ENA Annual Innovation Summary Report 2026

The Voice of the Networks

ena energynetworks association

Report highlights

Executive Summary / Key Takeaways

Our **Annual Innovation Summary Report 2026** showcases the impact of innovation across Great Britain (GB)'s electricity networks and the benefit of this to consumers.

This year's report highlights how our members are investing in innovation that will directly benefit households and businesses by making energy more affordable, while enabling Clean Power 2030 and Net Zero.

Through key funding mechanisms like the Network Innovation Allowance (NIA) and the Strategic Innovation Fund (SIF), networks have committed millions of pounds to projects that deliver real-world benefits.

In FY26† alone, networks registered 139 innovation projects, with forecast lifetime financial benefits exceeding £15.9bn* from a total of around £106m of funding provided.

This report features a selection of standout projects, each demonstrating clear benefits for consumers and the wider electricity system.

Figure 1.1 – Innovation Overview

Results & Outcomes

58

Projects deployed into BAU over RIIO-2

>£263m

Cumulative financial benefits to date from projects deployed into BAU over RIIO-2

This Document

The Annual Innovation Summary Report builds on the individual Network Summary Reports to present an aggregated view of the progress made in Innovation over the past year. These reports can be found here. All electricity networks have contributed to this report, allowing it to give a cohesive overview of common Innovation themes and achievements through collaboration over the past year.

The report structure has been updated this year to focus on guiding you through the innovation landscape and understanding the present picture across different networks, policy developments and key topics. To do this the report organises standout project case studies into **four key messages split across two sections:**

1. In the **Who We Work With** section, case studies are selected to showcase openness to innovation from a variety of sources and whole system collaboration.
2. In the **How We Ensure Value for Money** section, case studies are selected to showcase innovation deployment and maximising value for money. A key focus of innovation deployment is how innovation leads to tangible benefits that can be felt by consumers.

As well as communicating the positive impacts electricity network innovation brings to wider society, we intend this document, and the priorities, themes and principles it contains, to help enable collaboration and shape the sector's efforts over the years ahead. Preparation of this document involved networks sharing the challenges they encountered and learnings taken over the innovation process. Further details on the networks' forward look to meet interim and 2050 targets can be found here.

† FY26 refers to the regulatory year 1 April 2025 to 31 March 2026, in line with Ofgem's RIIO reporting cycle.

* Note that financial benefits quoted here are gross, projected lifetime future benefits of the impact of the innovation, not savings already made.

Report highlights

Real world benefits through innovation

Innovation turns new ideas into practical improvements for households and businesses

Together, the nine network operators and NESO turn new ideas into routine improvements for households and businesses. The four areas below summarise what the networks achieved together in FY26. The case studies in sections 4 and 5 show each one in practice.

Key benefits of innovation across all networks

	Openness to new ideas	Whole system collaboration	Innovation deployment	Value for money
Overview	*Networks publish the problems they need to solve, so organisations outside the usual supply chain can offer solutions.* • Fresh expertise from SMEs, start-ups, universities and other sectors • Ideas already proven in other industries reach the network faster	*Networks innovate with gas, water, telecoms and other partners, so a shared problem is solved once.* • Decisions on one system account for the effects on others • Learning is reused wherever the same challenge arises	*Proven innovations move out of trials and into everyday network operations (business-as-usual).* • Lower bills, fewer interruptions and faster connections for heat pumps, solar and EVs • Capacity released, reinforcement deferred and carbon saved	*Networks make every pound of consumer-funded innovation count, spending it once and sharing the cost.* • Results shared on the Smarter Networks Portal avoid duplicate projects • Projects that do not prove out are stopped and learnings are published
Impact	**1,043 ideas generated or received by networks**	**>50 organisations collaborating across sectors**	**£263m tracked financial savings from innovation deployed over RIIO-2**	**31 collaborative projects launched in FY26**

The common thread is adoption: consumers benefit when evidence from successful trials is translated into routine network planning, investment and day-to-day delivery

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1.

Introduction

1. Introduction

1.1 About ENA

We represent the electricity networks that power homes and businesses across the UK and Ireland.

As the voice of the sector, Energy Networks Association (ENA) brings together the owners and operators of licensed transmission and distribution networks. Our members manage and maintain the critical infrastructure that keeps energy flowing safely and reliably.

We work to ensure our networks are among the safest, most efficient, and most sustainable in the world. We influence decision-makers on the issues that matter most to our members, including:

- Regulation and the wider representation in UK, Ireland and the rest of Europe
- Cost-efficient engineering services and related businesses for the benefit of members
- Safety, health and environment across the electricity industry
- The development and deployment of smart technology
- Innovation strategy, reporting and collaboration in GB.

We provide a strategic focus for the sector and act as a central channel of communication. We promote the interests and reputation of our industry and offer a forum for collaboration among our members.

We lead and support a wide range of innovation activities, including hosting events and conferences, such as our Annual Energy Innovation Summit and the Energy Innovation Basecamp.

1. Introduction

1.2 GB Electricity Networks

Electricity networks are critical to Great Britain's journey to Net Zero.

The nine network operators and the National Energy System Operator play a vital role in ensuring the electricity grid can meet the evolving needs of consumers in a changing energy landscape. There are two network types:

- **Transmission networks** – high-voltage systems that transport electricity over long distances from generation sources to regional distribution networks. They form the backbone of our national electricity system.
- **Distribution networks** – lower-voltage systems that deliver electricity from transmission networks directly to homes and businesses. These operate at a regional level and connect our infrastructure to everyday lives.

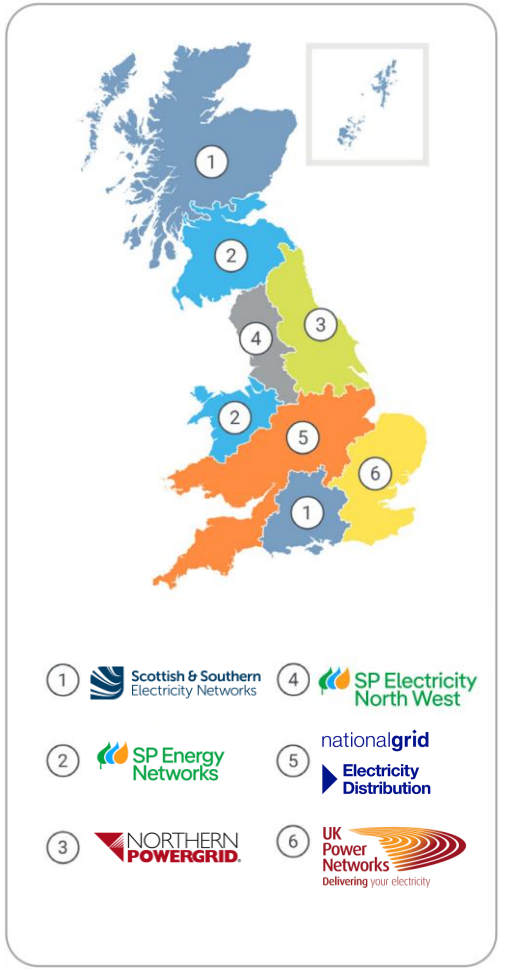
Together, these networks enable the transition to a smarter, cleaner, and more resilient energy future, that works for all consumers.

1.3 Network acronyms

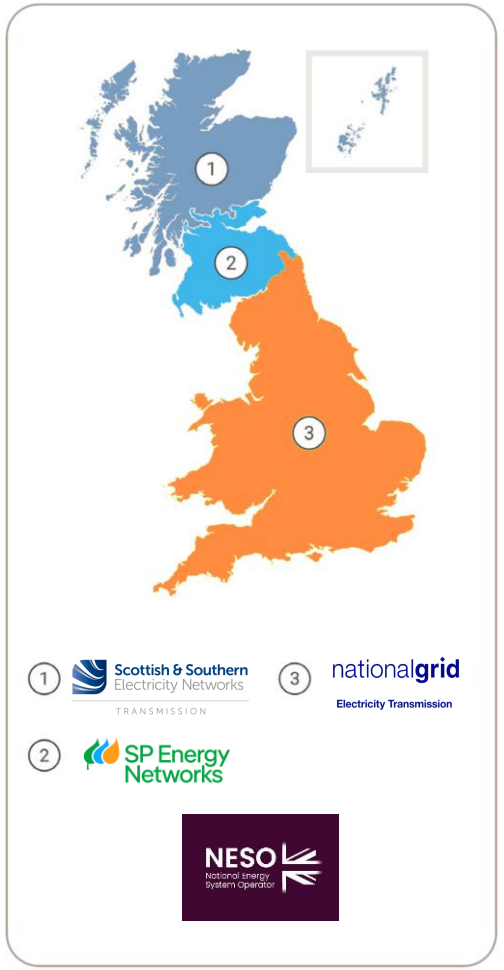
The following acronyms are used throughout this section to refer to electricity networks and the system operator:

- **SSEN-T / SSEN-D:** Scottish and Southern Electricity Networks Transmission / Distribution
- **SPEN-T / SPEN-D:** SP Energy Networks Transmission / Distribution
- **NGET / NGED:** National Grid Electricity Transmission / Distribution
- **SP ENW:** SP Electricity North West
- **NPg:** Northern Powergrid
- **UKPN:** UK Power Networks
- **NESO:** National Energy System Operator

Figure 1.2 – All of the GB electricity networks, as well as NESO, the system operator for England, Scotland and Wales, have contributed to this report



Electricity Distribution Network Operators (DNOs)



Electricity Transmission System Operators (TSOs)

1. Introduction

1.4 Innovation Funding

Strategic Innovation Fund (SIF)

The Strategic Innovation Fund helps energy networks develop big ideas to keep energy affordable, secure and clean. Ofgem replaced the previous innovation scheme (NIC) with this fund during the RIIO-2 price control period, over which it provided £450m for large, transformational projects tackling a wide range of challenges. From RIIO-3 (2026 – 2031), SIF moves to a programmatic approach, setting a long-term strategic direction and enabling collaboration across energy networks on 5 innovation challenges. A further £500m has been allocated with £50m dedicated for deployment.

The five strategic challenges provide a clear, long-term vision for transforming the electricity network. Together, they address the critical outcomes required to accelerate connections, improve network delivery efficiency, enable seamless customer adoption of low-carbon technologies, enhance network resilience, and facilitate decentralised system operation. However, these challenges represent only part of the transformation required.

Delivering a smarter, more resilient, and customer-focused energy system also depends on continued investment in areas such as customer services, operational excellence, digitalisation, workforce capability, and near-term network improvements that provide immediate benefits while enabling longer-term change. This is why both Network Innovation Allowance (NIA) and business-as-usual (BAU) investment remain essential, ensuring that innovation is balanced between transformational ambitions and practical improvements that deliver value today

Network Innovation Allowance (NIA)

Ofgem created the Network Innovation Allowance to support projects that explore better ways of running energy networks. These projects can be technical, commercial, or operational, and must deliver network benefits. Each network licensee receives a set NIA budget as part of their RIIO price control allowance. The NIA provides limited funding to RIIO network licensees to fund smaller technical, commercial, or operational projects directly related to their networks and could deliver financial benefits to them and their customers.

This funding started during the RIIO-1 price control period, continued through RIIO-2, and will carry on into RIIO-3 for electricity distribution and transmission networks, as well as the National Energy System Operator (NESO). The periods covered by these price controls are presented below.

Price control period	Electricity Transmission	Electricity Distribution
RIIO-1	2013-2021	2013-2023
RIIO-2	2021-2026	2023-2028
RIIO-3	2026-2031	2028-2033

Business-as-usual (BAU) Funding

Networks also fund innovation directly from their own business budgets, alongside Ofgem's dedicated funding mechanisms, from project conception to deployment. This investment comes from core price control allowances and shareholder funding, rather than a ring-fenced innovation pot. For example, UKPN in their ED2 business plan committed £50m to business-funded innovation with half invested directly by its shareholders.

Wholly BAU funded innovation projects include SSEN-T's Modular Substations project which is exploring ways to standardise and accelerate substation installation and commissioning, and SP ENW's Resilire project which enables assessment of whole network resilience of the electricity network to severe weather.

2.

FY26 Year in Review

2. FY26 Year in Review

2.1 Key Metrics

FY26 marks the third year of RIIO-ED2 for electricity distribution network operators (DNOs) and the fifth year of RIIO-T2 for transmission system operators (TSOs). Data on all network projects and benefits have been tabulated and collated in the FY26 IMF[1] data (and the Balanced Scorecard – see Figure 2.1) referenced throughout this report.

