is no mean feat for an organisation that is only 10 years old."

Inspiring Workplaces – Judges' feedback



Measuring performance

We are on the journey to become a more operational and service-oriented organisation, characterised by a focus on network performance and ongoing lifecycle management, underpinned by a culture of customer and consumer centricity.

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

Licence renewal

Ofgem is continuing its review of the regulatory arrangements for the DCC following the conclusion of the current licence in September 2025. In its Phase 1 Decision (published in August 2023) Ofgem outlined the key features that would form the basis of the new regulatory model.

In May 2024, Ofgem launched a further consultation on governance, incentives, and the future of the Switching Service*. Their main positions were:

1. The company Board should be majority independent with an independent Chair
2. The Core Mandatory Business should be conducted on a not-for-profit basis
3. Costs of activities deemed to be sufficiently stable should be subject to an upfront approval by Ofgem via an ex-ante price control or a budget-setting process
4. The operational model will remain primarily outsourced with key contracts procured competitively on the market (decisions made by the Board subject to Licence limitations)
5. DCC's Core Mandatory Business will remain funded by charges on users
6. Consideration should be given to whether the Switching Service should transition to RECCo

We are committed to continue engaging with Ofgem on the detailed design of the Successor Licence.

Governance

A majority independent Board with an independent Chair to minimise potential conflicts of interest. As we do today, ensuring there are a range of skills and expertise across Board members will be key, including risk management, the energy industry, consumers, technology, telecoms and financial management.

Not-for-profit

The DCC's core business should operate on a not-for-profit basis in the successor licence period.

Ex-ante

To effectively transition from ex-post regulation towards ex-ante regulation we believe we need to refresh our cost structure to ensure reporting is easily understood and in line with the services we offer. Given the compressed timescale, in order to deliver a

plan that meets the expectations of our customers and consumers, DCC is seeking prompt confirmation from Ofgem on the proposed timescales.

Role and scope

DCC is supportive of the continued focus on delivery of our Core Mandatory business, the provision of communications and data services to and from smart meters in a secure, economical and coordinated manner. Given the scale and pace of change required across the energy system over the course of the future licence period, it is critical there are mechanisms to enable a controlled and transparent evolution of our role in support of policy objectives. In line with policy and market need, there is further value to be extracted from the smart metering network and DCC's capabilities, and the licence should recognise and enable this, appropriately and cost effectively.

Switching

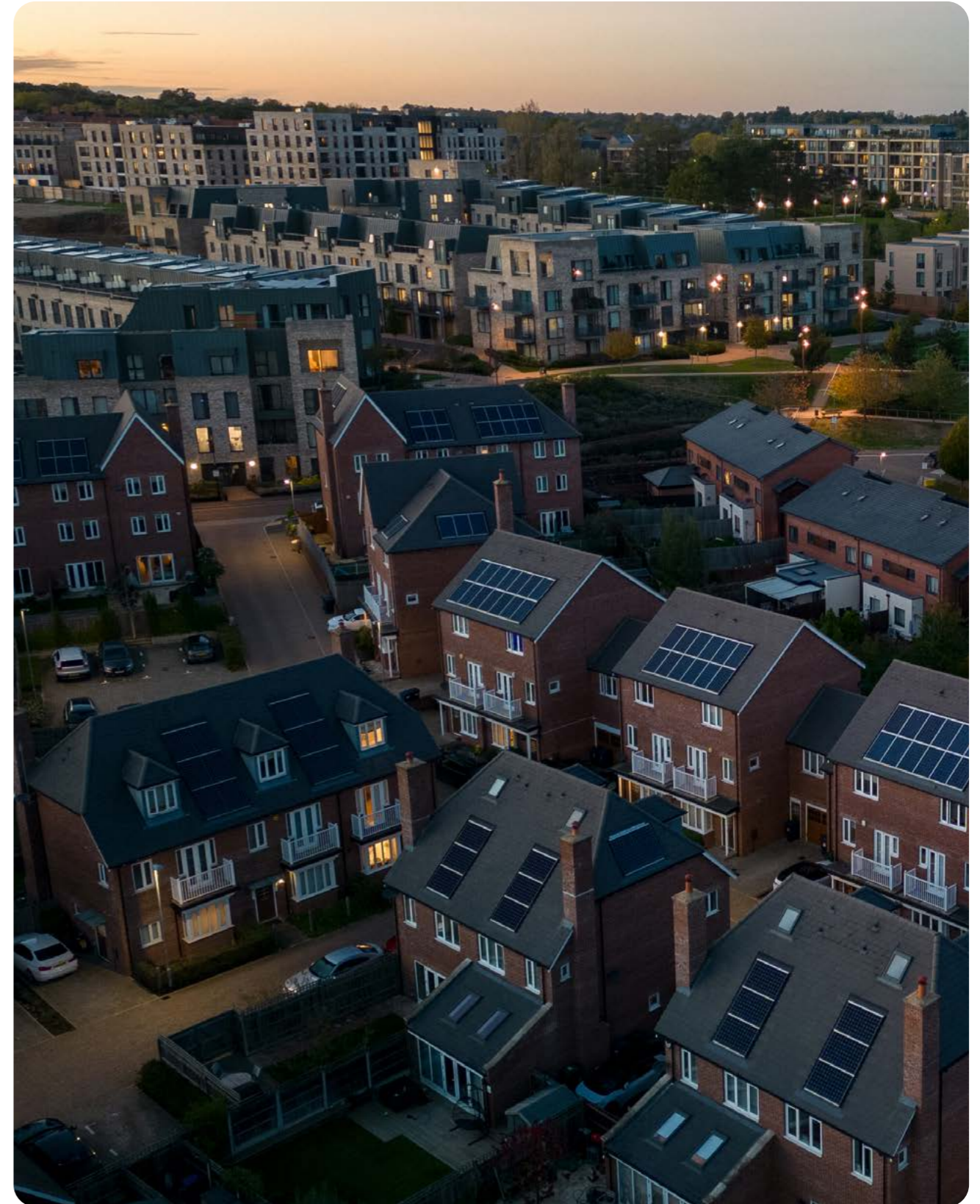
As Ofgem's key delivery partner, the DCC designed and built the Central Switching Service (CSS), which has been in operation since July 2022. Since then, we have processed over 28 million switches. As well as delivering an outstanding level of service, switching benefits from economies of scale where it is delivered alongside smart metering. Continued delivery by DCC leverages operational synergies, reduces disruption, and manages costs in the best interests of consumers.

Business handover

We have prepared a business handover plan that sets out how we would transition from one licence holder to another. Maintaining the stability and continuity of the core service during any transition and supporting the renewal of our supply chain contracts and the transfer of staff to the successor licensee will be paramount.

We are committed to continuing to work with Ofgem as they finalise the details of the extension to the current licence, the structure of the successor licence, and as they design the procurement for the next shareholder.

*All decisions remain subject to Ofgem's final decision



5. Strategic Outcomes

In this section, we have articulated 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.

These outcomes are:



Secure and stable



A responsible and efficient business







Flexible and fast



Right first time



Activity summary

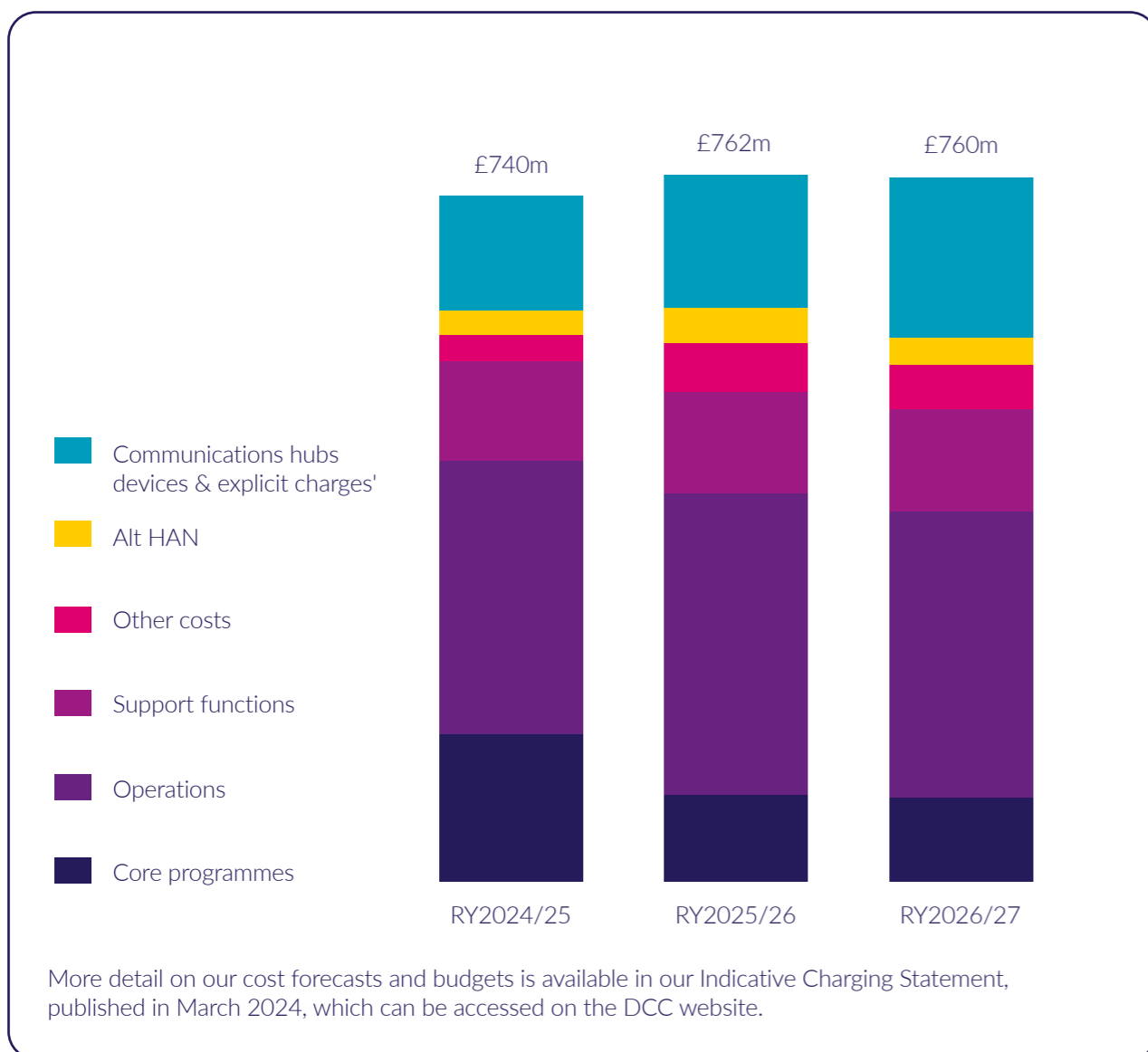
Programmes and Key Initiatives		2024	2025	2026	2027	2028
Secure and stable 	SMETS 1 Enrolment and Adoption	[Progress bar]				
	SMETS1 End of Life	N/A				
	In-life Change	[Progress bar]				Ongoing
	4G Communications Hubs and Networks (CH&N)	[Progress bar]				
	Public Key Infrastructure - Enduring Services (PKI-E)	[Progress bar]				
	Enduring Change of Supplier (ECoS)	[Progress bar]				
	Network Traffic Management (NTM)	[Progress bar]				Ongoing
	Future Connectivity	TBC				
A responsible and efficient business 	Our People Strategy	[Progress bar]				Ongoing
	Cost efficiency	[Progress bar]				Ongoing
Flexible and fast 	Future Service Management (FSM)	[Progress bar]				
	Data Service Provider (DSP) Data Systems	[Progress bar]				[Progress bar]
	Market-wide Half-hourly Settlement (MHHS)	[Progress bar]				
	Supporting new customers	[Progress bar]				Ongoing
	Maximising value from smart metering	[Progress bar]				Ongoing
Right first time 						

DCC total cost summary

As the DCC’s core programmes are delivered and move into live operations, we see spend on operational 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 March 2024. Cost forecasts for further years will be visible in the Charging Statement as required.