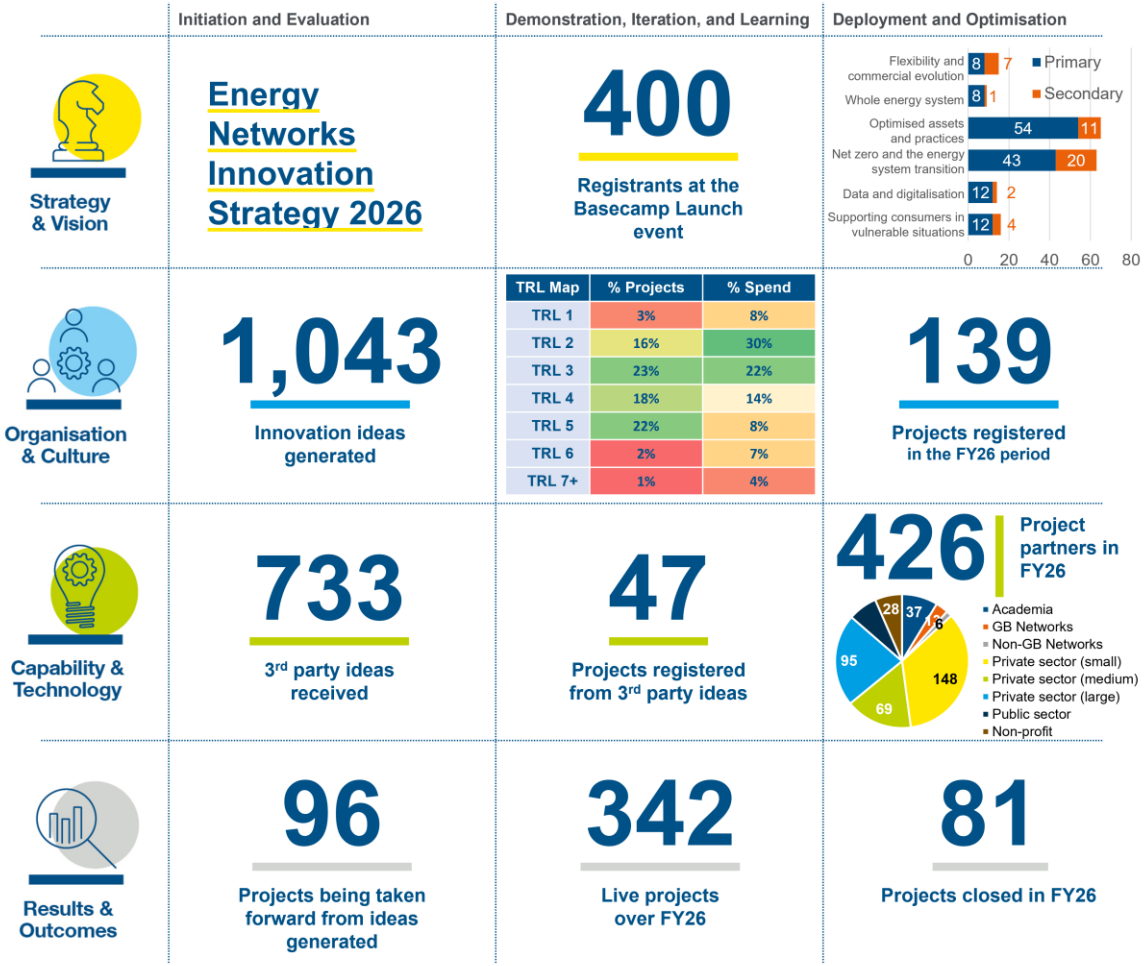
The **Balanced Scorecard** highlights four performance indicator groups identified by the networks as key enablers of innovation: Strategy & Vision, Organisation & Culture, Capabilities & Technology, and Results & Outcomes. The three columns map these performance indicators to the three stages of the innovation process (1 - Initiation and Evaluation; 2 - Demonstration, Iteration, and Learning; and 3 - Deployment and Optimisation) to show how networks are performing against each indicator throughout the innovation process.

This year's scorecard shows continued strength in the number of ideas generated/received and in the number of projects registered from third party ideas. There have been several notable conferences held this year (discussed further on the next page) that have supported the development of new initiatives to facilitate even more ideas.

The 2026 Balanced Scorecard demonstrates significant progress in the number of projects registered and their distribution across innovation themes. FY26 has seen a robust total of 139 projects registered. Collaboration remains a key focus, as evidenced by the substantial number of projects developed from third party ideas. In FY26, 49 projects originated from external collaborations, while the number of project partners is 426.

2.2 Balanced Scorecard

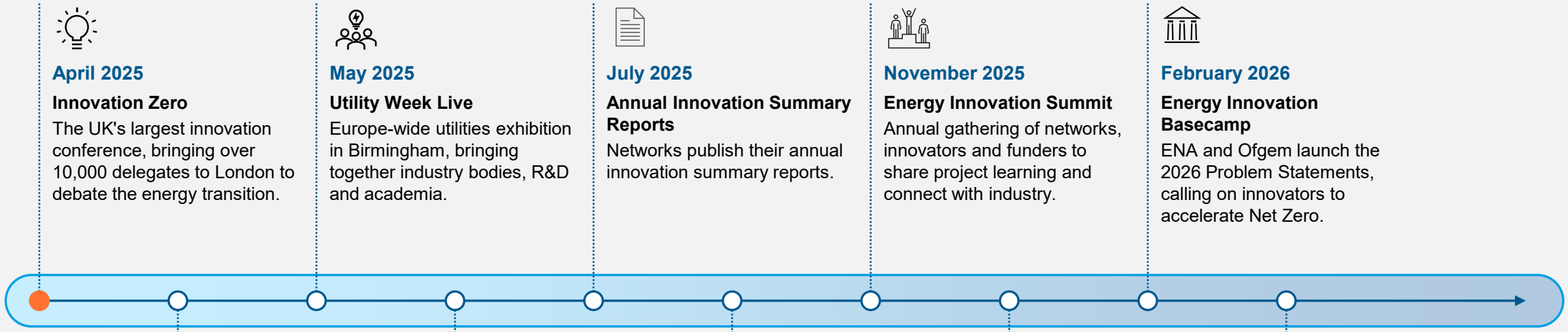
Figure 2.1 – FY26 Balanced Scorecard



[1] Innovation Measurement Framework – a mechanism by which networks submit data on innovation projects

2. FY26 Year in Review

2.3 Innovation Key Event Timeline – FY26



April 2025
Innovation Zero
The UK's largest innovation conference, bringing over 10,000 delegates to London to debate the energy transition.

May 2025
All-Energy 2025
The UK's largest low-carbon energy and renewables exhibition and conference.

May 2025
Utility Week Live
Europe-wide utilities exhibition in Birmingham, bringing together industry bodies, R&D and academia.

June 2025
CIRED
International conference for the designers and operators of electricity distribution systems.

July 2025
Annual Innovation Summary Reports
Networks publish their annual innovation summary reports.

October 2025
Energy Networks Innovation Taskforce Launch
Networks, Ofgem and government form a taskforce to coordinate innovation priorities.

November 2025
Energy Innovation Summit
Annual gathering of networks, innovators and funders to share project learning and connect with industry.

December 2025
Ofgem RIIO-T3 Final Determinations
Ofgem confirms allowances, outputs and innovation funding for the RIIO-3 price control.

February 2026
Energy Innovation Basecamp
ENA and Ofgem launch the 2026 Problem Statements, calling on innovators to accelerate Net Zero.

March 2026
SIF Community Forum and Networks Innovation Strategy
The SIF community meets as ENA publishes the refreshed Electricity Networks Innovation Strategy.

3.

POLICY OVERVIEW

3. Policy Overview

Policy plays a pivotal role in shaping the future of the UK energy system, setting ambitious decarbonisation timelines that electricity networks are instrumental in delivering. The policies below are those with the greatest influence on electricity network innovation over the period ahead.

Policy	Overview
Clean Power 2030	UK government is committed to at least 95% of Britain's power being produced by clean sources by 2030. This will require whole system coordination and improved grid flexibility to account for increased amounts of low-carbon generation.
Connections Reform	This reform addresses the overly congested grid connections system, changing it from "first come, first served" to "first ready, first connected". This will require improved digital load forecasting capabilities as well as maintaining safe and efficient operation of networks as more (often HV) generation and demand comes online.
Warm Homes Plan	The UK Government's £15bn Warm Homes Plan aims to upgrade up to five million homes by 2030. Grants will fund heat pumps, solar, battery storage and insulation for low-income households, with low and zero-interest loans for other homeowners. Networks must plan for the rise in electrified, flexible domestic demand.
Future Homes Standard	From 2025, new homes in England must cut carbon emissions by 75–80% through energy-efficient design and low-carbon heating, shifting new-build demand to electricity and adding heat-pump load networks must plan and connect for.
Strategic Spatial Energy Planning (SSEP)	SSEP will set out where and when electricity and hydrogen generation and storage should be built across Great Britain. Taking a zonal rather than project-level view, it gives networks, investors and government a shared picture of future need, and works alongside the Centralised Strategic Network Plan and Regional Energy Strategic Plans.

4.

Who We Work With

4. Who We Work With

Being transparent about the challenges we need to solve, sharing what we learn and working with diverse partners to turn innovative ideas into better outcomes for consumers.

Storms Arwen and Éowyn each cut power to around a million homes. Events like these cross organisational boundaries, so networks are working with partners in other sectors to model knock-on effects and restore supply faster. Innovation helps networks spot failing assets earlier, identify interdependencies across sectors and restore supply faster. NGET's CALICS project, for example, is testing fibre-optic monitoring that can spot faults at transmission cable joints over thousands of kilometres, before they cause major failures.

Electricity networks work with partners beyond their established supply chains, bringing together fresh perspectives, specialist expertise and proven ideas from other sectors. This spreads learnings and accelerates solutions, helping deliver a more reliable, affordable and low-carbon energy system for consumers. The case studies in this chapter explore two key messages: (1) openness to innovation from a variety of sources, and (2) whole system collaboration.

1. Openness to innovation from a variety of sources

The range of organisations delivering innovation with networks has widened, from large technology suppliers to SMEs and start-ups to university partners, and the route in has become clearer for organisations that have never worked with a network before. NPg's Project VOLT sources its microgrid designs from the energy users themselves, with a port, an airport, a vehicle manufacturer and a gas network shaping the specification while SSEN-T's Aquila Lite draws its technical model from multiple vendors rather than a single incumbent supplier.

Openness also means being clear about the questions being asked. Networks publish the challenges they are trying to solve, the criteria used to select projects and the learning that comes out of them. The outcomes of innovation projects funded through the Network Innovation Allowance and the Strategic Innovation Fund are reported on the ENA's Smarter Networks Portal. This reporting include progress against the project's problem statement and whether the project delivered its objectives. In addition, projects like UKPN's Future Fleet which convenes logistics operators, energy innovators and technology providers around a shared fleet electrification challenge, publish the project's problem statement so organisations outside the usual supply chain can contribute solutions.

47

projects registered from third-party ideas in FY26

1,043

ideas generated or received across the nine networks and NESO

£106m

innovation funding committed in FY26

4. Who We Work With

NET ZERO TERRACE (SP ENW)

Bringing low-carbon heat to terraced homes with no room for a heat pump

Lead network

SP Electricity North West

Partners

looped ENERGY COMMUNITIES

BH

Many terraced homes have no outside space for an air source heat pump, so their residents risk being left behind as heating decarbonises. Net Zero Terrace (NZT) solves this with a shared ambient loop: ground source heat pumps take heat from a loop that serves the whole street, so no home needs its own outdoor unit.

The street runs as a community-led Smart Local Energy System (SLES). A Home Energy Management System (HEMS) in each house and a Community Energy Management System (CEMS) coordinate heat pumps, thermal storage, community storage and solar, and can offer flexibility to SP ENW. This lifts heat pump uptake, avoids the high running costs of direct electric heating and defers network reinforcement.

After SIF Discovery and Alpha, the project moved to NIA ahead of a SIF Beta bid. Working across the whole system with SP ENW, its technology partners and residents took NZT from concept to a working minimum viable product.

- Funded: £680,616 (NIA)
- Project timeline: May 2025 – June 2026
- Project partners and collaborators: Buro Happold, Looped Energy Communities
- Project lead: Rachel Stanley, Innovation Project Manager

Smarter Networks Portal project page

Benefits

Deferred reinforcement and lower customer costs:

Benefits of £15.88m across SP ENW based on an 80-100% uptake.

TRL change

4 to 6

Key message

Openness to innovation from a variety of sources

4. Who We Work With

SIF BLADE (SPEN-T)

Restoring the onshore grid from offshore wind after a national power outage.

Lead network

SP Energy Networks

Partners

Scottish & Southern Electricity Networks TRANSMISSION

CARBON TRUST

tnei

University of Strathclyde Glasgow

System restoration today relies on large synchronous generators, and the number of those assets is falling as the system decarbonises. SIF BLADE demonstrates how novel technology can let offshore wind farms restore the onshore grid after a black-out, and then develops the market requirements and technical specifications needed for commercial roll-out.

The Alpha phase found that restoration from offshore wind is technically feasible, but that the proposed market is not clear enough, technically or commercially, for wind farm developers to participate. The Beta phase works on both: standard specifications for wind farms and networks, and the costs and evolved market requirements behind them.

It combines off-the-shelf grid forming batteries and turbines, OEM technology not yet on the market, and learning from Distributed Restart and Dersalloch, brought together by a consortium of transmission owners, ten offshore wind developers through the Carbon Trust's Offshore Wind Accelerator, OEMs and universities.

- Funded: £5,454,276 (SIF Beta)
- Project timeline: Sep 2024 – Oct 2027
- Project partners and collaborators: Offshore wind developers via the Carbon Trust's Offshore Wind Accelerator, OEMs and research partners.
- Project lead: Ahmed Salama, Project Manager

Smarter Networks Portal project page

Benefits

Financial:

Offshore wind contributing to restoration, rather than more low-carbon thermal generation, is worth £0.9bn-£1.6bn to 2050, a 12-year payback on Beta. NESO expects offshore wind may need to provide around 24% of restoration services by 2050.

New markets and revenues:

No wind farm provides restoration services today. Clear specifications and costs would let developers bid into NESO restoration tenders.

Key learning:

Feasibility was not the barrier; market clarity was. Working in the open through a consortium representing the key players in the industry ensures that the project outcomes are both technically and commercially feasible and have a smoother path to BAU adoption.

Key message

Openness to innovation from a variety of sources

4. Who We Work With

Innovating across vectors and sectors, so a problem is solved once and the learning can be applied wherever the same challenge arises, improving whole system efficiency.

2. Whole system collaboration

Clean Power 2030 and Strategic Spatial Energy Planning require networks to plan with gas, generation, transport and industry, not in isolation. Many network challenges sit at those boundaries, so innovation projects increasingly bring in the organisations on the other side of them.

Projects run jointly with gas networks test how the two systems interact, so decisions taken by one network are made considering the consequences for the other. UKPN's CReDO+ works with gas networks and other critical infrastructure operators including water and telecoms to quantify the interdependencies between electricity and gas assets, so cascading climate risks are assessed across the system rather than one sector at a time, and shows where coordinated resilience investment beats sector-specific spend. SPEN-T's Vibration Monitoring of Wind Turbine Effects on OHL Conductors project is using sensors to measure how nearby wind turbines cause overhead lines to shake. Each turbine-related outage it helps prevent could save £450k, a saving passed on to consumers through lower energy bills.

Collaboration also reaches beyond the energy sector. Industry, ports and consumer-facing organisations hold data, assets or consumer reach that networks do not. SSEN-D's Grounds for Change project is adapting trenchless methods proven in telecoms, water and gas to low-voltage cable work, aiming to cut the cost and disruption of the street works needed for electrified heat and transport and has collaborated with the Energy Innovation Centre to facilitate involvement of small innovators across the energy system. SPEN-D's Net Zero Industrial Pathways scales the approach proven in North-East Wales across the whole licence area, working with regional stakeholders to build the first whole energy system view of industrial decarbonisation demand and closing a gap in ED3 planning. UKPN's Electric Thames works with the Port of London Authority, vessel operators and Marine Zero to plan the electrification of Thames commercial shipping.

The Energy Innovation Summit, held at the SEC in Glasgow on 5–6 November 2025 under the theme of accelerating innovation to deliver CP 2030 outcomes, brought the networks and their partners together around that agenda.

11

energy networks beyond ENA members listed as collaborators on live FY26 projects

>50

collaborating organisations across gas, water, renewable generation and customer-facing sectors

22%

of FY26 projects delivered with at least one electricity network partner beyond the lead network

4. Who We Work With

CReDo+ (UKPN)

Accelerating resilience planning via a climate resilience digital twin to map cross sector network assets

Lead network

UK Power Networks
Delivering your electricity

Partners

CATAPULT Connected Places
CMCL
UKRI Science and Technology Facilities Council
SP Energy Networks

Extreme weather affects energy, water and telecoms assets together, and a failure on one network can cascade to the others. Each operator largely assesses this risk on its own, so the knock-on effects between systems are hard to see and plan for.

UKPN has partnered with organisations across the energy system and beyond to build CReDo+ which is a novel enhancement of the original Climate Resilience Demonstrator (CReDo) climate change adaptation decision support tool.

CReDo+ will scale up across the energy sector and develop a user-friendly platform for asset experts to quantify their combined knowledge of risk under extreme weather conditions into new statistical models. By connecting these asset impact models across the network, CReDo+ will capture a system level view of cascading risk, enhancing the ability of network operators and wider connected asset owners to build systemic climate resilience and robustness.

- Funded: £ 10,896,603 (SIF)
- Project timeline: Oct 2023 – Mar 2028
- Project partners and collaborators: Connected Places Catapult, CMCL, Cadent, National Gas, Scottish Power, NESO, BT, Thames Water, Anglian Water and academia
- Project lead: James Daniel, Innovation Project Manager

Smarter Networks Portal project page

Benefits

Societal:

£248m customer benefits through Customer interruptions (CI) and customer minutes lost (CMLs) reductions.

Whole system collaboration:

The CReDo+ Resilience Working Group brought together energy networks, as well as water and telecommunications organisations to build resilience at a whole system level.

Key learning:

A wireframe and technical requirements were defined for the digital elicitation tool, including features for a graphical interface and online questionnaire distribution, which will shape the development roadmap for model creation and stakeholder input.

Key message

Whole system collaboration

4. Who We Work With

VERIFY (SSEN-D)

Vulnerability evidence for resilience and flexibility investment.

Lead network

Scottish & Southern Electricity Networks

Partners

SGN, E.ON Next, Data Communications Company, Centre for Sustainable Energy, Aberdeen City Council, Quarriers, Smith Institute, CGI

VERIFY (Vulnerability Evaluation for Resilience Investment and Flexibility) combines data on networks, properties, consumer demographics and smart meters to ensure electricity networks can better tailor network investments to match the needs of local consumers. The project is delivered with a range of subject matter experts and innovators from the charity, technology, industry and academic sectors, in collaboration with SGN.

Quarriers, a third-sector charity partner, brings insight into supporting customers with home carers and into digital inclusion. The Centre for Sustainable Energy leads stakeholder and customer engagement. The Smith Institute contributes machine learning and AI expertise and Smart DCC brings specialist smart metering knowledge. The University of Reading supports assessment of the project's role in flexibility and the wider energy system, and Cranfield University contributes on consumer integration and participation.

- Funded: £5,972,922 (SIF)
- Project timeline: September 2025 – September 2028
- Project partners and collaborators: SGN, Aberdeen City Council, Aberdeen City Health and Social Care Partnership, Centre for Sustainable Energy, CGI, Cranfield University, E.ON, Quarriers, Smart DCC, The Smith Institute, University of Reading
- Project lead: Rhys Williams, Project Manager

Smarter Networks Portal project page

Benefits

Whole system collaboration:

Delivered with SGN, so vulnerability and flexibility evidence is built across gas and electricity rather than separately.

Innovation from a variety of sources:

Third-party collaborators span local government, health and social care, charity, technology, academia and industry.

Customers in vulnerable situations:

Charity and health partners ground the work in the needs of customers who rely on powered care at home.

Key message

Whole system collaboration

4. Who We Work With

REACT: Rapid Evaluation Areal Connection Tool (SSEN-T)

A geographic visualisation planning tool to optimise network development.

Lead network

Scottish & Southern Electricity Networks TRANSMISSION

Partners

MapStand® olsights®

Developed over three phases (SIF Discovery, SIF Alpha and now NIA), REACT draws on partners across the energy system. In the SIF phases, SSEN-T worked with NGET, SGN and Icebreaker One, bringing electricity transmission, gas and data-sharing expertise to the tool's design.

The most recent NIA phase, delivered with MapStand and Olsights, has combined planning, geographic and utility datasets and puts electricity, gas and hydrogen networks and planned carbon capture on one map. This ensures connection decisions account for the wider system.

The current NIA phase turned the SIF output into a standalone tool and added the features planners asked for: risked capacity scoring against user-set criteria, date-ordered substation capacity build-up against transformer rating, geographic filters, a 2025–2050 time slider and daily automated data updates.

Tested on the Argyll and Bute zone against SSEN-T's own records, it supported the Network Plan 2035 work, reached TRL 8 and is now used by SSEN-T's Energy Insights Team.

- Funded: £1,080,000 (NIA), £553,671 (SIF Alpha), £169,409 (SIF Discovery)
- Project timeline: January 2025 – March 2026
- Project partners and collaborators: Olsights, MapStand
- Project lead: Jonathan Powell, Innovation Development Project Manager

Smarter Networks Portal project page

Benefits

Innovation from a variety of sources:

Merging planning, geographic and utility network datasets that had not been combined before.

Whole system collaboration:

Electricity, gas and hydrogen networks and planned carbon capture sit on the same map, so connection decisions account for the wider system.

Benefit to consumers:

Potential for £10.8m estimated lifetime net benefits from £1.4m development costs to date, through reduced curtailment, strategic reinforcement, and greater network insight.

Key message

Whole system collaboration

5.

How We Ensure Value For Money

5. How We Ensure Value For Money

From funded project to everyday use: what deployed innovation delivered for households and businesses, and how the networks avoid paying twice for the same answer.

Innovation earns its keep once it is in use. This section looks at what the networks have put into service, what that delivers for consumers, and how they avoid funding the same problem twice. The case studies in this chapter explore two key messages: (1) innovation deployment, and (2) maximising value for money.

1. Innovation deployment

Completing a project is not the end point: networks continue to track innovations into BAU and quantify their benefit, whether that be capacity released, outages avoided, reinforcement deferred, or carbon saved. SSEN-D established a dedicated Innovation Deployment team this year, successfully transitioning NeRDA 2 into BAU, where it provides near real-time network visibility that supports dynamic tariffs and contributes to more efficient and affordable decarbonisation. SP ENW's Celsius project releases capacity at existing substations by managing thermal pinch points, deferring asset replacement. SPEN-T's Project Conan (T2) brings the same approach to overhead lines: its conductor condition assessment device measures corrosion directly, reducing premature replacement and sparing consumers paying unnecessary replacement costs. NESO's Volta project showed that machine learning can forecast demand minute by minute for the control room, with confidence ranges operators can read as risk; cutting real-time forecast error by 50 MW would save around £43m a year in balancing costs, and the model is already being reused across NESO's wider forecasting.

Deployment also builds on prior innovation work to deliver value for money. SSEN-D's submissions to the ED2 reopeners aim to take innovation already proven elsewhere straight to delivery, including a Voltage Management solution built on learning from SP ENW's CLASS project. Networks are the enabler; households and businesses are the primary beneficiaries. The value of a deployed innovation reaches consumers as lower bills, fewer interruptions and faster connections for heat pumps, solar and electric vehicles, and the carbon saved counts towards both network and national level targets. NGED's EQUINOX project, now in deployment, trialled technical and commercial methods to reward households for temporarily shifting demand when they use low-carbon heating in winter without losing comfort, cutting their bills while helping networks avoid costly reinforcement.

£919m

Forecast lifetime benefit of innovation projects deployed into BAU over RIIO-2

>500,000

unit deployments of solutions from innovation projects deployed into BAU to date

8

innovation projects adopted into BAU in FY26

5. How We Ensure Value For Money

REVEAL (NESO)

Tools to make the trialling of new balancing capabilities easier and faster for NESO and industry.

Lead network

Partners

As the pace of change towards net zero accelerates, new market services need to be tested and launched far more quickly than the current route to market allows. The project investigated the feasibility of, and developed a proof of concept for, a NESO-hosted, digitally ringfenced balancing and constraint market. Working with service providers inside that sandbox, NESO could build and trial new concepts, services and solutions autonomously, accelerating delivery of its Markets Roadmap.

REVEAL gives NESO and industry a ringfenced space to simulate and test new balancing services away from live systems, lowering barriers to entry for smaller market participants and supporting the Clean Power 2030 goals. Additionally, the REVEAL team have engaged with industry to develop trial pipelines and develop further iterations of the live trial environment to enable more market participants.

- Funded: £400,000 (NIA)
- Project timeline: September 2022 – March 2025, successfully deployed in 2026
- Project partners and collaborators: Capgemini
- Project lead: Leon Walker, Governance and Insights Manager

Smarter Networks Portal project page

Benefits

New and faster market participation:
Lowers barriers to entry and faster development so smaller providers can test and refine their solutions and bring to market faster

Knowledge sharing:
Builds evidence of what works that future products and services can build on.

Key message

Innovation deployment

5. How We Ensure Value For Money

DgWLCA – Digital whole life carbon assessment (NGET)

The UK's first digital whole life carbon tool for transmission.

Lead network

nationalgrid

Electricity Transmission

Partners

MOTT MACDONALD

NGET has committed in its Environmental Action Plan to cut the carbon footprint of its construction projects and to work towards the PAS 2080 standard. The current project transforms the carbon footprint calculation to a modern digital approach including AI-supported low-carbon optimisation and intuitive, energy-specific onboarding, while retaining NGET's existing carbon databases and updating them annually.

The tool has achieved a high TRL level and has replaced the legacy tool as the standard approach across the full NGET portfolio, with business procedures and contractual requirements updated accordingly and 40 supply chain partners now tracking whole life carbon data. Over a ten-year asset life it is assumed to save 64,000 tCO2e, worth around £19m in societal value.

- Funded: £163,220 (NIA)
- Project timeline: August 2024 – August 2025, successfully deployed in 2025
- Project partners and collaborators: Mott MacDonald
- Project lead: Dr Muhammad Shaban – Lead Innovation Engineer

Smarter Networks Portal project page

Benefits

Route to BAU:
Embedded across the full NGET portfolio at TRL 8, replacing the legacy tool.