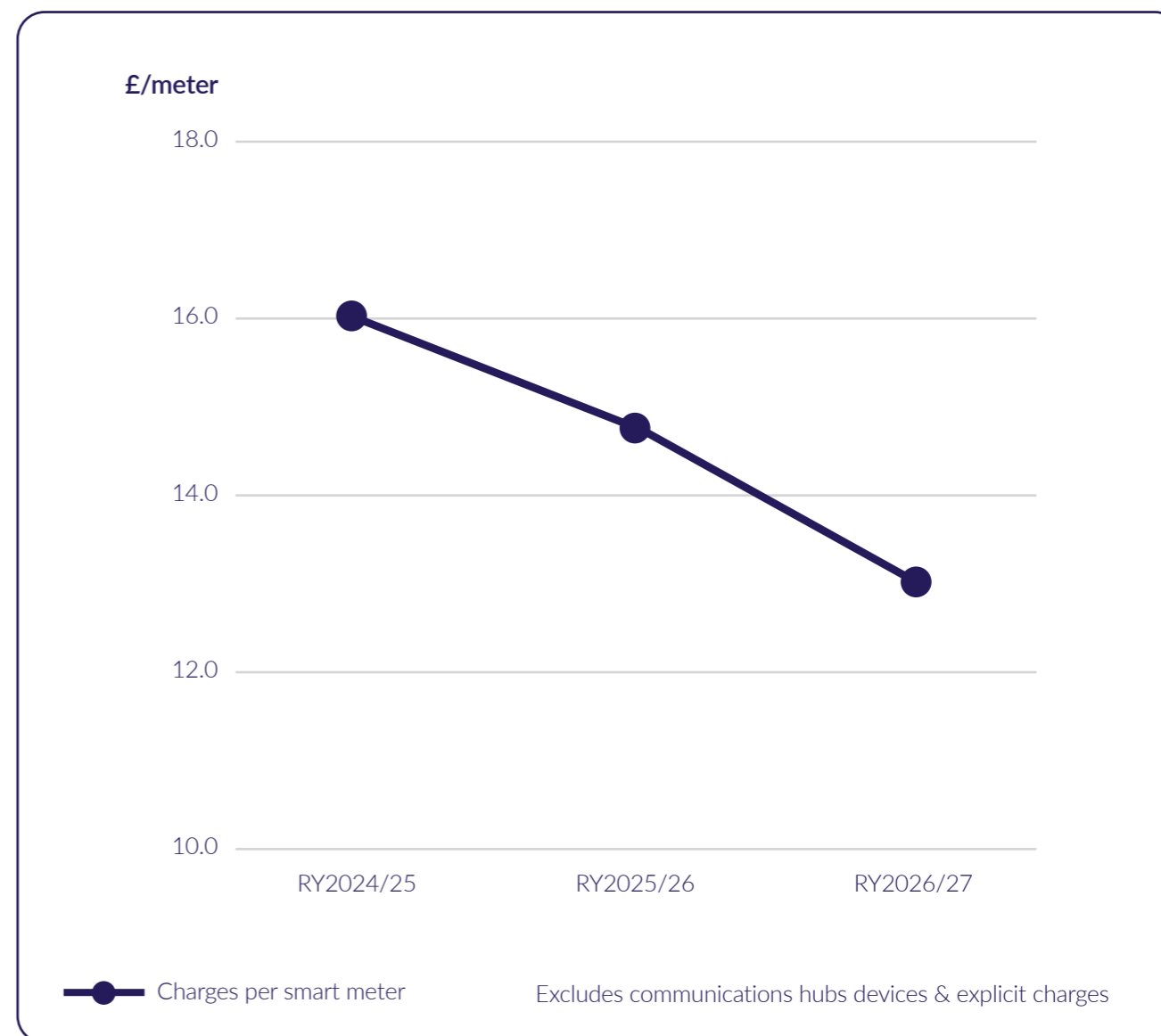
Total cost summary



Delivering value for money to our customers

Cost per meter continues to fall for our customers as the number of connections grows and we focus on driving cost efficiencies across the organisation. Below is the cost per meter over time, based on indicative smart meter roll-out volumes.

Cost per meter over time



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:

- Secure and stable**
- A responsible and efficient business**
- Flexible and fast**
- Right first time**

Lifecycle stage

Which stage of the lifecycle this programme is currently:

Concept to Contract

↓

Contract to Market

↓

Market to Retire

Cost

Indicates programme implementation costs. Cost scale represents:

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

Service family

Which service family this programme belongs to:

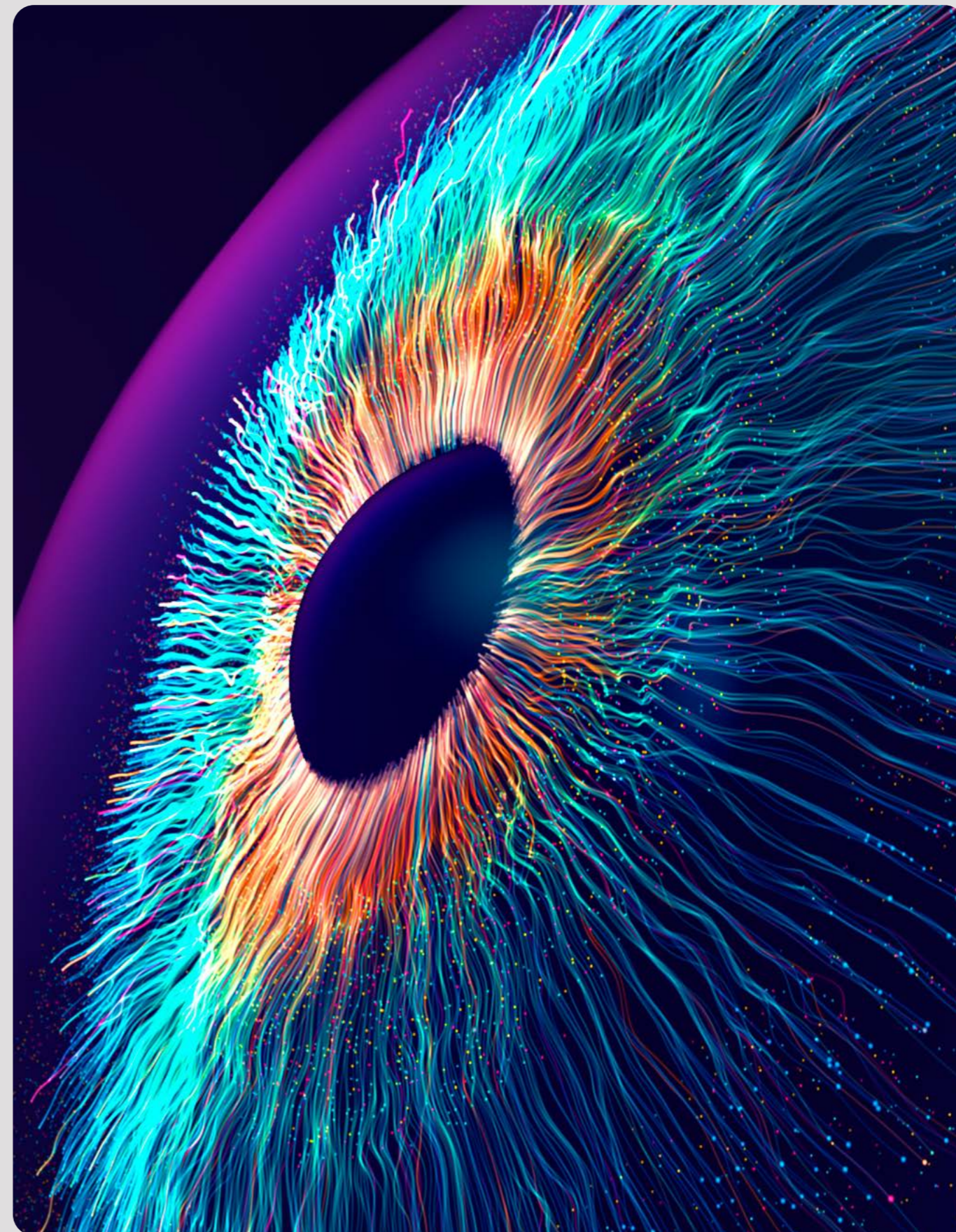
eg Smart Energy / Testing / Data Services

End date

Current timing for programme to completion and handover to enduring operations.

Example:

Outcomes	Service family	Lifecycle stage	Cost	End date
	Smart Energy - SMETS1	Market to Retire	££££	2024





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 33 million premises. Given its increasingly central 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 remains a small proportion of 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 ensure we deliver our mandated business and some key elements of business-as-usual activity.



SMETS1 Enrolment and Adoption

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

Outcomes	Service family	Lifecycle stage	Cost	End date
  	Smart Energy - SMETS1	Market to Retire	£	2024

What is this?

The SMETS1 Enrolment and Adoption Programme is enabling the migration of more than 15 million first-generation SMETS1 smart meters onto the DCC network where they will become fully interoperable between energy suppliers.

The programme is complex and technically challenging, involving multiple hardware and software combinations operating in a live environment. The migration and operation of each cohort has required the deployment and integration of a new platform. All cohort migration capabilities went live between August 2019 to February 2021.

Why is it important?