Avoiding duplication:
Builds on an existing tool and shared carbon databases, not a new platform.

Environmental benefits:
64,000 tCO2e saved over ten years, worth around £19m in societal value.

Key message

Innovation deployment

5. How We Ensure Value For Money

Artificial Forecasting – Beta (NPg)

Developing innovative AI-based approaches to augment load forecasting capability, unlocking flexibility as a reinforcement option.

Lead network

NORTHERN POWERGRID

Partners

OAKTREE POWER

ev.

FACULTY

This project tests machine learning algorithms to produce load forecasts and develop AI techniques for modelling load connections.

As DNOs transition to DSOs, the load forecasting process must become increasingly granular to support flexibility dispatch – frequency needs to increase from annual to monthly, weekly and daily, and the scope needs to expand to capture HV / LV transformation points. Given the new conditions, enhanced models and novel approaches are required to enable system flexibility and support network stability under these new conditions.

Available capacity in the network for new low-carbon loads will be freed up thanks to more effective network management, increasing the speed and lowering the cost of decarbonisation.

The project will benefit a wide range of users, including those seeking to connect low-carbon loads, flexibility providers and controllers, network customers and other electricity distribution companies.

The innovation project takes the technology TRL 4 to TRL 8, aiming at everyday forecasting use rather than a proof.

- Funded: £3,664,540 (SIF)
- Project timeline: February 2025 - February 2027
- Project partners and collaborators: Oak Tree Power Ltd, EV Dot Energy Ltd, Faculty Science Ltd
- Project lead: Neal Wade – System Forecasting Engineer

Smarter Networks Portal project page

Benefits

Cost savings for networks:

Reduction in HV / LV reinforcement cost by about 5 -10% (£3.5m-£7m p.a. for NPg, increased by a factor of 7 for all DNOs in GB)

Staff cost savings of ~£2m p.a. in NPg, increased by a factor of 7 for all DNOs.

TRL change

4 to 8

Key message

Innovation deployment

5. How We Ensure Value For Money

Getting the most from every pound of consumer-funded innovation money, spending it once, sharing the cost where we can, and stopping projects that will not pay back.

2. Maximising value for money

Innovation is funded from consumer bills, so the test is not if an innovation project works, but whether it was the best available use of funds. The nine network licensees and NESO face many of the same problems: connecting low-carbon technology, managing constraints, and monitoring ageing assets. The same idea can therefore occur in several places at once, and because innovation funding comes from consumer bills, an overlapping project spends that money without producing a new answer.

The networks use a set of mechanisms to reduce that risk. Projects and their findings are registered and searchable on the Smarter Networks Portal; ENA's innovation governance groups give the networks a forum to compare plans before funding decisions are taken; and annual innovation reporting and dissemination events put completed results in front of the other licensees. Where overlap is found the work is combined rather than repeated: one project with several network partners, shared trial sites, or one network adopting another's proven method instead of running its own trial.

SPEN-D's D-suite takes its distributed soft open point from UKPN's earlier Active Response project and its slim-design DC and AC capable smart transformer from their own LV Engine project. In this way, rather than funding either again, the project is reusing existing IP to develop a rating optimised suite of LV smart devices. NGED's HV Pinpoint is being designed to complement an existing Pre-Fix method rather than replace it, locating pre-fault events on HV underground cables precisely enough to cut reliance on test vans, so the network gains a second detection route without funding a second detection programme. NPg's MultiResilience project coordinates proven trials over two different sites to ensure rural customers have uninterrupted supply during an outage.

Sharing of test facilities, contributions from project partners and suppliers, and competition for funding all contribute to value for money for the consumer. Projects delivered with several networks also have the benefit of spreading costs over a wider customer base. Projects are reported against the problem statement they set out to address and a method that does not prove out is closed and published as a negative result, so other networks don’t invest additional funds to come to the same conclusion.

3000+

projects registered on the Smarter Networks Portal and searchable by every network

31

collaborative projects registered in FY26, run jointly rather than separately

426

project partners working with the networks on registered projects in FY26

5. How We Ensure Value For Money

PHASED SWITCH SYSTEM (NGED)

Rebalancing LV phases to release capacity and defer reinforcement.

Lead network

nationalgrid Electricity Distribution

Partners

UK Power Networks Delivering your electricity

Low Carbon Electric

UNIVERSITY of STRATHCLYDE PNDC

The Phased Switch System (PSS) dynamically reconfigures the phases of a low voltage feeder to cut phase imbalance. That lowers the load on the most heavily loaded phase and the risk of incorrect fuse operations, improves use of the cable's capacity so reinforcement can be deferred, reduces losses and the CO_2 that goes with them, and eases the voltage problems that can stop customers taking part in flexibility markets.

As customers adopt low-carbon technologies, phase imbalance threatens hosting capacity and triggers reinforcement with PSS being a cheaper alternative.

The SIF Beta project starts from a prototype already trialled to TRL 6 by UKPN under NIA, so consumer funding goes on market readiness rather than repeating the proof, and lab testing runs at PNDC, a shared industry facility, instead of building test capability for one project. A planning tool developed alongside it shows where the technology delivers most benefit, so any roll-out can be targeted rather than universal.

- Funded: £3,430,000 (SIF Beta)
- Project timeline: September 2024 – January 2028
- Project partners and collaborators: UK Power Networks, LCE, Nortech, PNDC
- Project lead: Jacob Lynch – Innovation Engineer

Smarter Networks Portal project page

Benefits

Financial:

Targeted roll-out forecasts a net lifetime benefit of £230m and a 45-year NPV of £371m, from fewer unintended fuse operations and deferred reinforcement.

Environmental:

Net savings of 3 TWh of losses over the devices' lifecycle and 24ktCO2e of carbon.

Customer access to markets:

Fewer voltage problems should let more customers earn from flexibility and smart charging, where savings can run to several hundred pounds a year.

Key message

Maximising value for money

5. How We Ensure Value For Money

VEST Enhancement (SPEN-D)

Finding the households the energy transition risks leaving behind, postcode by postcode.

Lead network

SP Energy Networks

Partners

SIRIO

The VEST Enhancement project upgrades SPEN-D's Vulnerability in the Energy System Transition (VEST) tool rather than starting from scratch. The improved tool better considers personal circumstances and the physical suitability of customers' home environments.

The refreshed index adds property-level barriers to low-carbon technology, such as no off-street parking for a charge point or no space for a heat pump. Modelling now covers around 96,000 postcodes in Scotland and over 81,000 postcodes in England and Wales and produces adoption scores for solar PV, heat pumps and battery storage together with the drivers and blockers behind each.

Insight reaches users through an interactive mapping platform for SPEN-D and its partners, with a customer-facing portal concept so households can explore their own options and funding routes.

- Funded: £545,000 (NIA)
- Project timeline: July 2025 – September 2026
- Project partners and collaborators: SIRIO Multilateral Strategies Ltd
- Project lead: Mikaelle Lopes Diniz – Project Manager

Smarter Networks Portal project page

Benefits

Value for money:

£545k of cost against £954k-£2.35m of modelled net benefit.

Benefit to consumers:

Better targeting cuts delivery cost and widens access to EVs, heat pumps and solar.

Key message

Maximising value for money

6.

Continuing the Cycle

6. Continuing the Cycle

6.1 Opportunities Ahead

RIIO-3, the current electricity transmission price control period, began in April 2026, with final determinations announced by Ofgem in December 2025. The final determination confirmed £500m for the SIF and £164m of NIA funding for electricity transmission, along with an important shift in emphasis from RIIO-2 to RIIO-3 from trialling new ideas to deploying proven ones with the SIF gaining a new Deployment Phase to fund roll-out of innovation into business-as-usual. Draft determinations for the next electricity distribution price control period due to start in 2028, are yet to be announced.

This was accompanied by the release of the SIF challenges for 2026 to 2033 in May 2026 via the Networks reimagined: Designed to deliver for customers and growth report from the Energy Network Innovation Taskforce. These challenges show a clear focus on innovation that leads to a highly operational electricity network which improves performance and delivers better outcomes for consumers, including reduced costs:

Innovation challenge 1: Industrial and business connection acceleration

Innovation challenge 2: Faster build and maintenance

Innovation challenge 3: Instant use domestic energy devices

Innovation challenge 4: Eliminating energy outages

Innovation challenge 5: Decentralised system balancing

At the same time, networks are aligning their innovation efforts with broader system goals, such as those outlined in National Grid's Operational Objectives, which take a whole-system view of progress. The most recent publication of the Electricity Networks Innovation Strategy reinforces this approach. It provides a unified framework to innovate in ways that support the UK's low-carbon transition and deliver value to customers.

As we enter RIIO-3, projects are becoming increasingly iterative over extended periods of time and across funding streams. For example, SP ENW's Net Zero Terrace, detailed further on page 15, began as a SIF Discovery and Alpha project, then moved to NIA to develop the solution further, and is now progressing towards a SIF Beta application. Future projects will also continue this trajectory to ensure that learnings from past years are taken forward and more projects reach business-as-usual deployment.

Looking ahead, networks will be expected to show how innovation projects can lead to new solutions being deployed and the real-world benefits they will bring to consumers, with cost and reliability being key drivers in this regard.

6. Continuing the Cycle

6.2 Key Learnings

During the FY26 period, networks registered 139 new projects, closed 81 projects and successfully integrated 8 solutions into business-as-usual operations[1]. As projects progress, networks continue to seek opportunities to embed innovative solutions into day-to-day operations.

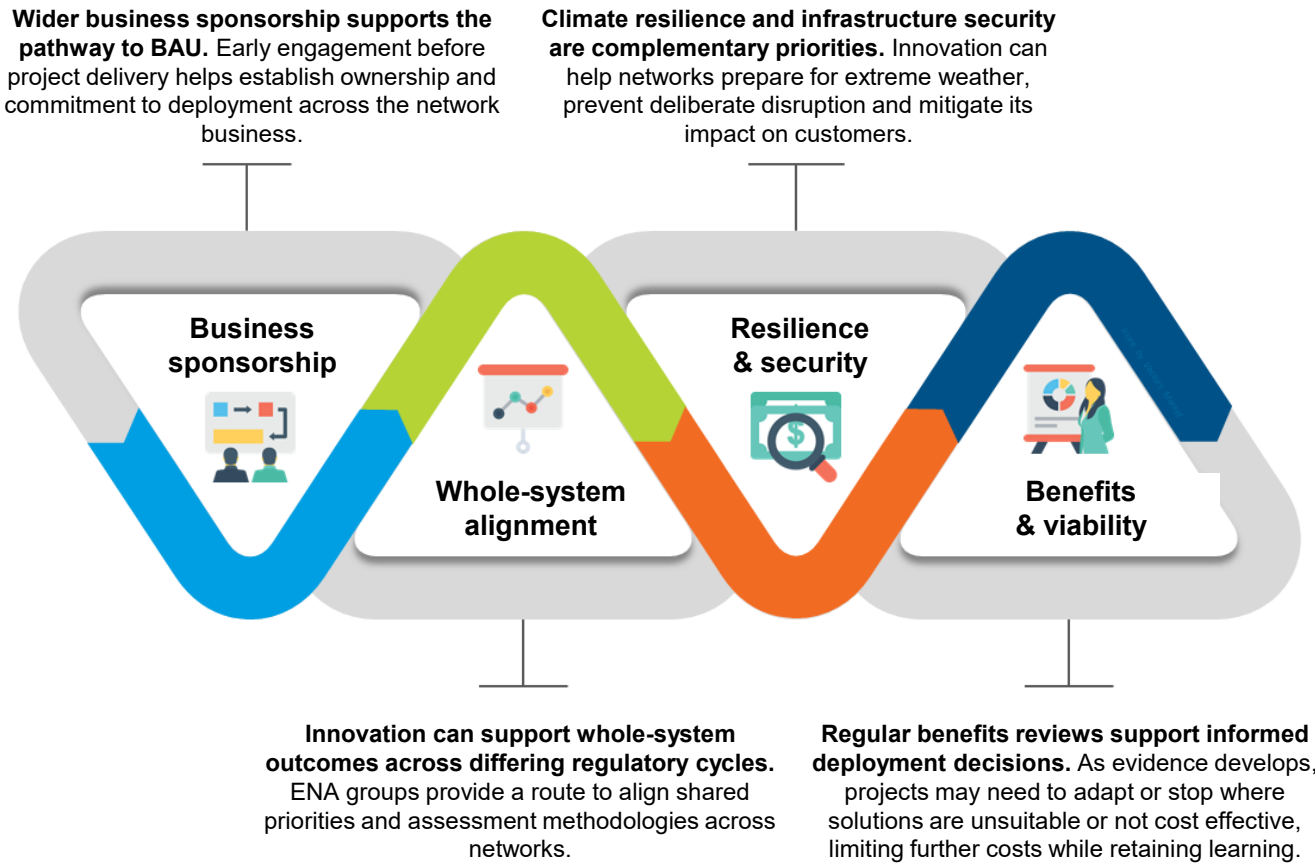
However, this process is not always straightforward. Innovation takes time, and the path to BAU can be complex. Networks may face strategic, policy, or operational challenges that require flexibility and persistence. For example, the EQUINOX project ran over multiple years and encountered challenges with changing policy, technology and operational landscapes that had to be managed through iterative trial design and regular horizon scanning. Lengthy onboarding for project partners, particularly small businesses, can also hinder progress. Many projects have made use of the Energy Innovation Centre to reduce this admin barrier for resource-constrained innovators.