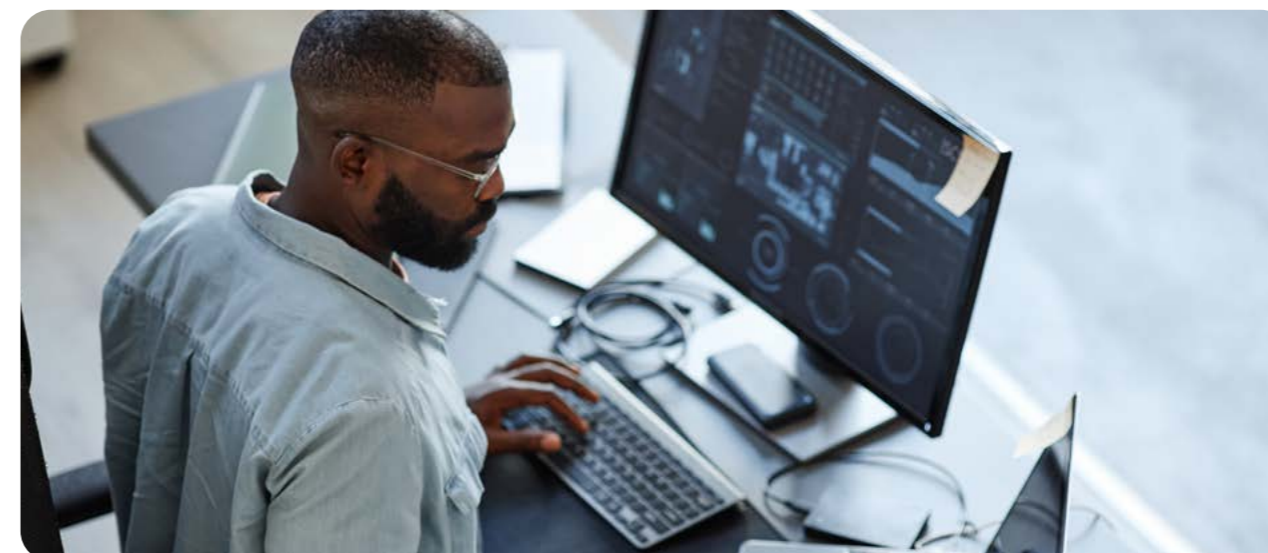
Migration will allow consumers to change energy suppliers without losing smart functionality. The objective is to support competition in the retail market and allow consumers to enjoy the full benefits of products and services which depend on smart metering. Migration also extends the operating life of first-generation metering assets, ensuring value for money and reducing waste.

What's next?

Energy suppliers have a licence enrolment obligation to have taken all reasonable steps to enrol SMETS1 meters onto the DCC network by September 2024 with three months to complete closure activities. We are therefore preparing for the closure of the DCC's Migration Service.



The key activities for SMETS1 in 2024 are:

- 1) Working with our remaining customers to complete migrations of outstanding devices
- 2) Requesting Party Closure for Secure & Final Operating Capability Cohorts once all migrations have completed
- 3) Certificate Rotation in FOC to allow devices to continue to operate to End of Life



SMETS1 End of Life

Planning for the end of life of the SMETS1 service

Outcomes	Service family	Lifecycle stage	Cost	End date
 	Smart Energy - SMETS1	Market to Retire	£	N/A

What is this?

We are planning for the end of life of SMETS1 meters. There are a series of connectivity challenges to overcome over the next nine years. However, there are three overriding factors which have significant implications for the operation and lifespan of SMETS1 meters over the next decade. The combination of these will present a significant challenge to industry and will require an agreed transition approach, overseen by industry committees.

- The continuity of Communication Service Provider contracts
- The 'sunset of 2G' networks in the UK by 2033 at the latest
- Ageing infrastructure and contract expiry challenges

This programme is aiming to provide industry the support it needs in managing our commercial and contractual positions with key service providers and ensure smart meter functionality during the end of life transition.

DCC's role is to understand if the contractual position of the service needs to be assessed to support industry in the swap-out.

Following the switch off in February 2024 of one 3G network, there was no impact to the SMETS1 service. DCC will continue to monitor the service during future switch offs.

Why is it important?

SMETS1 service provides smart connectivity to circa 8.9m premises.

The SMETS1 service is underpinned by 11 major contracts which will expire between now and 2033.

The challenge of this transition is significant. We have a strategy in place to ensure continuity of smart meter functionality during the end of life of SMETS1 meters.

What's next?

The DCC is producing business cases to support the procurement needs of key SMETS1 contracts. DCC is working with the Communications Transition Group and other industry committees to assure the approach has full engagement with industry and that key risks are mitigated.



In-life Change

An ongoing programme of maintenance and refresh for key architecture components to ensure security and stability of the network

Outcomes	Service family	Lifecycle stage	Cost	End date
	Various	Market to Retire	£££	Ongoing

What is this?

In November 2023, we created a dedicated In-life Change team in Operations to manage and coordinate the enduring delivery of all operational changes under the Market to Retire lifecycle stage.

The primary objective of this team is to maintain the stability, performance and security of our smart metering network, as well as deliver small minor enhancements across our existing products and services, including SEC and REC modifications, in line with our SEC and REC obligations.

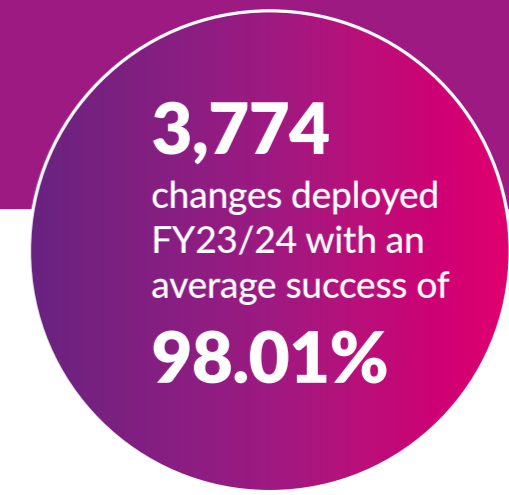
We are seeing significant success in delivering change:

- 438 changes completed in March 2024 with a success rate of 97.95%
- 3,774 changes deployed FY23/24 with an average success of 98.01%

Why is it important?

Each release delivers different benefits, but some of those deployed over the course of 2023 included:

- Maintained stability, security, and performance of the network
- Reduced costs and enhanced customer experience via 'over-the-air' (OTA) functionality and security features
- Improved performance at peak loads
- Reduced number of consumer meters not functioning correctly
- Improved the logging and understanding of Alert performance coming from communications hubs, allowing DCC to improve its service to customers
- Improved accuracy and speed of switching service for consumers



What's next?

Below, we have set out the pipeline through to 2025 and are continuously reviewing this schedule.

Service Family		Type of Change	Description
Smart Energy	SMETS1	Maintenance	Completion of the remaining DCO service platform upgrades. Targeted for Q4 2024
		SEC Modifications	Capacity enhancements in readiness for Market Half Hourly capability being launched in April 2025
	SMETS2	SEC Modifications	Investment in network infrastructure in the North Southbound traffic prioritisation
		Firmware Upgrade	Second phase of our DSP maintenance programme. Targeted Q1 2025
	Connectivity	Firmware Upgrade	Completion of the GBCS 4.1 roll-out to EDMI communications hubs
Switching	REC Modifications	First release to go live since the launch of the CSS. Introduction of the CSS Refresh Functionality	
Enabling Technical Services	Meter Data Management	SEC Modifications	Introduction of new user role – Meter Data Retrieval (MDR) to support the MHHS Programme

Alongside delivering all the technical product improvements to our network and maintaining its performance and stability, we have also embarked on a series of incremental process improvements to ensure we improve the way we deliver change consistently for our customers. These improvements remove inefficiency and rework, deliver value for money through better planning and forecasting, and create a delivery model that is scalable and more flexible for new changes that will be delivered in 2025, such as follow on activity after the 4G communications hubs have been delivered.

4G Communications Hubs and Networks (CH&N)

Design and procurement of next-generation communications hubs and networks

Outcomes



Service family

Smart Energy - Connectivity

Lifecycle stage

Contract to Market

Cost



End date

2025

What is this?

The CH&N programme is geared towards defining and delivering future-proof CH&N in the Central and South regions with an efficient supply chain and a targeted longevity of at least 15 years.

To ensure the longevity of smart functionality, DCC is developing a solution to allow for the introduction of new communications hubs that use the 4G network.

In procuring the contracts to implement the 4G CH&N programme, DCC has for the first time, established a disaggregated supply chain made up of six component entities to improve visibility, control, and agility in providing smart meter connectivity.

Why is it important?

The smart meter network in the Central and South regions is currently supported by 2G and 3G cellular networks. This technology is now being phased out by all UK networks.

To help mitigate the 2G/3G sunset, provide secure ongoing connectivity, and maximise the longevity of smart meter devices, this programme ensures that smart metering can continue to provide an efficient and effective service for energy providers and consumers post closure of the 2G and 3G networks. This is through the introduction of 4G-supported services.

In delivering these outcomes, the 4G CH&N programme will provide updated technologies and deliver a service that is sufficiently flexible to allow for future change while minimising the impact of change on DCC's customers and consumers. A disaggregated model also allows DCC to drive greater efficiency in delivering our services, and these cost savings will be passed on to our customers.

DCC continues to work proactively with its network providers to ensure a smooth transition through the 3G switch off. Phase 1 of this transition has been completed successfully with phase 2 being planned for 2025.

What's next?

A live pilot will be running from the end of 2024 and volume manufacture and installation of 4G communications hubs from mid-2025.

Over the course of 2024, we will be working closely with customers to ensure both DCC and our service users are prepared for go live, ensuring a smooth transition to new ways of working.



Public Key Infrastructure - Enduring Services (PKI-E)

Provides cryptographic services to the smart metering infrastructure to ensure security

Outcomes	Service family	Lifecycle stage	Cost	End date
	Enabling Technical Services- Privacy and Security	Concept to Contract	£ £	2026

What is this?

The Trusted Service Provider (TSP) PKIs provide cryptographic services to the smart metering infrastructure. This programme is introducing an enduring public key infrastructure platform.

The new solution will be delivered with minimal impact to our customers and DCC's live services and programmes.

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?

TSP provides the fundamental public key infrastructure 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?

The programme is currently in an advanced phase of procurement with a goal of awarding contracts by Q3 2024 and entering the Design phase by Q4 2024. The planned go-live date is Q1 2026.



Enduring Change of Supplier (ECoS)

Enhance security when consumers are switching from one energy supplier to another

Outcomes	Service family	Lifecycle stage	Cost	End date
	Enabling Technical Services- Privacy and Security	Market to Retire	£ £	2024

What is this?

Ensuring that consumers can change energy suppliers 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 DESNZ to deliver an ECoS solution, and the corresponding Service Provider procurement process was concluded in 2021.

Remote Transitional Change of Supplier (TCoS) to ECoS certificate migration successfully started in July 2023, and since then, over 29 million TCoS devices have been successfully migrated to the ECoS solution and corresponding Service Provider.

Why is it important?

ECoS is a mandated programme in accordance with Condition 13A.1 of DCC's licence. The DCC is directed to establish efficient, economical, coordinated, and enduring arrangements for the changing of device security credentials on or following the completion of a supplier transfer in respect of premises at which there is a smart metering system.

What's next?

ECoS went live in summer 2023 and the activities below will be completed for full programme closure:

- In Q2 2024, portability of keys will be enabled, and the security keys associated with the TCoS service provider will be migrated to the ECoS service provider
- At the end of Q3 2024, the TCoS service provider will be shut down, and the security keys it once held will be destroyed
- At the end of Q4 2024, new manufacturing certificates will be made available to meter manufacturers to enable the manufacturing of new devices with ECoS credentials



Network Traffic Management (NTM)

Support the efficient management of the network, ensuring we have capacity available in the right place and at the right time

Outcomes Service family: Various Lifecycle stage: Market to Retire Cost: £ End date: Ongoing

What is this?