Not every project delivers a benefit that can be measured in pounds, carbon or customer minutes lost. Some projects prove that an approach does not work, that the technology is not ready, or that market or regulatory conditions are not in place.

These results, while harder to quantify, still have value and can lower the risk of later business-as-usual decisions. In such instances, it is important to fast fail projects to avoid sunk costs. UKPN is trialling a benefits readiness framework within their governance to review project cost benefit analyses twice annually to identify such instances early.

We've summarised the key challenges and lessons learned in Figure 6.1, offering insights that will help shape future innovation across the sector.

Figure 6.1 BAU challenges and lessons



[1]This imbalance between the number of projects launched / registered and the number completed is to be expected for a period nearing the end of a price control period, as project registration tends to be front loaded for a particular period of this type.

6. Continuing the Cycle

6.3 Recommended and Future Actions

Embedding innovation into BAU requires clear communication, strategic planning, and industry-wide support. This section outlines the key enablers that help networks integrate innovation outcomes into day-to-day operations.

A strong focus on communication and developing plans for deployment early on in a project is essential, ensuring that teams across the business understand the value of proposed changes and are invested in successful deployment. Networks attend regular project notification meetings, chaired by ENA, where collaboration helps highlight upcoming projects and avoid duplication. DNOs will also show how they aim to avoid project duplication in the Innovation Appendices they will submit as part of the new ED3 price control.

Support from industry stakeholders is vital. The proposed new structure for the Innovation Measurement Framework (IMF) will require networks to capture benefits from deployed projects, including non-financial ones such as environmental impact. This should allow networks to better articulate the value of innovation, particularly to senior leadership and the wider energy sector. Tracking knowledge generation as a benefit is also especially important for low Technology Readiness Level (TRL) projects, which play a critical role in testing feasibility but can be harder to quantify due to their experimental nature.

Unlocking innovation for business-as-usual requires targeted funding and flexible regulation. Additional funding dedicated to deploying innovative solutions into BAU operations would help networks to overcome barriers such as resource constraints, policy limitations and organisational practice. To support this, Ofgem has introduced a beta version of the Energy Regulation Sandbox, which helps innovators trial new propositions without some of the usual rules applying, and are also planning to launch the Future Regulation Sandbox, an innovative policy instrument to test and trial changes to the energy rulebook in a controlled environment before implementing them. This initiative could help mitigate some of the regulatory barriers to innovation.

However, the specifics of deployment are often outside of the scope of innovation projects, and networks still struggle to quickly assemble the necessary resources. Additional policy support through relaxed licence obligations, the ability to use a more simplified/agile policy process and clear communication from government of future policy direction have also been highlighted as important avenues to boost BAU deployment.

FEN Annual Innovation Summary Report

2025/26

Compiled by:

Cadent Your Gas Network

national gas

Northern Gas Networks

SGN

WALES&WEST UTILITIES

In conjunction with:

fen future energy networks

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Why we're producing this report

This 2025/26 Annual Innovation Summary Report looks at the shared progress made by the four Gas Distribution Networks – Cadent, Northern Gas Networks, SGN and Wales & West Utilities – along with the transmission network operator, National Gas. It concerns the 2025/26 regulatory year, running from April 2025 to March 2026. Since August 2024, the GB Gas Networks have been members of Future Energy Networks (FEN), which coordinated this report.

Every year, each gas and electricity network publishes its own Annual Innovation Summary report. These give a clear picture of the projects, progress and lessons learned that relate directly to the future of the networks and the wider energy system. Together, the gas and electricity reports give a full picture of network innovation across Great Britain.

This collective industry-wide summary report includes highlights from these individual reports, alongside data on innovation activity, deployment and benefits. We have structured this report using the five themes identified in the Gas Networks Innovation Strategy, which together aim to deliver 'a fair and low-carbon gas future':

Theme 1:
Reducing our environmental footprint

Theme 2:
Digital by default

Theme 3:
Whole-system pathways

Theme 4:
Equitable energy for everyone

Theme 5:
Flexible and seamless connections

We've included case studies throughout to demonstrate the range, quality and success of innovation-funded projects across all the gas networks. This includes selected examples of subsequent activity that show how work that started during RIIO-2 is progressing.

Why innovation matters

Innovation is one of the four requirements of the RIIO **(Revenue = Incentives + Innovation + Outputs)** regulatory framework. Ways we can innovate include reducing our environmental footprint, working with data and digital tools, taking a whole-systems approach, providing flexible connections and ensuring that our customers are not left behind.

Innovation reduces uncertainty by generating the practical evidence that supports informed decision-making. Going into RIIO-3, we are focusing on embedding solutions into business-as-usual. We need to find new ways of developing and operating energy networks to enable the whole-system energy transition. Many of our projects are already delivering tangible value for customers and stakeholders as our energy system evolves.

The value of collaboration

Collaboration remains central to this approach. The gas and electricity networks work closely together, as well as with industry partners, academic institutions and supply chains, to share learning and speed up progress. By working together on our innovation projects, we can:

1. **Share best practice** and **subject matter expertise** across all of our businesses
2. **Prevent duplication** by raising ideas in our Gas Innovation Governance Group
3. Ensure that **project outputs are applicable** across the whole gas industry in the UK
4. **Present a unified view** of the innovation benefit for the consumer

Workshops and engagement with our innovation stakeholders play a key role in making sure our solutions reflect real-world challenges and opportunities. This approach will support a portfolio of projects that moves from early-stage research towards scalable deployment.

If you want to work with us, **get in touch.**

The role of innovation funding

The role of innovation funding

With support from the Network Innovation Allowance (NIA) and the Strategic Innovation Fund (SIF), the networks continue to invest in projects that speed up decarbonisation, improve system performance and deliver benefits for customers and the wider energy system.

Innovation funding has successfully built a strong evidence base during RIIO-2. We are now moving into RIIO-3 with clearer priorities, stronger partnerships, a better understanding of future energy options and a continually evolving ability to turn innovation into real benefits for consumers.

The innovation cycle

We follow the three-stage Future Energy Networks Innovation Process (FENIP). All innovation projects move from idea generation through projects developed to benefits realisation, which may be business-as-usual rollout but it can also be creating valuable learning for further development.

A framework set out by the Gas Networks Innovation Strategy (April 2026)

Innovation activities are guided by the energy networks' innovation strategies. These are developed with the Energy Networks Association (ENA), FEN and network operators across Great Britain and by consulting with other internal and external stakeholders. This shared approach makes sure innovation is coordinated nationally, focusing on delivering real value for customers, while supporting the transition to net zero.

The Gas Networks Innovation Strategy sets out a clear framework for tackling the key challenges facing us. These include decarbonising heat, building a flexible and resilient energy system and supporting consumers in vulnerable situations. It is designed to be both ambitious and adaptable, encouraging meaningful innovation without placing unnecessary limits on how that innovation is achieved.

Highlights from the Innovation Measurement Framework (IMF)

The IMF contains a benefit tracking methodology for a fair and consistent assessment of innovation projects. We use it to report on a range of innovation outcomes, including collaboration and partnerships, the speed at which successful innovation is moved into business-as-usual and the benefits innovation has delivered for network customers.

Balanced scorecard

The balanced scorecard outlines the measures to be reported against and where they sit within the innovation framework. It is also a useful reference for idea generation, and for reference at later project stages.

Activity

141	**147**	**89**	**51**
Projects started in 2025/26*	Projects completed in 2025/26	Research projects started	Development and demonstration projects started

Collaboration & ecosystem

34	**450+**	**190+**	**42**
Collaborative projects started	Unique external organisations in the innovation ecosystem	Small-business project partners	Academic project partners

Idea pipeline

310	**147**	**48%**	**116**
Distinct innovation ideas captured	Externally originated ideas	External share of recorded-origin ideas	Ideas not progressed

Responsible investment

£44.5m	**£203k**	**59%**	**85%**
Forecast project investment	Median forecast project cost	Projects forecast at ≤£250k	Projects forecast at ≤£500k

*Network totals may exceed the number of unique projects because collaborative projects can be recorded against more than one participating network.

Figure 1. 2025/26 Balanced scorecard, derived from IMF and FEN reporting

Funding breakdown

The NIA is a set allowance each energy network receives as part of its price control allowed revenue. The NIA provides funding to energy networks to fund smaller technical, commercial or operational projects directly related to the licensees' network. The innovation projects should have the potential to deliver benefits to the licensee and its customers, and facilitate the energy system transition and/or address consumer vulnerability.

The SIF is an additional funding mechanism which network licensees can apply for, under a competitive process organised by Innovate UK – UKRI. The SIF supports large-scale transformational research and development projects which can address the innovation challenges set by Ofgem.

In contrast to the NIA, the SIF adopts a three-stage approach for project funding: Discovery phase (for feasibility studies), Alpha phase (for experimental development) and Beta phase (for building, operating and/or demonstrating).

How benefits are delivered

The innovation funnel uses technology readiness levels (TRLs) to progress projects from concepts through to deployment.

TRL 1–3:

Research

Ideas come from our own teams, strategic insights, external partners or open submissions. We assess how well the idea fits our priorities, meets customer or network need, its potential value, how realistic it is to deliver, its novelty, level of risk and overlap with existing work. We either progress the idea, put it on hold or stop it.

TRL 4–6:

Development

The idea is turned into a clearly defined innovation project by setting out the problem and how it would be used, the planned solution, partners involved, users, costs, funding, ways to measure success, expected benefits, governance, and any safety or regulatory requirements. This results in an approved project plan and a concept that can be tested.

TRL 7–8:

Demonstration

A prototype is built and tested in a controlled or realistic setting. We test technical performance, how well it fits into operations, safety, how well users accept it and potential benefits. Evidence and feedback is gathered to improve the solution, and to decide whether it's ready to be trialled on the live network.

TRL 9:

Implementation

The solution is fully integrated with operational hardware and software systems. The system has been thoroughly demonstrated and tested in its operational environment.

The TRL stages indicate potential benefits but not all projects will deliver an implementable outcome.

Innovation project progress

Innovation is inherently uncertain and not every project will result in an implementable solution. Benefits may take the form of financial return or cost avoidance, but can also include learning, reduced environmental impact and improved customer or social outcomes.

Many projects are still at an early stage so it is difficult to put a clear financial value on them using simple methods or accounting rules. Research projects, for example, create a basis for future practical implementation so their return on investment is the learning they generate and how we build on previous research projects. Similarly, it is often not appropriate to define key performance indicators (KPIs) for projects without clear data-based outcomes.

Some of the learning our innovations generate helps form the evidence for future scenarios and policy decisions that may not come to fruition, or they may bring differing value depending on which pathway the energy transition takes.

End TRL	Projects with end TRL	Recorded cost	Project share	Recorded cost share
TRL 1	0	£0	0%	0%
TRL 2	4	£539,930.00	2.94%	2.15%
TRL 3	44	£5,347,316.52	32.35%	21.28%
TRL 4	19	£4,023,223.62	13.97%	16.01%
TRL 5	29	£5,832,268.28	21.32%	23.21%
TRL 6	20	£6,582,874.61	14.71%	26.20%
TRL 7	9	£1,457,377.20	6.62%	5.80%
TRL 8	11	£1,343,994.12	8.09%	5.35%
Total	**136**	**£25,126,984.35**	**100%**	**100%**

Figure 2. Percentage of projects and spend by network and TRL

Building partnerships

We collaborate with a range of supporters and partners to ensure projects benefit from diverse expertise and perspectives.

Project supporters

Project supporters make no contractual or binding commitment to the project but they intend to endorse and provide support to the project by being publicly named as its supporter.

69

total project supporters

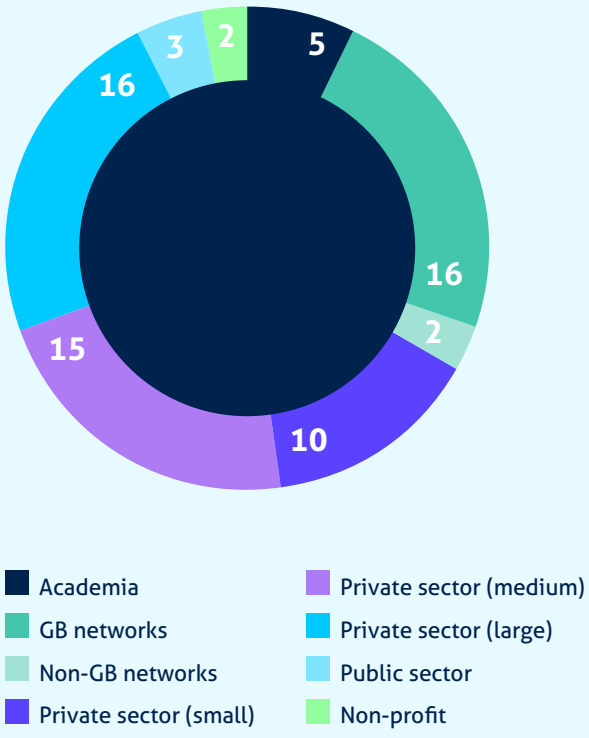


Figure 3. Project supporters by type

Project partners

A project partner is not a network licensee but they make a contractual commitment to contribute to the project, for example in terms of funding, personnel or equipment.