Significant growth in message volume carried over the smart metering network and changing customer expectations, has driven a need for a single strategic approach to NTM.

Network traffic growth is driven by several factors. Growth in the number of devices on the network from the continued smart meter roll-out, completion of the SMETS1 migrations, and increased usage of the network from new use cases that include growing use by DNOs for better awareness of power usage patterns, 'Other Users' for consumer consumption advice, and MHHS.

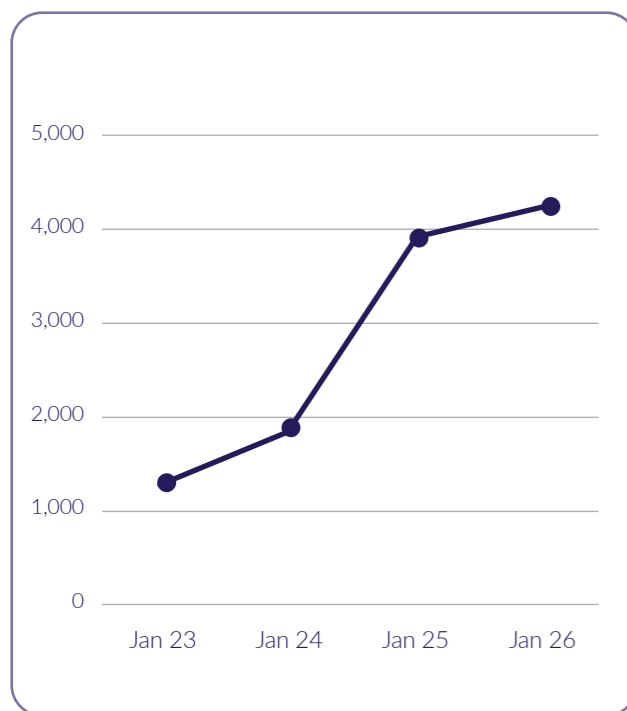
The NTM Portfolio will focus on the intelligent use of capacity, to minimise investment while optimising

performance, and it will pragmatically drive several collective initiatives working collaboratively with customers.

The initiatives will not be solely technical. We will proactively identify opportunities within the customer, operational, process, regulatory, and commercial areas of the business, striving to be data led and benefits driven.

We are also strengthening the maturity of our new operating model to improve engagement and insights with our customers, industry and programme change in a proactive manner. As part of this, we welcome our customers' continued support to help understand their demand profiles.

DSP SRV Volume Forecast [Millions]



DCC will work on the identification of potential issues and improvements, define problem statements, and work through an evaluation with a set of criteria to assess overall benefits and value.

The criteria will include:

- Impact or change to customers
- Complexity of the solution
- Timing of delivery
- Total cost to deploy and manage in-life
- Realisable value
- Benefits
- Regional or national opportunity
- System-level impact

Why is it important?

DCC needs to ensure it has a robust strategy in place to ensure we make the right strategic choices to manage the network. This is important for continued and reliable performance, optimising capacity investment and for broader public benefit given the growing number of use cases for the network.

Without intervention, the performance risk to on-time message delivery will grow. An end-to-end strategic approach is therefore essential to ensure timely delivery of solutions that offer value for money and avoid potentially costly changes implemented in isolation. The overarching NTM objective is to readily demonstrate value realisation and ensure that there is a clear measurable return for DCC customers and ultimately consumers.

What's next?

There are currently 15 initiatives identified and tracked by the NTM portfolio, in four different stages that will be progressed dependent on economic and service viability:

- Stage 1:** Candidate and Feasibility (7)
- Stage 2:** Requirements and Solution (3)
- Stage 3:** Implementation (2)
- Stage 4:** Deployed and Value Realisation (3)

Quarterly updates to customers are planned for these NTM initiatives through TABASC and OPSG. In the quarterly sessions, we will provide quantitative data to validate approach.

We are also making the following operational changes:

Demand Forecast Tooling using machine learning and the ingestion of existing usage data to increase efficiency and reduce cycle time of the production of the demand forecast. This tooling is currently in proof of concept, and we hope to deploy into production this year, enabling DCC to provide sensitivity analysis and scenario planning across the very large data set and parameters required.

Capacity Management Assurance to undertake a detailed review and gap analysis of future capacity plans and highlight proposed interventions required to deliver the demand forecast. A clear outcome is for DCC and our suppliers to have the confidence that robust plans are in place, in the most efficient manner to deliver the required capacity and services dependent upon it.



Future Connectivity

Sustainable smart metering connectivity for the future

Outcomes



Service family

Smart Energy - Connectivity

Lifecycle stage

Concept to Contract

Cost



End date

TBC

What is this?

DCC is continuously reviewing the future needs of the network and technology requirements to facilitate this. Holistically, this has shown there are two areas to investigate:

- Future Connectivity Strategy
- Connectivity for consumers in 'no WAN' areas (mandated activity)

Future Connectivity Strategy

Usage of the DCC network is not static and has already started to change significantly over the past year as network operators scale up their use of data, and also as new customers start to access smart meter data and offer new propositions and services. We expect that network usage will continue to grow and develop further in future as both the smart meter roll-out completes and as the number, needs, and usage profile of different DCC customer groups continues to evolve.

In parallel, communications technologies and infrastructure reach their limitations or become obsolete

over time and need replacement. We are already seeing an example of this with the 2G/3G network sunset decision made by DCMS, and the 4G network programme and replacement activity. In addition, new network technologies become available or are improved, for example, the 4G rural initiative, and also the UK gigabit fibre roll-out. Through DCC initiative, we are actively exploring future connectivity solutions for both the North and Central/South regions to either continue, complement and/or replace existing connectivity technologies. This will enable DCC to future-proof our ability to deliver mandated business.

Connectivity for consumers in 'no WAN' areas

The Government is committed to ensuring every home and small business in the UK is eligible for, and can benefit from, smart meters.

Today, the DCC is contracted to cover 99.3% of the Great Britain, leaving a gap of 0.7% with no network coverage ('no WAN'). Consumers in no WAN areas are not currently able to have a smart meter installed.

Why is it important?

Future Connectivity

DCC must ensure the network meets customer needs for performance and capacity in all regions, as the smart meter roll-out achieves completion and as usage volumes and profile continue to evolve in the future. We must also seek to mitigate the operational and cost impacts of change for our customers, including the costs of meter or communications hubs replacement.

Connectivity for consumers in 'no WAN' areas

As the smart meter roll-out continues to progress towards completion, it is increasingly important to find solutions to ensure everyone can participate in a digital energy system.

What's next?

Future Connectivity

We continue to monitor and evaluate all options to ensure that we can provide our customers with the best and most economic long-term solutions for the DCC network. This includes evaluating the options to integrate fibre connectivity into the DCC network, as well as working closely with the Government on initiatives like the Smart Meter Energy Data Repository (SEDR)

Connectivity for consumers in 'no WAN' areas

The DCC is working closely with the Government and industry on the Government-led 'CADg' initiative to enable connectivity in no WAN areas.





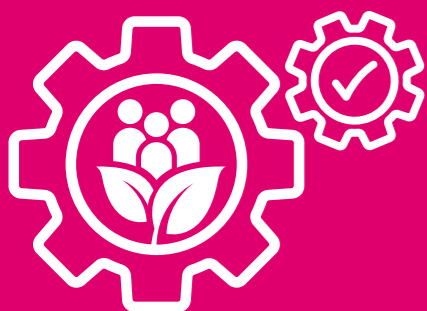
A responsible and efficient business

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.

As a licensed monopoly, 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 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 business as usual (BAU) activity which enables us to deliver this outcome.



Responsible Business Framework

The DCC is a purpose-led, responsible business that is focused on serving its customer community and held to high standards of performance and value for money.

In 2023, DCC launched its Responsible Business Framework, which draws together an array of environmental and social aspects of how we work, based on the principles of 'Environmental, Social and Governance', into a coherent whole.

2023 was focused on data gathering and assessments to identify the greatest opportunities for impact.

Looking ahead, we will continue to focus on delivering positive impact through responsible, inclusive, and sustainable practices. We will continue to build strong foundations for the framework while balancing this with initiatives to deliver impact. We are looking forward to engaging our value chain and collaborating with our partners to strengthen our collective efforts.

We will:

- Empower our employees to act responsibly while increasing our capacity to deliver positive impact through increased employee training and engagement
- Decarbonise our operations progressively and identify opportunities to decarbonise the network in collaboration with our partners to help deliver Britain's net zero targets
- Encourage greater diversity at all levels and create an inclusive environment that attracts the best talent to support our company goals
- Harness the talent and desire to help at DCC to give back to local communities
- Deliver responsible business initiatives in the most efficient manner possible, with a continued focus on delivering value for money for our customers



Responsible

Be accountable for delivering our purpose to the highest standard.

- Operate to the highest security standards as defined by Critical National Infrastructure (CNI)
- Deliver value for money with a focus on consumer benefit
- Hold ourselves and our partners to the highest levels of integrity, governance and performance
- Leverage our technology for public good



Inclusive

Act with integrity and deliver for customers, consumers and employees.

- Enable all eligible homes and businesses to get a smart meter
- Use DCC skills to benefit local communities
- Build a diverse and inclusive workforce through our diversity and inclusion strategy
- Promote good health and wellbeing to employees



Sustainable

Make a difference by reducing our impact on the environment.

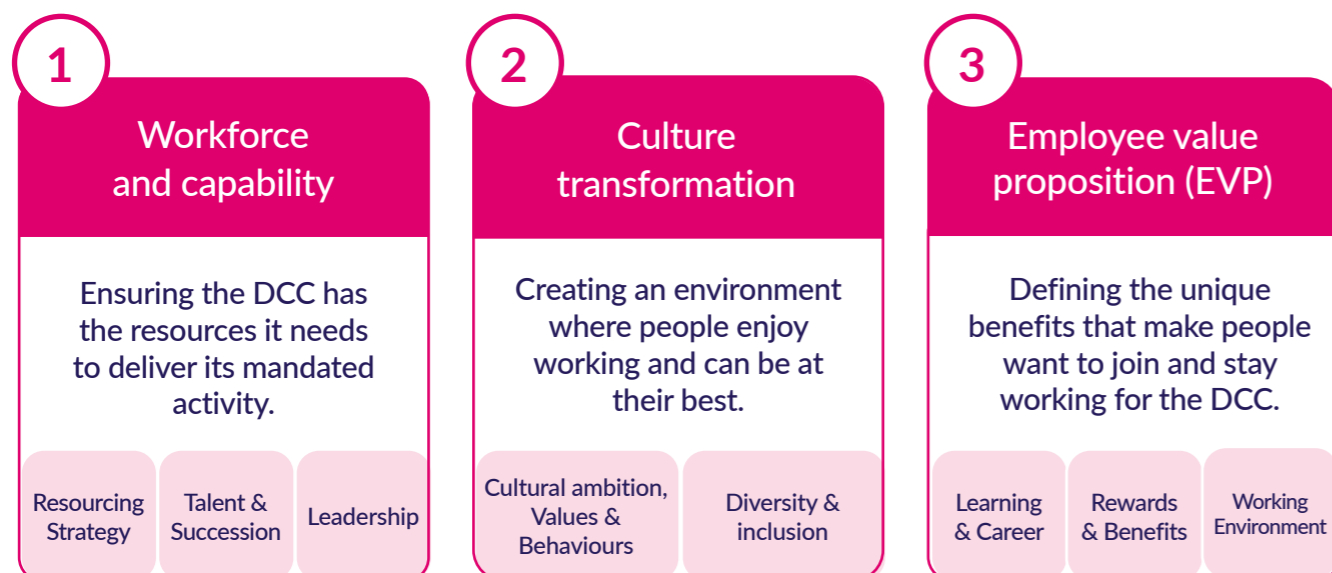
- Support the roll-out of smart meters GB-wide
- Act to reduce our scope 1-3 carbon emissions
- Incorporate circular design principles into the approach for smart metering
- Provide employees with sustainability training

Our People Strategy

The delivery of our strategy is achieved through three key people pillars which will be our enduring focus for the future.

These three pillars prioritise focus on – Workforce and Capability, Culture Transformation, and Employee Value Proposition. We aim to:

- Build a workforce that is not only skilled and capable to deliver on our mandate but also
- Ensure a stable and engaged workforce aligned with the strategic priorities of our organisation



1 Workforce and capability

We continue to refine our workforce strategy, which will ensure that we have access to the right capability at the right time. By ensuring we have the right talent and nurturing their skills, we aim to build a workforce that is skilled, capable and efficient.

Investment in leadership development remains, and our 'Smart Leader' Leadership programme, launched in July 2023 and concluded in March 2024, exemplifies this commitment. Aligned closely with our organisational values and behaviours, this programme has garnered positive engagement and developed a foundation for leadership excellence.

This year, we are in the process of capturing and validating the skills and competencies of all colleagues across DCC. This ongoing initiative offers immediate visibility into our workforce's skills and experience and lays the groundwork for conducting strategic capability planning to meet our future organisational needs.

In support of our talent agenda, we have launched a new intake of Degree Apprenticeships in areas of core importance to DCC and where securing external talent has historically been challenging: Security, Enterprise IT and Architecture. This underscores our unwavering commitment to growing future talent, investing in STEM opportunities and the promotion of a culture of continuous learning and growth.

2 Culture transformation

Since 2022, our focus on fostering a positive and inclusive organisational culture has yielded significant progress, driven by a new approach to colleague engagement and a commitment to diversity, equity, and inclusion. Prioritising employee feedback has sparked a positive mindset shift among leaders, driving enhanced engagement throughout the organisation, as evidenced in our recent employee opinion survey. This saw the Employee Net Promoter Score (eNPS) increase by 18 points during 2023/4 to +14. During this year, voluntary attrition has also declined from 16% to 13% reinforcing the importance of our culture strategy on the stability of the workforce.

Efforts to engage leadership at all levels have been intensified through the implementation of a robust Leadership Engagement Network. This framework facilitates information sharing, fostering alignment and cohesion across diverse leadership groups.

The adoption of a hybrid work policy has prompted a new era of connectivity and engagement, revitalising office dynamics and bolstering organisational cohesion. Moreover, prioritising wellbeing for all colleagues underscores our commitment to their holistic development, promoting awareness, and providing access to development resources.

Substantial strides in advancing our Diversity & Inclusion (D&I) agenda reflect our dedication to cultivating an inclusive workplace culture. We continue to perform well relative to comparable organisations in our sector, with 37% of employees being female and 28% BAME.

Integration of inclusion targets into corporate objectives, supported by a new diversity and inclusion plan for 2024 and beyond, signifies a pivotal step forward in addressing key focus areas and fostering a more diverse and inclusive future.

Our next steps include progressing our relaunched D&I Forum, promoting education and awareness, updating policies and processes to create an increasingly inclusive environment, and working with our supply chain to promote accountability across our wider network.

Our significant progress in this space, was recognised in May 2024 when DCC placed 7th in the "Inspiring Workplace Awards" recognising our commitment to workplace culture, diversity and inclusion and employee communications. This award is important not only as recognition for the commitment to our people agenda, but also in attracting a new wave of talent to the organisation.

3 Employee Value Proposition (EVP)

This year we will be launching a revitalised EVP. This refreshed EVP, tailored to resonate with both prospective and current employees, showcases the unique proposition of the DCC employee experience. Central to our EVP is a renewed focus on our strengths and distinctive attributes, setting us apart in the competitive talent marketplace and attracting the best talent to DCC.



Cost efficiency

DCC continues to mature 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.

Last year, following our cost benchmarking exercise, we focused on delivering short-term cost efficiency opportunities. This year, we will focus on driving cost efficiency through automation, contract management, and optimising resources, which will include both short-term opportunities and mid-to-long-term enduring efficiencies. We have identified over 50 initiatives to support this, and we are on track to deliver £30 million of enduring cost efficiencies over the three-year period (FY23/24 to FY25/26).

We have a robust process of capturing cost efficiency initiatives that are validated, tracked, reported internally, and contribute to our strategic and corporate objectives. This reinforces our focus on value for money and being a responsible and efficient business.



Charging review

What is this?

DCC is reviewing its charging policy in line with SEC Modification DP218. Frontier Economics has been appointed to support analysis around charging options and distributional impacts.

Why is it important?

DCC's current charging methodology has not substantively changed since it was first established ten years ago. As the roll-out progressed, it was always envisaged that DCC would review its charging model. DCC is now witnessing a shift in how its network is being used and the customer groups driving demand. The review of DCC charging will look at how a sustainable charging framework can be delivered.

What's next?

DCC aims to consult industry and all other interested parties over the course of 2024 on the main options for reforming charging. A Request for Information was published in April 2024 to gather a wide range of perspectives on the possible merits and challenges associated with each of the potential models.

A second stage consultation will commence in the autumn of 2024 to narrow down the possible options.





Flexible and fast

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



Future Service Management (FSM)

Upgrading our service management system to drive an improved customer experience

Outcomes



Service family

Enabling Operational Services - Network Management

Lifecycle stage

Concept to Contract

Cost



End date

2026

What is this?

The FSM programme will replace the existing DCC Service Management System (DSMS) with a modern, secure service management system that is easy to maintain and meets the performance obligations under the Smart Energy Code (SEC).

What's next?

DCC is currently progressing the competitive procurement of the new capability, aiming for selection of a preferred bidder in July 2024 and a contract award in September 2024. DCC will then work with this new Service Provider to conduct design, build, and test activities with a commissioning date of October 2025.

Why is it important?

DSMS is a critical part of the DCC's infrastructure, which is used to track and resolve issues across the smart meter network. Customers can request DCC services, raise incidents, review service audit trails, check downtime, and access a wider range of other reporting and diagnostics information through the Self-Service Interface.



Data Service Provider (DSP) Data Systems

Design and reprocurement of the Data Services platform to drive reliability, security and flexibility

Outcomes



Service family

Enabling Technical Services - Meter Data Management

Lifecycle stage

Concept to Contract

Cost

£££

End date

2027

What is this?

The DSP sits at the heart of the smart metering infrastructure, providing data services that connect energy suppliers to devices at their consumers' premises.

In simple terms, the DSP Data System is a central facility that controls the flow of messages to and from smart metering equipment, with customers (eg energy suppliers, network operators, and 'Other Users') communicating via these central DSP facilities. These messages enable critical functions to take place, such as prepayment meter top-up, and allows for the collection of data needed for energy supplier billing, settlement, or other industry-wide innovative purposes.

DCC currently has a single hub contract with a data services provider who operates these central facilities, and this contract expires in October 2024. The DSP programme will ensure continuity of service beyond the lifetime of the existing contract, making sure any change is managed effectively to minimise risk. It will also provide an opportunity for technical redesign and improvement, where necessary.

Why is it important?

As a regulated business, the DCC is required to ensure the maintenance and continuity of critical services, while 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 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 reuse of the network for new services.

Specifically, the programme will provide the following benefits:

- Meet customer needs including improved performance and reduced service 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 the new feature development
- Enable increased customer flexibility, reduced cost, and service innovation
- Maintain continuity of service and minimise transition risk

What's next?

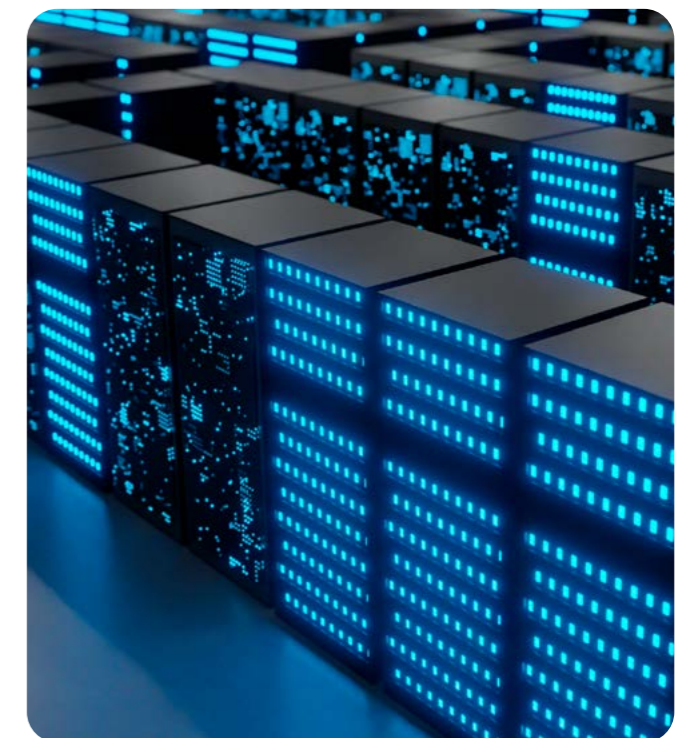
A preferred option for the DSP Core Services procurement was agreed with customers and stakeholders in December 2023 enabling the issue of the Core Services Provision Invitation to Tender. The procurement is underway, and contracts are planned to be signed by October 2024.

Further to this, a preferred option for the procurement of the Systems Integrator to support DSP was agreed with customers and stakeholders in April 2024 enabling the issue of the Systems Integrator Invitation to Tender. This procurement is also targeting completion by October 2024.

A forward look post-2024:

- Design and build phase (including Pre-Integration Testing) then runs to January 2026
- Test and sign off phase (including System Integration Testing and User Integration Testing) runs from January 2026 to October 2026, with DSP minimum viable product available October 2026
- Migration runs from October 2026 to October 2027
- Technical go-live is October 2026
- Fully operational with all meters migrated is planned for October 2027

The existing contract was extended in March 2024 which ensures a rolling contract in place for the next four years (starting in October 2024) to complete the programme. Further time is available (if required) to complete the migration to the new DSP. Current plans are that the solution is fully operational in October 2027.