142

total project partners

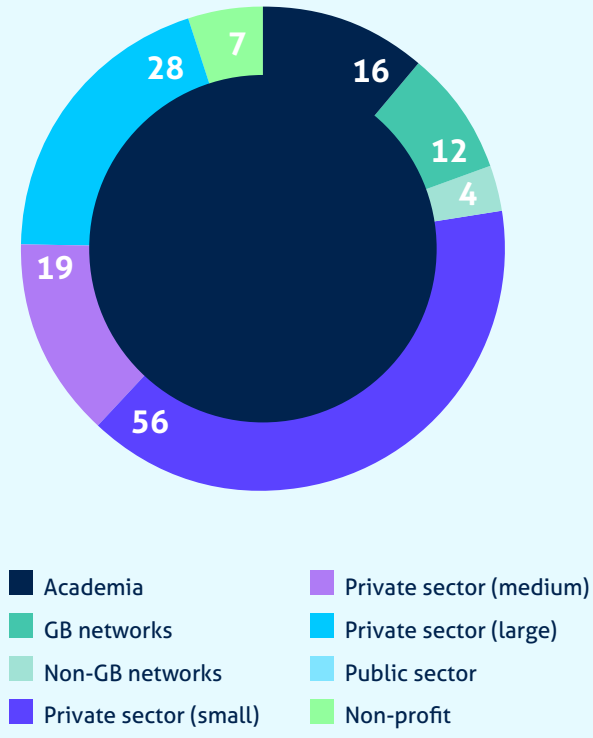


Figure 4. Project partners by type

Events

As well as sharing knowledge and ideas throughout the year, we organise and attend events to meet with other innovators, industry colleagues and decision makers. They are opportunities for us to form new relationships, build on existing partnerships, share information and keep the momentum going.

Here are some examples of events we ran or attended in 2025/26:

Biomethane Futures
SIF Community Day
Cadent Global Technology Conference
CRISP26 - Welsh Government Innovation Support Meetings
Energy Innovation Summit 2025
SGN Innovation Showcase
Utility Week Live
FEN Innovation Insights
Great Yorkshire Show
Green Gas Taskforce
All-Energy Exhibition and Conference
ENA Energy Innovation Basecamp
EUA NEEG Conference
BOHR Innovation Day
IGEM webinars
NEWID / Deeside Decarbonisation Forum
Biomethane session at Cereals 2025
South-West Business Council - Autumn Conference
Deblending SIF Beta Stakeholder event

Theme 1

Reducing our environmental footprint

We aim to reduce the environmental impact of our businesses while investing in low-carbon construction and maintenance technologies.

Innovation is central to accelerating the transition to net zero by reducing methane emissions, improving decarbonisation and adopting low-carbon technology. As well as advancing whole-energy solutions that support the shift to low carbon, we are looking at ways of reducing the environmental impact of the gas networks, for example by cutting gas leakage, venting and emissions during maintenance, construction and operations. This helps keep gas in our networks until it's actually used.

We're also looking at reducing waste in our supply chain and developing low-carbon vehicle fleets. For example, Wales & West Utilities developed **a total cost of operation model** for its commercial vehicle fleet to assure value for money for customers. Similarly, NGN's **Potential of biomethane to accelerate the decarbonisation of UK HGVs** project found that biomethane is already being used across parts of the haulage sector, and that it works well for long-distance routes, requires minimal changes to operations and can be scaled up quickly using existing infrastructure. **H2 Rail** research demonstrated high potential for hydrogen-powered rail in the Wales & West Utilities region.

SGN's **Biomethane feedstock mapping and strategic growth planning study** looked at the best locations for future anaerobic digestion capacity closer to where feedstocks are produced. Its **Catalysing Biomethane Growth in the UK** project reviewed existing policy and regulatory frameworks governing biomethane production and grid injection, to identify how they can be updated to unlock growth.

Resilience will become more important to keep operations reliable and supply continuous as networks face new and changing risks like more extreme weather events in the UK. This includes using smarter, data-driven approaches to help us manage asset health, lifespan and integrity to improve overall network performance. **The Climate Resilience Decision Optimiser (CREDO+)** was scaled across the electricity and gas sectors to understand infrastructure interdependencies and risk from extreme weather, including flooding, extreme heat and strong winds.

Gas remains part of the UK energy plan, among many other energy types, providing security during times of high demand and system stress. Our priority is to provide safe, reliable and resilient services that meet customer needs. Using more efficient and sustainable methods for network design, operation and maintenance will help limit our environmental impact while supporting wider goals to cut carbon.

NextGen Electrolysis

Project:
Converting wastewater to green hydrogen

Project reference:
SIF_WWU_2_3B

Duration:
Oct 2024 to Sept 2028

What we achieved

- Opportunity to significantly reduce the cost of green hydrogen production
- Potential cost savings from reusing wastewater to produce energy
- Potential to blend excess hydrogen into the local gas network in the future.

Why is the innovation needed?

One reason why producing green hydrogen is expensive is the high cost of the pure water and membranes needed to carry out the necessary electrolysis. Our membraneless technology using impurified water needed more practical testing.

Solution

Our partner Hydrostar's low-carbon electrolyser system does not need pure water to produce green hydrogen. This can help the hydrogen supply across the network to stay reliable, giving the best value for money and supporting energy security.

We are running two trials. At a Welsh Water treatment facility, we will use solar power, effluent and sea water to produce 100% hydrogen to provide the site office with heat and hot water. At Yeo Valley, we will use solar power and various water sources to blend up to 20% hydrogen with natural gas for producing yoghurt.

This lets us test the near-term use of hydrogen for an industrial customer and better understand the safety and operational needs for hydrogen blending technology and how it can be added to networks.

This project focuses on using impure water, such as rainwater, storm overflow and wastewater from industrial processes. This reduces costs and operational limits for customers. It also supports the wide-scale use of low-carbon hydrogen. Removing the need to purify water in this process could save the equivalent of 4.5 swimming pools of water a day for every gigawatt of hydrogen produced.

Cadent
Your Gas Network

Digital Platform for Leakage Analytics (DPLA) Beta phase

Project:
Reducing methane emissions across the network

Project reference:
CAD_SIF0005

Duration:
Sept 2023 to Mar 2026

What we achieved

We built an analytics platform that represents a clear shift from reactive repairs towards a proactive, strategic approach, to help reduce emissions and improve network safety.

Why is the innovation needed?

Methane leaks have a regulatory, environmental and societal impact. A more accurate, transparent and efficient methane leakage management platform can help us identify leaks and prioritise repairs.

Solution

We developed DPLA to improve how methane emissions are detected, measured and managed across the gas network. It uses a new data-driven approach to proactively detect and locate methane leaks on distribution networks. The solution combines physics-based hydraulic models with machine-learning-based models that use existing and new data to detect and locate gas leaks. The different elements are merged in an analytics platform to provide a complete approach to leak detection.

The project has shown how we can combine real-time data with advanced leak detection (ALD) technology. When this is paired with detailed hydraulic models, it allows us to measure emissions and pinpoint the exact location of leaks, so we can carry out fast, targeted repairs and plan asset work more strategically.

Following the successful end of the Alpha phase in June 2025, we expect DPLA and vehicle-mounted ALD to be used across the networks within the first two years of RIIO-3. This will deliver value straight away, while we continue to improve and refine how the rollout works.

Reducing operational emissions

Project:
Testing preferential emissions and developing a predictive tool to identify unaccounted-for gas

Project reference:
NIA_NGT0277 / NIA_NGT0260

Preferential emissions:
Apr 2025 to Dec 2025

Predictive tool:
Aug 2025 to Feb 2026

What we achieved

These two projects created an evidence base that reduces the risk of making poor investments, increases operational efficiency, improves data transparency and supports long-term decarbonisation goals.

Why is the innovation needed?

We lacked vital data on the behaviour of gases under certain conditions within the network.

Solution

We designed the preferential emissions research to close an evidence gap around whether hydrogen leaks preferentially to methane at transmission pressure. Earlier trials generally found that hydrogen and methane don't leak proportionally when blended in low- and medium-pressure systems but it had not been tested at transmission pressures.

By running controlled tests at around 70 barg using assets similar to real transmission systems, we gained direct evidence about how hydrogen and methane behave. It highlighted several factors that matter less at smaller scales or lower pressures. This improves the quality of evidence available to guide future decisions on hydrogen blending. The project also identified issues to be addressed in future work on preferential emissions. It gives clear guidance on how studies should reduce uncertainty and improve how results are interpreted.

Unaccounted-for gas (UAG) is the difference between how much gas goes into the network and how much comes out. It is mainly caused by measurement errors, not gas actually being lost. We built a model to simulate how gas should flow through part of the network and compared the results with real and simulated data to highlight where measurements might be wrong. The resulting repeatable process can be scaled up to cover larger parts of the network.

Comparing expected data with actual data can flag possible errors in meters or sensors, making it quicker to locate issues. It also improves confidence in reporting by providing stronger evidence to explain any unusual results. Even small reductions in UAG could bring cost benefits to consumers.

Theme 2

Digital by default

We will use open data and digital tools that work together to make every decision smarter, faster and more transparent.

Every part of the network relies on accurate, reliable information as we move through the energy transition. As the industry changes, easy access to data and the effective use of digital tools will build a smarter, more effective and more responsive energy system.

Our innovation programmes expand the use of real-time data, digital platforms and advanced analytics to help us see and control the network more clearly. By improving how we capture, share and use data, we can manage assets proactively, respond to network issues faster and plan more effectively to help us prepare for the energy transition.

For example, The Asset Compatibility Assessment Tool for Transmission, led by SGN, extended the scoring system method developed under the H21 Hydrogen Ready Components projects to include assets operating from 7 barg to 94 barg.

Interoperability – the ability of systems to work together – is another key priority across the wider energy sector. When systems can communicate and share information, collaboration improves so that we can share insights, coordinate work and respond more efficiently to industry-wide challenges. It also supports thinking about the whole-energy system, across different types of energy. For example, the Forecaster for Embedded Generation (FEmGE) is a notification platform improving real-time visibility of embedded generator activity across the electricity and gas networks.

New technologies offer real opportunities to get more value from data. For example, National Gas's Quantum optimisation for future gas network design research looked at which quantum-inspired methods offer the greatest system-wide benefit. Artificial intelligence, machine learning and digital twins can help us analyse complex datasets, spot risks earlier, predict maintenance needs and model how assets behave in real time. Together, these tools will improve efficiency, reduce costs and support better long-term planning.

AI opportunities for consumer network engagement

Project reference:
10167276

Duration:
Sept to Dec 2025

What we achieved

We're using AI technology to:

- Increase trust
- Improve communication
- Enable timely delivery of network upgrades that are accessible to communities across the country.

Why is the innovation needed?

Traditional methods of engaging customers in expanding the UK's net zero gas and power networks are slow and resource intensive.

Solution

During the Discovery phase, we identified consumer needs and explored how new AI-driven engagement tools, such as multilingual chatbots, gamified education and sentiment analysis, could support them.

We used a range of insights and pain points to identify possible uses for AI-supported engagement. We then carried out an exercise to prioritise these ideas, and identified three AI-powered tools to take forward into the Alpha phase.

The Alpha phase is now live and is further testing these three solutions. This includes carrying out a detailed cost-benefit analysis for each one, along with in-depth prototyping and controlled testing.

Working in partnership with communities, we aim to use AI technology to build trust, transparency and public support for future infrastructure. This will help strengthen engagement, reduce opposition and cut down on construction delays.

Riser Data Intelligence

Project:

Creating a single consolidated platform to map, classify and prioritise MOB pipe, riser and meter data

Project reference:

NIA2_SGN0109

Duration:

Feb to Jul 2026

What we achieved

We created an intelligence platform that brings together different datasets about multi-occupancy buildings (MOBs) across our network. The platform informs our asset-replacement plans and provides insights that help us support the energy transition.

Why is the innovation needed?

MOBs are complex so, to manage them well, we need to understand the assets, the buildings and what customers need. As the energy system changes, we need better information so that we can judge what future investment is needed, identify risks to assets and see where different routes to cutting carbon may work best.

Solution

Working with Deloitte, we combined geospatial analysis, machine learning and multiple internal and external datasets to create a cloud-hosted MOB intelligence platform.

The first phase mapped all MOB assets across our network by linking information on gas assets, building characteristics and wider location-based datasets. This provides a richer understanding of the environments in which our risers, pipes and meters operate.

The second phase built analytical models and interactive dashboards to explore asset risk, replacement priorities and future transition scenarios. These were tested in two priority areas before being rolled out across the full network.

The platform gives us useful insights into the features of MOBs, the condition of their asset and how hard these assets are to replace. This helps us make better-targeted investment decisions and deliver replacement programmes more efficiently. It also builds a stronger evidence base on the role gas networks could play in MOBs during the energy transition. This will help us assess where replacing infrastructure, using other technologies and choosing future energy solutions could give customers the best long-term value.

Cadent
Your Gas Network

Project Collaborate

Project:
Developing a national digital solution to help highway authorities and utilities to plan joint streetworks

Project reference:
10179184

Duration:
May 2026 to November 2026
(Alpha phase builds on the previous Discovery phase)

What we achieved

- Requirements for a future shared planning tool
- A review of ways to encourage collaboration
- A review of organisational and operational barriers
- A framework to assess costs, benefits and commercial potential.

Why is the innovation needed?

There is no consistent approach to making sure that utilities' and highway authorities' streetworks happen at the same time. Duplicated activities raise costs and create unnecessary emissions from excavations and traffic.

Solution

The discovery phase confirmed that a new approach to collaborative streetworks is needed and built strong evidence to support the next steps to make infrastructure planning more efficient, transparent and collaborative.

Partnering with National Grid Electricity Distribution (NGED), Greater Manchester Combined Authority and West Midlands Combined Authority, we created a digital prototype that automatically finds overlapping works and notifies the right people. It also improves data sharing so that different sectors can work together earlier. Following the Alpha phase, we plan to move onto the Beta phase, which will see the full development of the tool.

By spotting joint working opportunities sooner, this approach supports a 'dig once' method – leading to fewer repeated excavations and lower costs. Evidence from other schemes shows this can lead to real cost savings and less disruption. The final tool will overlay streetworks for utilities and authorities, and will also provide benefits for the collaborative opportunities, creating a central solution for all streetwork undertakers.

Theme 3

Whole-system pathways

We will facilitate innovations for whole-system optimisation with the wider energy industry and ensure that the role of gas is built into regional and strategic planning activities.

A whole-energy system approach is needed to achieve the UK's decarbonisation goals, while also keeping energy supplies secure and reliable. This means looking at the energy system as one connected network rather than a set of separate parts. If electricity, gas, hydrogen, biomethane and new low-carbon technologies are to interact, a coordinated approach will make sure the future energy system is efficient, adaptable and able to meet changing demands.

For example, Unlocking the role of nuclear in low carbon hydrogen and heat (SGN) explored how nuclear energy can support a whole-system energy transition by providing for the energy requirements of low-carbon hydrogen and heat networks in regions where renewable energy potential is relatively low.

Whole-system optimisation also means understanding how gas networks can best support electrification. Gas infrastructure will continue to play an important role, but the challenge is working out when and how it can support the shift to cleaner energy. This includes looking at how gas networks can provide flexibility, meet local and regional needs and work alongside new technologies.

Cadent has already assessed the Role of Gas Distribution Networks in Power Generation, developing a clear evidence base for supporting dispatchable electricity generation within a decarbonising UK energy system.

We will keep strengthening whole-system modelling tools, to improve forecasting and scenario analysis at national, regional and local levels. High-quality data and strong modelling are essential for informed decision-making across the energy system.

Net zero rollout – hydrogen assessment

Project:
Understanding what's involved in rolling out 100% hydrogen at a town scale

Project reference:
NIA_WWU_02_80

Duration:
Mar 2025 to Mar 2026

What we achieved

We achieved a better understanding of what would be needed to convert our network fully to hydrogen within the case study areas.

Why is the innovation needed?

While evidence suggests that hydrogen conversion is feasible, we need to understand how this data can be applied to specific areas of the gas grid so we can make decisions about the future of the network.

Solution

First, we reviewed previous work and set criteria for shortlisting areas. We chose areas that represent different types of networks, housing and demographics, as well as how close and how large nearby hydrogen production sites are, as these need different approaches and engagement. Our project partner, Arup, assessed three areas using mapping software and built a multicriteria assessment.

We created a key stakeholder plan for each area by reviewing past engagement work and considering lessons learned from other projects. Then we carried out desk-based research to understand what changes would be needed to existing assets. After grouping building types across the network, we made recommendations on the work required and identified factors that would affect how a rollout could be delivered in practice.

Finally, Arup created stakeholder and customer engagement plans which consider how to prepare communities for any switch and support a successful rollout. The findings are set out in a final report that will help shape our response to any future policy decisions on dedicated hydrogen networks.

FutureGrid CO_2

Project:
Exploring how gaseous-phase carbon dioxide can be transported in repurposed pipes

Project reference:
10157622

Duration:
Sept to Dec 2025

What we achieved

- Showed that the National Transmission System (NTS) can transport carbon safely and reliably
- Answered important technical questions
- Contributed to safety and regulatory compliance.

Why is the innovation needed?

Transporting high-pressure carbon dioxide within the gaseous phase presents key technical challenges that need further research. Current models for dispersion lack data to validate them.

Solution

Supporting carbon capture, utilisation and storage (CCUS) projects is one way of making the conversion from natural gas as smooth as possible, especially if we can present solutions to help sectors that struggle to decarbonise.

FutureGrid CO_2 is the final phase of a suite of carbon dioxide projects looking at how we can repurpose parts of our network to transport gaseous-phase CO_2 safely. We're reusing our existing FutureGrid facilities to observe how carbon dioxide behaves when it is moved through repurposed pipelines. We'll look at leaks, noise, vibration, movement and temperature changes, and how CO_2 disperses if pipes are damaged. We'll also test impurity- and corrosion-detection systems and response times.

The outputs include a range of areas to help us critically analyse and validate theoretical models of gaseous CO_2. This includes CCUS technical benchmarking, safety case analysis, commissioning, materials and operational considerations.

Northern Gas Networks

Navigator

Project:
Developing a whole-system planning tool

Project reference:
NIA_NGN_471

Duration:
Feb 2025 to Sept 2026

What we achieved

- Improved how we work together
- Strengthened local energy planning
- Provided clearer evidence for decision-making
- Given us a strong foundation for future planning
- Shown how a joined-up, local approach can support a more affordable, reliable and fair path to net zero.

Why is the innovation needed?

The energy system is becoming more complex as it connects gas, electricity and heating. A tool was needed to bring everything together and show the whole system while turning national climate targets into practical, local action.

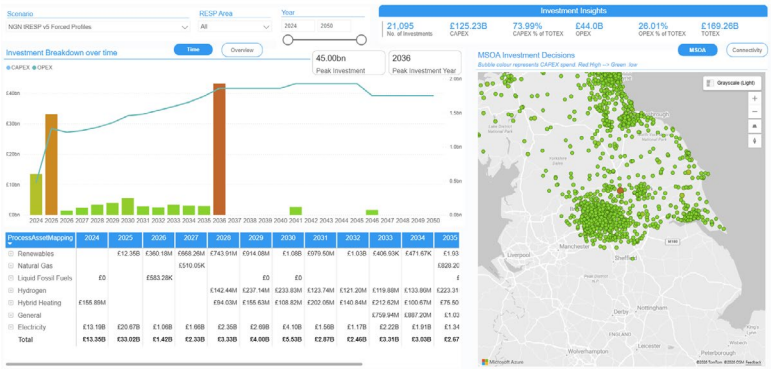
Solution

Navigator is a Whole-Energy Systems Pathway (WESP) planning tool to help us make better decisions about how we meet national climate targets. Working closely with councils, energy networks and experts meant we developed a tool that reflects genuine challenges. Navigator:

- lets us analyse data across gas, electricity, heat and the wider infrastructure
- tailors insights to regional constraints, capacities and community readiness
- provides robust evidence for Local Area Energy Plans and regional strategies.

Its clear, practical, evidence-based insights help national, regional and local planners to make decisions based on a whole-energy system.

By combining data about energy demand, network capacity, costs, emissions and social factors like fuel poverty, Navigator allows us to test different scenarios, compare options and understand trade-offs. It shows how local factors can affect which solutions will work best and when, and helps identify where certain changes could put extra pressure on communities.



Theme 4

Equitable energy for everyone

We use innovation to ensure that our customers in vulnerable situations are not left behind during an energy transition and they have access to the technology and tools to reduce energy consumption.

People are at the centre of our innovation activity. As we move into RIIO-3, we will keep focusing on fairness and inclusivity, building trust and making services easier for our customers, partners and communities to access and use.

With our partners and stakeholders, we are developing solutions that improve convenience, value and engagement. Our projects explore how new technologies, services and approaches can better support our customers, so that nobody is left without heating as the energy system changes.

In the Hybrid Heating & Services Beyond the Meter (SBtM) project, Cadent developed a single, customer-focused pathway that combines appliance upgrades, insulation, heating system installations and tailored advice for delivering hybrid heating systems for vulnerable and fuel-poor households.

Working in partnership with local authorities, we aim to help establish resilient, low-carbon communities. This extends to the NHS, where the Resilient Energy Futures for NHS (NGN) provided an evidence base for coordinated, cost-effective decarbonisation planning.

In particular, we want to understand and address what consumers in vulnerable situations need. This is key to delivering quick, targeted support to customers who are under pressure from the cost-of-living and energy crises. Sometimes these people can be hard to identify, so Cadent's Finding the Hidden Vulnerable Stage 2 uses data to identify hidden customers in vulnerable situations so that they can join the Priority Service Register and receive the support they need if there is a gas supply interruption.

Digital exclusion affects around 20% of the population. These are people who don't have access to digital devices, lack digital or reading skills, do not understand enough English or simply choose not to engage with digital platforms. It can be difficult to tell these people about planned maintenance, potential disruptions and gas emergencies. Clearer, more timely information will help customers understand what to expect and make informed decisions. For example, as part of Digital Inclusion in Rural & Vulnerable Communities Phase 1, NGN developed a non-internet Message Beacon to alert customers that an important energy network message is available. On a practical level, SGN developed a functional prototype of an accessible carbon monoxide alarm, tailored to the needs of vulnerable and disabled customers.

Northern Gas Networks

Improving communication with digitally excluded customers

Project reference:
NIA_NGN_492

Duration:
Aug 2025 to Jan 2026

What we achieved

- A better understanding of digital exclusion and the most effective ways to communicate with digitally excluded groups
- Solutions for practical, user-led communications for digitally excluded customers.

Why is the innovation needed?

Those most in need often miss important information and services because we cannot contact them through our digital communication channels.

Solution

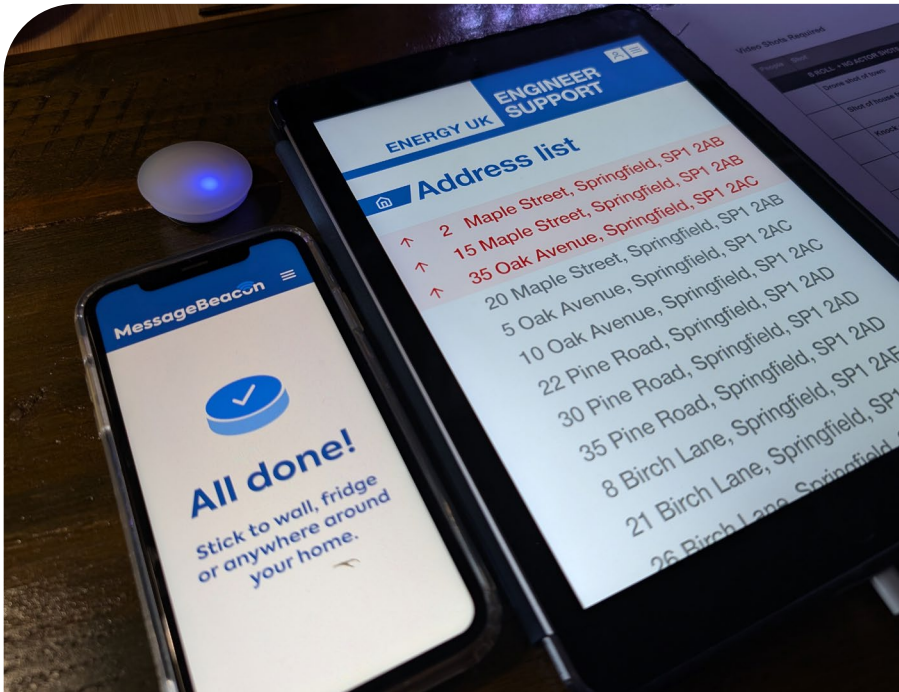
We engaged directly with digitally excluded customers and communities to understand how they receive information and to identify the best way to communicate with them.

After gathering insights from people with limited or no access to digital technology, people who do not speak English well and migrant communities, we realised that digital exclusion is complex and that no single solution would meet all needs.

Using these insights, the project team created a range of practical, inclusive and user-focused potential solutions. Prototypes have been developed for:

- **Digital Buddy:** a simple app which allows trusted friends and relatives of digitally excluded customers to receive energy network notifications on their behalf
- **Message Beacon:** a small, simple device that can be placed on a wall, door or windowsill, which lights up to alert users of energy network notifications. They then hold their phone up to the device to receive the message

Once scaled to the network, solutions like these mean digitally excluded customers get the energy information they need, and that we comply with accessibility standards and communication best practices.