Market-wide Half-hourly Settlement (MHHS)

DCC is supporting the industry wide MHHS programme

Outcomes



Service family

Various

Lifecycle stage

Contract to Market

Cost



End date

2025

What is this?

MHHS is an industry-wide programme, of which DCC is delivering a series of capabilities.

Electricity settlements and trading works are 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 contribute to a more cost-effective electricity system, with more flexible use of energy and lower consumer bills. This opportunity has been made possible by the roll-out of smart meters which can capture half-hourly data and transmit it back to the supplier.

DCC supports industry in the delivery of MHHS, specifically the delivery of the following capabilities:

- Creation of the Meter Data Retriever role, and associated SEC & REC Changes
- Additional network management for increased network traffic associated with MHHS
- End-to-end System Integration Testing (SIT) Functional Testing, and migration of suppliers to MHHS

Why is it important?

Through MHHS, energy suppliers will be exposed to the exact half-hourly costs of customer consumption patterns. This will encourage electricity suppliers to offer time of use tariffs, which in turn will incentivise consumers to shift their consumption to times when energy is cheap or to support protecting the electricity networks by managing levels of demand.

What's next?

End-to-end SIT Functional Testing commenced in March 2024 and is due to run for 12 months, ensuring that the full industry-wide solution is in place for the start of migration to MHHS in April 2025.

Alongside the testing, DCC is working with suppliers on the delivery of the increased capacity required, to be in place ahead of the start of industry migration in April 2025.



Supporting new customers

Following an increasing focus within GB on the decarbonisation of homes and small businesses, accompanied by the rising penetration of smart metering nationally, DCC is witnessing rising interest in its user roles. This interest comes from a range of organisations in both the commercial and non-commercial sectors and across a range of industries. DCC has a duty to ensure its network can service incoming demand and unlock the wider benefits that smart metering brings. To ensure it is best placed to do this, we are making improvements across a range of areas, including our user onboarding journey and our technical capabilities.

Enhance the onboarding process

What is this?

The DCC network is attracting an increasing number of potential new users. As outlined in an independent report for DESNZ, and a DCC commissioned analysis, several pain points in the existing journey were established. These result in a poor customer experience - too long, too complex and in some cases too onerous, especially for small and medium sized enterprises. This results in a poor customer experience, which is likely to deter potential new customers from using DCC services.

This project seeks to address these issues by improving the onboarding journey through the implementation of better processes and systems. This includes the following:

- Introducing a dedicated onboarding manager to coordinate the onboarding process for prospective users and act as a dedicated go-to resource
- Simplify existing processes and revise and update collateral - reducing the time to onboard
- Proactively offer services, such as DCC Boxed and Testing support, to reduce the time required for users to develop interfaces to DCC

Why is it important?

This is important because to get to net zero, we need to facilitate access to the smart metering network in a secure, controlled and coordinated manner. Improving the onboarding journey will help this by reducing complexity, accelerating timelines, and increasing efficiency.

What's next?

The project will provide an initial business case setting out the available options to simplify, automate, and digitise the DCC's on-and-off boarding journeys.

Improvements will be delivered in phases, with incremental improvements to processes delivered over the course of the year.

Further significant changes subject to further assessment and business case justification to be developed over the course of 2024.



Case studies

New DCC Customers

Unify Energy – non-domestic retailer user

Unify Energy went live on the DCC network as a non-domestic energy retailer in December 2023, however it has been supplying energy since 2016. Unify Energy is a Manchester based energy supplier with a national portfolio of business customers specialising in supplying green energy, bespoke billing and managing multi-tenanted energy supply. As a core user, Unify Energy, will be using the DCC network to, amongst other things, manage billing and optimise demand to innovative tariffs.

Brookfield Utilities UK (BUUK) – independent distribution network operator (iDNO) user

BUUK has become the first iDNO user of the DCC network. BUUK, as a leading multi-utility provider for new-build properties, has a range of innovative, low carbon solutions designed to meet the upcoming Future Homes Standard. By utilising DCC technology, BUUK can deliver comprehensive end-to-end services to property developers, including low-carbon heating networks. This enables BUUK to address network outages while enhancing its capacity to provide improved network management services promptly and precisely for customers.

New DCC Services

DCC has worked to improve its testing service offer to the market, building on existing and new capabilities to serve a range of new use cases.

Testing Automation Framework (TAF)

DCC's TAF service will go live shortly and will use robotics to support testing either in live production on the DCC network or via DCC Boxed emulation testing. Robotics support a wide range of use cases, including accelerated lifetime testing of new devices.

DCC Boxed Emulation Testing

Leveraging DCC's "Boxed" product, DCC has been able to provide remote testing services for organisations looking to test new products, supporting test and learn environments outside of the live DCC network. Late last year, using Boxed Emulation testing carried out at its secure Brabazon facility, we were able to support Green Energy Options in comprehensively testing its innovative new SeeZero integrated Prepayment Meter Interface Device, Consumer Access Device, and Home Energy Management System which offers a range of new functionality that will unlock smart energy services for households and support energy suppliers in reducing household energy costs and carbon emissions.



Maximising value from smart metering

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.

Platform for policy implementation and market 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 supporting our customers and wider stakeholders to explore how the end to-end system and its features might be used to facilitate the delivery of Government policy objectives. Since our 2023 Business and Development Plan was published, activity in several policy areas has progressed. Significant industry initiatives such as the MHHS programme are continuing to advance and provide the foundation for the next wave of energy system propositions such as time of use tariffs. In addition, we have continued to support the development of the Government's proposals for 'Common Systems' for cyber security including Public Key Infrastructure and Anomaly Detection. We also responded to several policy proposals on digitalisation and consumer consent, leveraging lessons learnt from the smart metering programme to support decision making.

We will also continue to participate in several Government-funded innovation competitions, particularly under the Flexibility Innovation Programme. In parallel, DCC's own data access initiative, termed 'Data for Good' seeks to increase access to smart metering data, particularly for public good. DCC and Energy Systems Catapult (ESC) published 'Data for Good: Smart Meter Data Access' with proposals to maximise the public interest benefit of smart meter data.

Following on from the paper's recommendation, DCC is working to provide controlled access to anonymised and aggregated smart meter system to certain organisations with Ofgem's approval and supplier support. These organisations, including local authorities and academia, will use the data to develop further methods to identify and support households at risk of fuel poverty.

We continue to support opportunities to help our stakeholders and industry understand the potential of the system in contributing to key policy priorities and the viability of doing so, while remaining cognisant of the absolute priority of focusing on our mandated obligations. A summary of the key policy areas we are supporting includes:

Vulnerable consumers in particular fuel poverty



Following successful participation in the Modernising Energy Data Applications competition, we are continuing to work to provide appropriate access to smart system data at an aggregated level to a wider group of organisations to enable further support services to those at risk of fuel poverty

The potential for smart meter data to help identify those at risk or in fuel poverty is increasingly recognised as a significant opportunity by industry, with both the Committee on Fuel Poverty and Citizens Advice highlighting its potential

Timescales:

- Ofgem 'Permitted Purpose' granted and valid to August 2025
- Anonymised smart meter system data sets to be provided monthly for the same period
- DCC is a project partner in the Strategic Innovation Fund (SIF) project Vulnerability Identification Via Informative Data (VIVID), which utilises anonymised smart meter system data to inform fuel poverty modelling

Flexibility



Continuing to support the DESNZ with proposals for the potential use of DCC capabilities to deliver 'Common Systems' for cyber security including Public Key Infrastructure and Anomaly Detection. We will also support industry, as requested, on the Interoperable Demand Side Response programme (IDSR)

The Electricity System Operator's DFS has enabled greater consumer savings over the winter of 2023/24, building upon the success of last year's iteration. The DFS also continues to change consumer attitudes towards energy usage via smart meters

We continue to be involved as a consortium partner alongside GreenSync and the ESC in the Government-funded AAR Programme. Our key role (beyond provision of advice across several areas - technical, security, regulation, and operations) has been to explore how 'gold standard' address data from the Retail Energy Location (REL), established through the CSS, can be incorporated into the solution

Timescales:

- Working groups expected throughout 2024:
- Government proposals and decision on implementation of common systems expected in 2024/2025
 - Phase 2 of AAR continues in 2024 and Phase 3 expected in August 2024
 - IDSR Phase 2: June 2023-March 2024 and Phase 3: April 2024-October 2024
 - Continued engagement with the ESO to support the DFS's ongoing development and evolution

Energy efficiency



We will continue to help determine the feasibility of connecting sensor devices (temperature and humidity) as part of the Smart Meter Internet of Things (SMIoT) 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

Timescales:

- Two SMIoT Phase 2 projects are currently in delivery
- Phase 2 culminates in a trial of the new technology in real energy consumers' homes
- Both projects will run until the second calendar quarter of 2025

Data policy and services



We will continue to work with industry to progress the Data for Good proposals (published by the ESC in September 2023)

As part of a consortium led by Advance Infrastructure Technology, DCC is contributing to the Phase 2 of the Smart Meter Energy Data Repository (SEDR) project. This will enable future innovation of products and services to benefit consumers while ensuring their data remains protected under the Smart Meter Data Access and Privacy Framework

We will also continue to work with RECCo to develop new ways to identify energy theft, which has become a more widespread issue due to the energy and cost-of-living crisis using smart meter data

We have contributed to Ofgem's ongoing consideration of a centralised consumer consent dashboard, bringing lessons learnt from smart metering and associated projects to support timely and cost effective delivery. We will continue to support this initiative as it progresses over the course of 2024

Timescales:

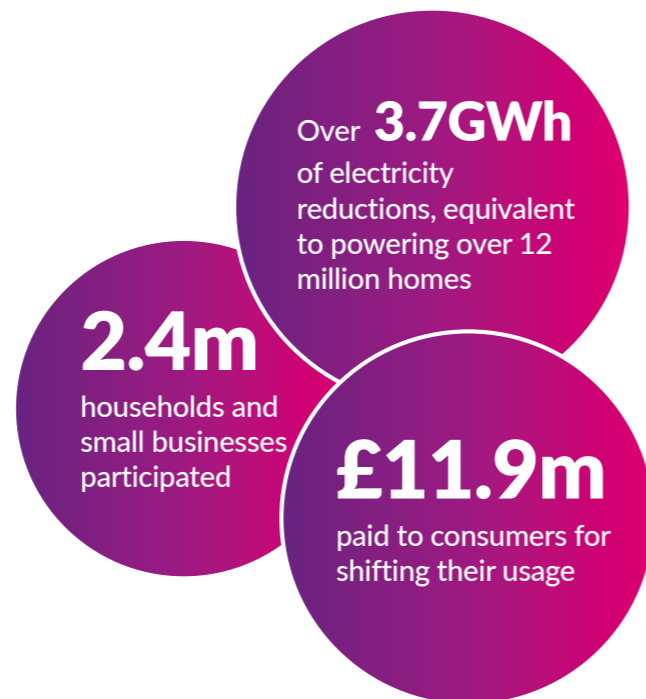
- Progressing recommendations of the Data for Good paper through to 2024/25
- Considering an enduring way to access anonymised smart meter system data in 2024/25
- Smart Meter Energy Data Repository Phase 2 Project to run until August 2024

The Demand Flexibility Service (DFS)*

The continued development of the DFS emphasises the pivotal role of managing energy consumption by shifting usage away from peak periods. This approach not only aids in maintaining grid stability but also supports incorporating renewable sources and the electrification of various assets, potentially circumventing the need for expensive infrastructure upgrades.

Coordinated by the National Grid Electricity System Operator (ESO), the DFS was operational from November 2023 to March 2024, offering Great Britain's consumers the option to receive a rebate from their electricity providers in exchange for reducing their energy use during peak hours (for example, between 17:00 and 21:00). The national smart meter infrastructure, managed by the DCC, was instrumental in enabling consumer involvement. In preparation for and throughout the service, there was a close collaboration with the ESO to guarantee its successful execution.

This initiative underscores the critical role that smart metering will play in future flexibility services and the broader context of demand flexibility as we transition towards a more sustainable and intelligent energy landscape. We are eager to continue our partnership with the ESO, our customers, and the broader industry as we prepare for this coming winter and subsequent versions of the DFS.



*As of 28th February 2024



Automatic Asset Registration (AAR) Programme

The uptake of low carbon technologies (LCT) is rapidly accelerating, but at present, there is a distinct and increasing lack of visibility of these energy assets. While registration with network companies is a legal requirement for some assets, it is understood that roughly 40%* or less of new small-scale energy assets are currently visible to the networks.

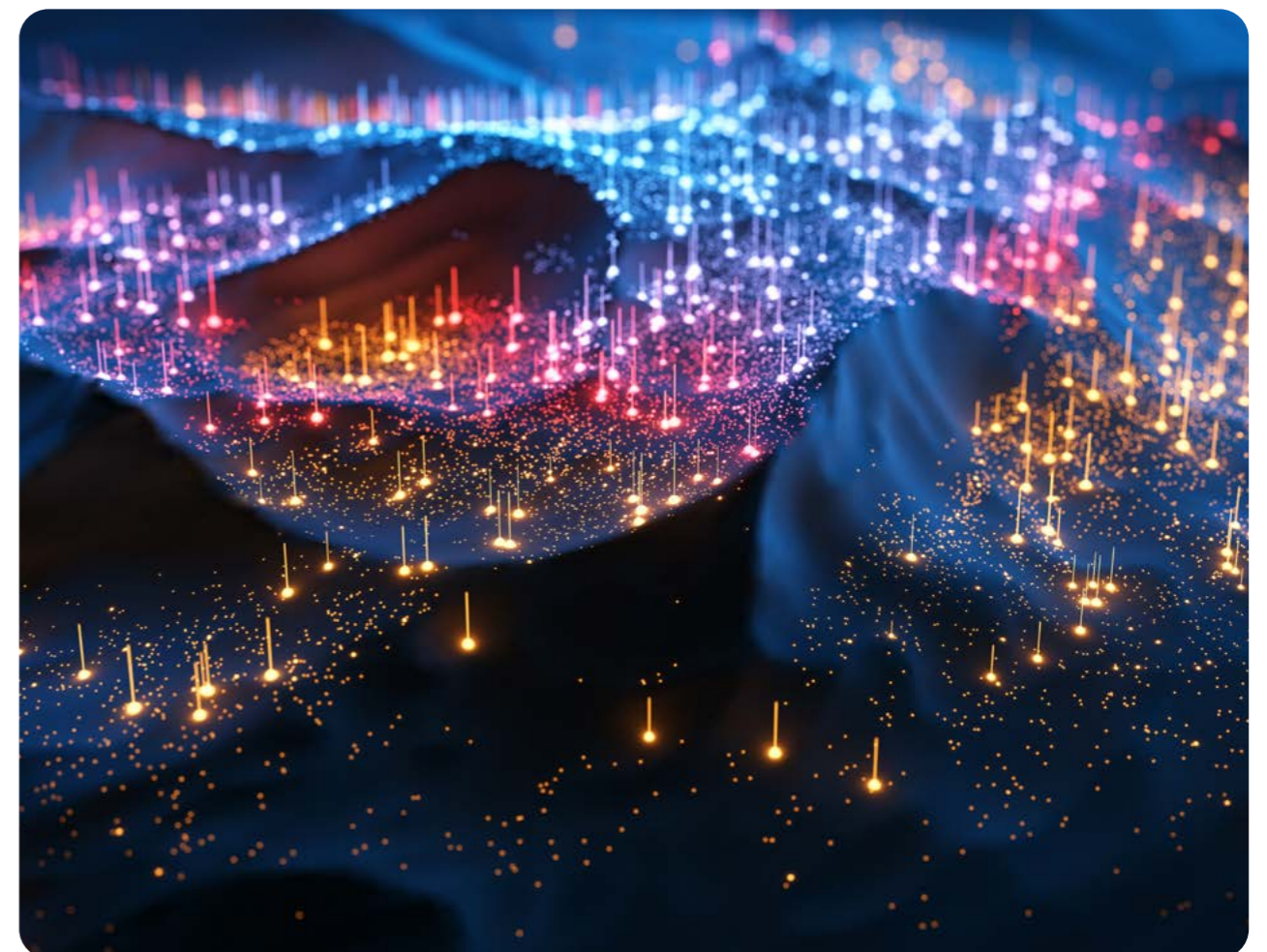
DESNZ set up the AAR Programme, a funded innovation programme, to address this challenge. The AAR Programme will develop a pilot demonstration using live data for an automated asset registration process. Once assets are registered, a Central Asset Register (CAR), will act as an intelligent data repository for all relevant data of a registered LCT.

Having completed the project's feasibility study, we are currently engaged in solution development, with pilot testing to begin in August 2024 and conclude

in August 2025. Through this programme, we have gained experience of navigating and working to overcome challenges of data use in principle versus in practice, relevant to the future flexibility of digital infrastructure (FDI).

As the operator of existing digital energy infrastructure, the DCC has a number of existing capabilities that could provide accelerated delivery, cost effectively, for a future CAR.

* <https://es.catapult.org.uk/wp-content/uploads/2023/04/AAR-Final.pdf>





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 forecast costs more accurately.

Delivering right first time is an outcome that all our initiatives strive for. The following section covers our standards and process framework which further enables us to deliver this outcome.



Standards and processes

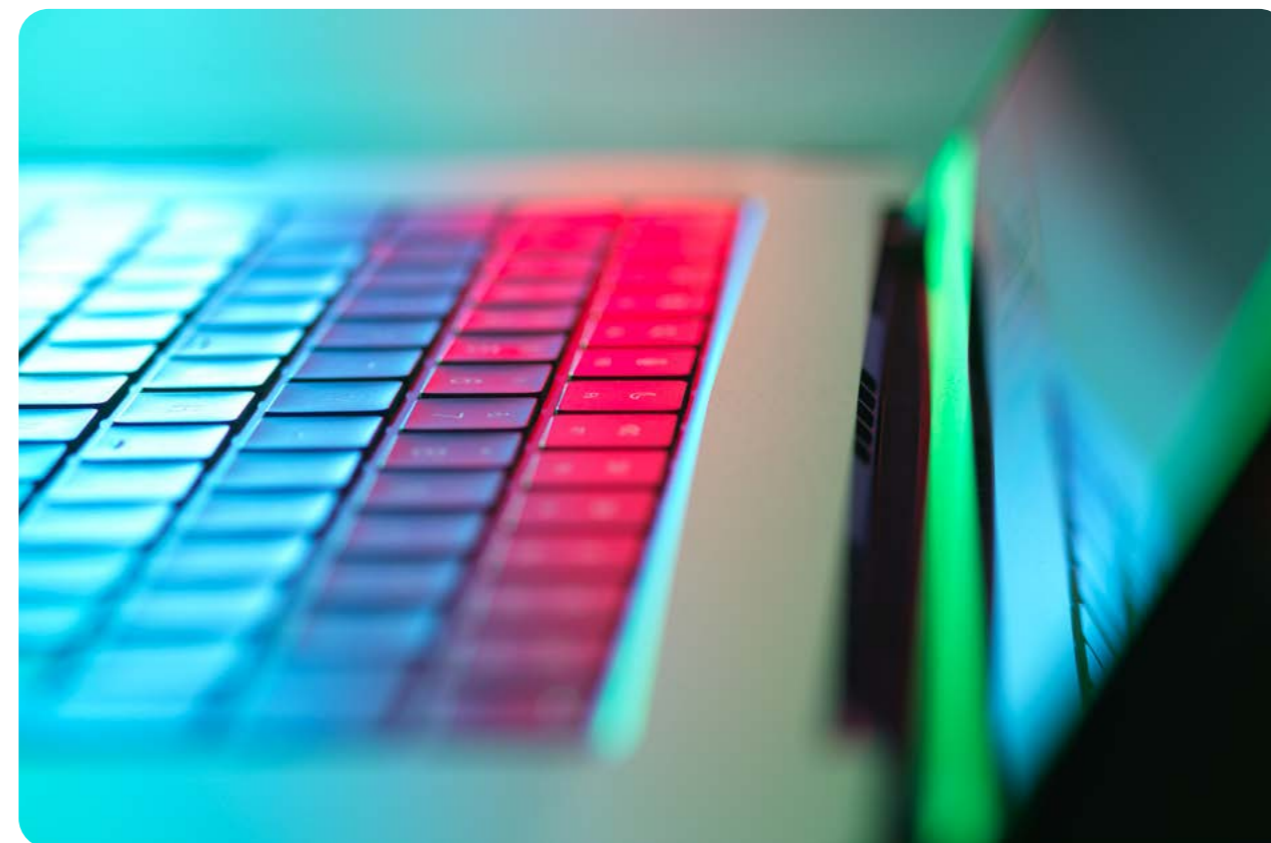
In order to ensure DCC meets the time, cost and quality expectations of our stakeholders, while maintaining adherence to our broader obligations, we are focusing on the formalisation and integration of efficient processes and common standards.

These processes cover the breadth of our organisational activities - lifecycle, value stream and functional, and ensure compliance with established standards. Work is underway to assess the maturity of key processes and defining improvements through documentation, standardisation, and optimisation. Future steps will include automation of process improvements and building on the culture of continuous improvement.

A key part of this is enhancing our enterprise-wide, end-to-end Delivery Framework. This will be based on PRINCE2 and Managing Successful Programmes methodologies to enable standardised delivery of programmes, projects and in-life change for our customers and stakeholders. This follows feedback from our customers and the findings of an independent assessment of DCC's delivery capability. The Delivery

Framework will complement our lifecycle management approach with internationally recognised process-based methodologies that will further enable right first-time delivery and allow us to operate as efficiently as possible. Implementation of the framework is planned from October 2024.

The adoption of PRINCE2 will support a common language across our customer and supplier base, providing greater transparency of DCC's delivery approach which will positively impact alignment as well as ensure that DCC attracts and retains highly competent delivery talent. The framework will additionally drive greater compliance with P3M (Portfolio, Programme & Project Management) standards, enhancing our control and risk management practices.



Appendix: DCC response to stakeholder engagement

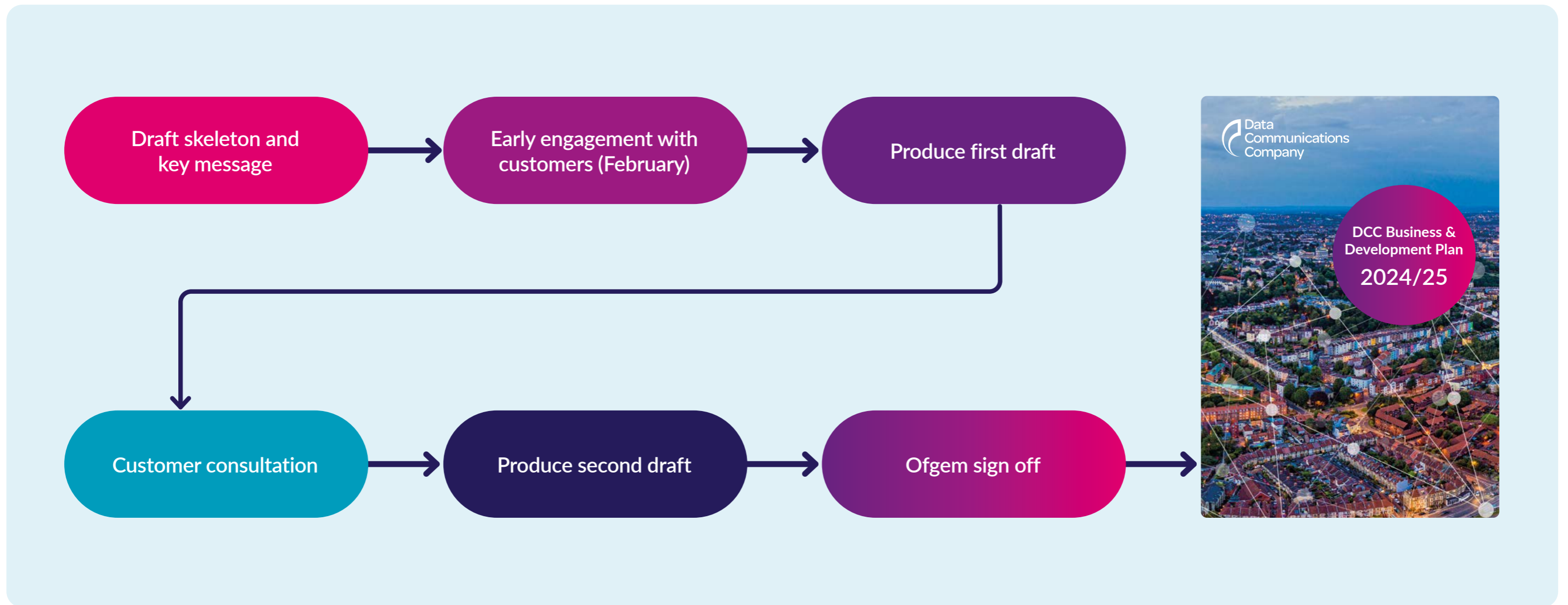
We have incorporated the majority of feedback we received into the BDP. Where we have not, we have set out our responses below.

For ease of transparency, where there are common themes, we have indicated where to locate the information in the plan.

DCC Outcome	Question	DCC response
Right first time	Are you planning to re-share the business handover plan? We submitted some comments in response to it and keen to see how you have responded to it and addressed it to see how you will protect DCC users and energy consumers.	DCC will publish a consultation and the updated Business Handover Plan (BHP) once we have sign off from Ofgem in August 2024.
	How to alleviate concerns around Capita's role during the licence renewal	Updated BHP includes more detail on how conflicts of interest are currently managed and how the separation of duties will be strengthened once the Ofgem procurement process starts.
Responsible and efficient	Can we have line of sight on framework renewals and how to get on frameworks to support DCC?	Our commercial team reviews and publishes upcoming tender opportunities on a regular basis. To register your interest please use the following link: https://www.smartdcc.co.uk/about-dcc/partners-suppliers/work-with-the-dcc/
	Any steps DCC has taken or is planning to take to address concerns raised by customers/ stakeholders, in particular referencing the OPR, and how DCC intends to address the concerns that were raised which resulted in a failure to obtain full scores in the last few years?	<p>DCC places great value on customer feedback and welcomes constructive input from our customers to enable us to continue to meet our customers' ever-changing needs. Each year we engage our customers in key issues and activities impacting them, feeding these views into our Business and Development Plan (as demonstrated in the 'DCC response to stakeholder engagement' section; business cases for continued investment in the DCC network (eg DCC's Future Connectivity business case which directly addresses customers' concerns regarding technology in the north and beyond 2033); and changes to the way we engage and operate such as updating the terms of reference for the Quarterly Finance Forum in direct response to customer feedback.</p> <p>We gain and act on feedback throughout the year but place particular emphasis on the feedback received through the customer engagement Operating Performance Regime (OPR) which we are delighted to demonstrate year-on-year improvement against this measure since FY21/22. Based on feedback received through this assessment of customer engagement, DCC has focused on the following key areas:</p> <ul style="list-style-type: none"> • Ensuring the level of detail our customers receive, particularly for major incidents, meets their needs • Continuing to drive consistency into our engagement approach, such as through the continued adherence to the Programme Assurance Policy, and introduction of a business case engagement process agreed between DCC, DESNZ, Ofgem and SEC • Introduced new engagement approaches to provide more detailed cost information to our customers, such as running three confidential sessions with SEC Panel to demonstrate evaluation detail relating to DCC's most customer impacting procurements; sharing ROM costs for investment cases earlier in the process and amending both the terms of reference and content for the DCC Quarterly Finance Forum in response to customer feedback received • Continuing to improve ways of working with key stakeholders such as the SEC committee independent Chairs to ensure they are briefed on key DCC programmes/areas of activity, enabling a shared understanding of the purpose of DCC's engagement, leading to a more constructive dialogue in the committee meeting itself

DCC Outcome	Question	DCC response
Secure and stable	Have you identified any implications (if any) from the 3G sunsetting?	This is covered in Section 5 under 4G Communications Hubs & Networks, SMETS1 End of Life, and Future Connectivity.
	For Network Traffic Management will you be sharing criteria via the BDP document this year? Was this for SLAs?	In Section 5, Network Traffic Management, we have included criteria to assess overall benefits and value.
	Do you engage with CSPs to resolve any issues promptly and transparently?	DCC regularly engages with CSPs through different channels. Recently we had a session with a key supplier where stakeholders and a select group of customer representatives were invited.
	Any examples of existing communication where you highlighted commitment to collaborate with suppliers? How do you demonstrate dedication to fostering strong relationships and ensuring effective future connectivity?	Future Connectivity: <ul style="list-style-type: none"> • We ran two workshops earlier in the year which suppliers were invited to attend and input their views and insights • We have run bi-laterals and would be very open to supporting a bi-lateral with suppliers to explore their needs in more depth • DCC's priority is to provide suppliers with clarity on which connectivity technology will best meet their needs in the North Region once 5m premises have been connected
	Where can customers get visibility of what is discussed on 4G communications hubs decisions around procurement and financing?	This topic is discussed during the Quarterly Finance Forum, so we encourage any customers interested to attend the forum to hear more about the programme and have the chance to ask any questions.
	Can we have more details on how DCC will meet the demand for MHHS and how DCC intends to manage traffic on its network?	Please see Section 5 Network Traffic Management.
	Consider the implications of Artificial Intelligence (AI) and DCC approach to implementation of AI	Please see Section 3 under Technology and security landscape for DCC's position on AI.
Flexible and fast	What role does DCC see itself having in policing 'Other Users', so they do not think they have free and open access to data sets. That data has valuable and personal information about us all as consumers.	The DCC customer landscape is changing. Part of the work DCC is doing under its Network Traffic Management initiative and Charging Reform consultation is designed to better manage use of the DCC network, and better understand how the smart metering network is being used.
	DCC Testing: we believe DCC should review its charging policy for test lab use	We have now published our charging RFI, which is live, and will be looking into all related issues. The RFI is an open document with some open questions around "have we missed anything". We would encourage our suppliers to raise any charging questions and queries there if they wish.
	DCC needs to ensure that access to smart meter data is fair to consumers and paid for by those receiving the benefit. Data should not be free unless under very specific circumstances such as university research. 'Other Users' who receive data from smart meters for commercial gain should be paying their fair share, which in turn should mean that vulnerable consumers are not paying higher than necessary charges.	

Appendix: Business and Development Plan Process



Glossary

Acronym	Description
AAR	Automatic Asset Registration
AI	Artificial Intelligence
BDP	Business and Development Plan
BHP	Business Handover Plan
BUUK	Brookfield Utilities UK
CAR	Central Asset Register
CH&N	Communication Hubs and Networks
CNI	Critical National Infrastructure
CSP	Communication Service Provider
CSS	Central Switching Service
D&I	Diversity & Inclusion
DCC	Data Communications Company
DFS	Demand Flexibility Service
DNO	Distribution Network Operator
DSMS	DCC Service Management System
DSO	Distribution System Operator
DSP	Data Service Provider
DSR	Demand Side Response
ECoS	Enduring Change of Supplier
eNPS	Employee Net Promoter Score
ESC	Energy Systems Catapult
ESO	Electricity System Operator
EVP	Employee Value Proposition
FDI	Flexibility of Digital Infrastructure
FSM	Future Service Management
FY	Financial Year
HAN	Home Area Network
ICE	Internal Combustion Engine
iDNO	Independent Distribution Network Operator
IDSR	Interoperable Demand Side Response

Acronym	Description
LCT	Low Carbon Technologies
MDR	Meter Data Retrieval
MHHS	Market-wide Half-hourly Settlement
NCSC	National Cyber Security Centre
NTM	Network Traffic Management
OPR	Operational Performance Regime
OTA	Over-the-air
PKI-E	Public Key Infrastructure- Enduring Services
PV	Photovoltaic
REC	Retail Energy Code
RECCo	Retail Energy Code Company
REL	Retail Energy Location
RY	Regulatory Year
SEC	Smart Energy Code
SEDR	Smart Meter Energy Data Repository
SEGB	Smart Energy GB
SIF	Strategic Innovation Fund
SIT	System Intergration Testing
SMETS1	First Generation Smart Meters
SMETS2	Second Generation Smart Meters
SMIoT	Smart Meter Internet of Things
SOC	Security Operations Centre
SRVs	Service Request Variants
SSES	Smart and Secure Electricity System
TAF	Test Automation Framework
TCoS	Transitional Change of Supplier
TOC	Technical Operations Centre
TSP	Trusted Service Provider
VIVID	Vulnerability Identification Via Informative Data
WAN	Wide Area Network