LISTEN: Local Insights Supporting Transparent Energy Networks

Project:
Creating a scalable, data-led tool to build community trust in the energy transition

Project reference:
NIA2_SGN0097

Duration:
Nov 2025 to Jul 2026

What we achieved

LISTEN provides richer, more timely insights into current and future infrastructure plans, helping us respond faster to community issues and improve future planning.

Why is the innovation needed?

The UK's move to a low-carbon energy system is facing resistance from local communities. We need engagement approaches designed for specific situations, which traditional methods can't offer.

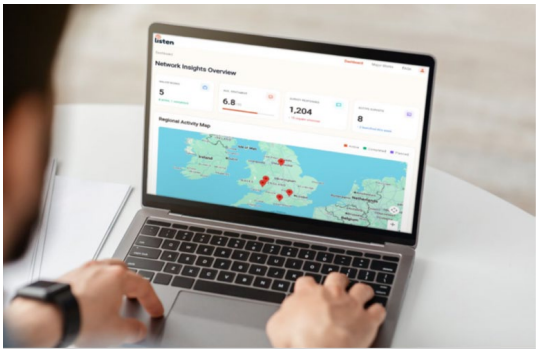
Solution

Communities often feel that energy projects are being forced on them, leading to low participation in formal consultations. Last-minute objections can cause delays and cancelled projects. We need proactive, data-driven tools that can capture public opinion early.

LISTEN aims to build a data-led approach that can be scaled up, helping us understand and build public support for the energy transition. It brings together AI-driven tools, engagement tailored to specific places and dashboards codesigned with communities. The platform brings together four main parts:

- **Regional dashboards** show insights by location, topic and demographics, to help guide planning and engagement strategies
- **Multi-source data capture** combines local news, social media, planning documents and community events, to build a full picture of local feeling
- **Voice-enabled surveys** capture community views in people's own words. AI-supported analysis identifies trends and themes in responses
- **Tailored recommendations** give us clear, useful insights and engagement strategies, in line with Ofgem's priorities around fairness and putting consumers first

LISTEN's outputs will feed into our everyday workflows, for more tailored and responsive engagement.



Cadent
Your Gas Network

The Customer Safeguarding Virtual Training Platform

Project:
Helping our staff to support customers in vulnerable situations

Project reference:
NIA_CAD0092

Duration:
Jun 2023 to Mar 2026

What we achieved

Being able to practise complex, realistic scenarios in a safe, virtual environment allows learners to explore and test the most appropriate responses to support customers in vulnerable situations.

Why is the innovation needed?

Customer safeguarding is everyone's responsibility. All team members need to have the knowledge, confidence and tools to spot issues and take action when supporting customers, family or neighbours in vulnerable situations.

Solution

In partnership with mX Reality, we developed four immersive safeguarding training scenarios designed to reflect complex, real-life challenges that engineers, call handlers and other roles may face, including recognising utility scams and knowing what to do in an emergency. In these virtual simulations of customers' homes, learners perform tasks to help them decide the best actions and tools to meet the customer's needs. The scenarios help them to recognise how internal processes can impact external interactions and how the outcome may be different for different people.

Each scenario ends with a performance score, giving learners personalised feedback and linking to support materials. This ensures learning is continuous.

This online training is mandatory for customer-facing staff and optional for others, and can fit around working patterns and personal commitments. Another benefit is that online courses use 90% less energy, produce 85% fewer CO_2 emissions and are more cost-effective than face-to-face training.

The resulting greater confidence in customer handling can improve the morale and mental wellbeing of customer-facing staff and show them how they can make a real difference to people's lives.

Theme 5

Flexible and seamless connections

We aim to enable a clean, resilient gas future by connecting, blending and transporting more green gases and facilitating new, flexible applications.

A key part of supporting the UK ambition of achieving net zero by 2050 is replacing natural gas with greener alternatives. Gases such as biomethane, e-methane and low-carbon hydrogen will be central to delivering a cleaner, more sustainable energy system.

New technologies must be developed and tested to allow green gases to operate at scale, while innovation also supports the development of policies, standards and processes needed to manage them effectively. Gathering evidence on green gas performance will help inform future planning and ensure decisions are based on robust data.

Biomethane is already produced across the UK, and increasing the number of biomethane connections will reduce the carbon intensity of gas supplied through the network. Cadent, among other networks, has investigated the potential to use high pressure storage assets to directly inject biomethane. National Gas's research into standardised biomethane connections designs identified a low-impact, cost-effective alternative to traditional above-ground installations.

At the same time, preparing the gas system for blended hydrogen will support wider decarbonisation. This requires coordinated action across transmission and distribution networks to ensure infrastructure, operations and processes can safely and reliably transport hydrogen. Cadent's Net Zero Multi-Vector Assessment found that extending hydrogen rollout from industrial clusters into nearby residential areas is both technically feasible and potentially cost effective, particularly where existing infrastructure can be repurposed.

Continued collaboration, research and investment will be critical to building a resilient, low-carbon gas system capable of meeting future energy needs.

Knapton Hydrogen Storage

Project:
Creating dispatchable power from stored energy

Project reference:
10167733

Duration:
Nov 2025

What we achieved

We identified a mix of scalable hydrogen storage solutions, creating a blueprint for flexible, dispatchable low-carbon energy systems.

Why is the innovation needed?

To support a low-carbon energy system, medium to large-scale hydrogen storage is needed to improve flexibility, resilience and energy security.

Solution

Hydrogen can be produced when renewable electricity is plentiful and stored for use when demand is high or renewable generation is low, which is essential for creating flexible, dispatchable low-carbon power.

We assessed how a range of hydrogen storage technologies could support a future hydrogen-to-power energy hub in North Yorkshire. Knapton is a former gas-fired power station site with existing grid and gas infrastructure, land, water access and a history of energy operations. It is also strategically located within the East Coast Hydrogen corridor, linking future hydrogen production, storage and demand across the wider region.

The study evaluated several storage options, from engineered near-surface systems to large-scale geological storage, including depleted gas fields, pipelines and other legacy energy assets. We also looked at future hydrogen production, demand and infrastructure requirements to understand how they could operate as part of an integrated energy system.

The project found that different storage technologies could serve complementary roles. Engineered storage can be faster, smaller and more flexible, while geological storage could deliver the large-scale, long-duration capacity needed to support future hydrogen-to-power and wider energy system resilience. The project also identified opportunities to repurpose existing energy infrastructure and established an evidence base to inform future design, demonstration and deployment activities at Knapton and beyond.

Biomethane Islands

Project:
Creating a business case for self-sufficient green gas networks

Project reference:
NIA2_SGN0072

Duration:
Jan to Oct 2025

What we achieved

For the three Scottish regions studied, we found an alternative business case for biomethane islands, as long as certain technical and legal conditions can be met.

Why is the innovation needed?

Technical and legal barriers hold us back from our target of supplying biomethane to one million households and businesses by 2030, so we need new ways of producing more biomethane and building it into the supply system.

Solution

A biomethane island is an isolated area of the gas network where customers' only gas supply is low-carbon biomethane. This project looked at whether we could supply certain areas of our Scotland network solely with biomethane, using a complete and sustainable system.

We chose as case studies three networks of different sizes and layouts across SGN's Scotland network. We worked with a wide group of industry experts to closely study everything needed for success, including the availability of suitable feedstocks, land needs, production methods, gas storage, waste management, market rules and funding. We also assessed financial aspects, including funding options and regulatory compliance.

We found opportunities to get the most out of biomethane as a long-term way of cutting carbon. We will keep developing this research and create a blueprint so biomethane islands can be repeated nationwide.

Smart Pressure Control

Project:
Maximising biomethane injection through dynamic network operation

Project reference:
NIA_WWU_02_118

Duration:
Mar 2026 to Aug 2026

What we achieved

Smart Pressure Control is an automated system that could heat 48,353 extra homes, save £10k a year in callouts and cut CO_2e emissions by 123,000 tonnes a year.

Why is the innovation needed?

Biomethane producers often can't connect to the network because of limited capacity, or they're restricted when demand for gas is lower.

Solution

A previous project introduced a smart pressure control (SPC) system to part of our network to prove the idea of automatic pressure control to maximise how much biomethane can enter the gas network. This trial rolls out that technology on a larger scale. It is designed to increase biomethane capacity all year round and automatically manage changes in demand.

We planned the installation and set-up of control and monitoring equipment and work procedures at 17 sites on the Swindon to Honiton medium-pressure (MP) network. When sites are added to the SPC system, they can run automatically and respond to real-time conditions, such as higher biomethane pressures. We split this work into two phases so that existing biomethane sites could benefit from a partly completed smart pressure network, without overworking our operational teams.

The Swindon to Honiton MP system will be automated and controlled dynamically, letting us maximise biomethane input while keeping supply secure. The SPCs also improve safety by keeping pressure lower in those parts of the network. By tackling the key issue of network pressure, this SPC system could deliver biomethane to more homes.

Next steps

Over the last five years, our innovation work has built valuable evidence, developed new skills and tools and strengthened partnerships across industry, academia, government and the wider energy sector.

As we enter RIIO-3, our focus will shift more towards putting ideas into practice. We will continue to build on the foundations laid during RIIO-2 by speeding up the rollout of proven solutions and making sure innovation delivers real benefits for customers, communities and the wider energy system.

What are our key learnings?

This report has highlighted projects that are improving network safety, supporting customers, enabling low-carbon gases, using digital technologies and exploring the future role of energy networks. Many of these projects have already delivered significant results on their own, but their greatest value lies in the evidence, learning and capability they provide for the future.

Collaboration will stay at the heart of our approach. The challenges facing the energy sector can't be solved by one organisation alone, so our continued work with other network operators, government, regulators, technology providers, academic institutions and industry partners will be vital to success. The strong relationships we've formed across industry, academia and supply chains give us a solid platform for continued progress and shared learning across the sector.

Building on the strong evidence base we've developed during RIIO-2, we will keep targeting innovation where it can deliver the greatest value. This means focusing on reducing environmental impact, enabling whole-system solutions, supporting vulnerable customers, speeding up digitalisation and growing the use of low-carbon gases.

What will innovation look like?

- Innovation will keep supporting the delivery of safe, secure and resilient networks, with a key focus on building advanced technologies.
- Innovation will be scalable, cost-effective and built into everyday business operations.
- Innovation will help create infrastructure that supports a low-cost transition to Net Zero, for example by expanding biomethane connections and improving pressure reduction sites, to support a more flexible, lower-carbon gas system.
- Innovation will improve the quality of our service for customers, particularly those in vulnerable situations. This means reducing disruption and delivering wider social value and better outcomes for them.
- Innovation will keep driving system efficiency and long-term value for money. Projects will focus on digitalisation, automation and the smarter use of network data, to improve how operations perform. Activity will increasingly link to clear business outcomes, supporting the shift from research into practical implementation.

The move to a decarbonised energy system must be fair, practical and built on collaboration. It must also deliver an energy system that is resilient, affordable and trusted by customers. By investing in the right technologies, partnerships and ideas, we are committed to shaping an energy future that works for everyone.

Calling all innovators

Have you got an idea that could make our network safer, smarter or greener? If you're an innovator, get in touch.

Collaboration is at the heart of innovation and we don't solve challenges alone. As well as sharing projects across gas and electricity networks, we work closely with innovators, SMEs, universities and utilities to bring in new thinking and specialist skills, helping us develop, test and deliver solutions faster. We'll steer you through our funding availability and processes, and, although we can't guarantee that every idea will be funded, we always give feedback if an idea is not taken forward.

Here are some useful links:

- Browse current projects in progress and check for duplication of your idea on our **portal**.
- Explore the **Energy Networks Association's (ENA) Smarter Networks Portal**, a centralised hub for regulation-funded innovation projects from all types of energy network.
- Find out about **upcoming innovation events**, webinars and industry engagements. Each network also holds its own events for innovators – see individual reports for details.
- Explore the **Future Energy Networks Innovation Process** (FENIP) to understand the framework for reporting and collaborating on Ofgem-funded innovation projects in Great Britain.
- The **RIIO-3 Network Innovation Allowance (NIA) governance document** sets out arrangements for the governance and administration of the RIIO-3 NIA.
- The **Strategic Innovation Fund (SIF)** governance document sets out the governance and administration of the SIF.
- Learn about **gas industry challenges** relating to SIF funding.

You can also contact each network's innovation team:

Cadent: innovation@cadentgas.com

National Gas: box.gt.innovation@nationalgas.com

NGN: innovation@northerngas.co.uk

SGN: foecentralprogramme@sgn.co.uk

Wales & West Utilities: innovation@wwutilities.co.uk

Or enquire through the **FEN Portal**: portal@futureenergynetworks.org.uk

Appendix 1:
Current and future projects

Live and completed projects logged between April 2025 and March 2026

Each project reference number is linked to the FEN Portal, where more information is available. Network totals may exceed the number of unique projects because collaborative projects can be recorded against more than one participating network.

Cadent
Your Gas Network

Project reference	Funding	Name of project	End date
10179412	SIF	BioCapMap – Discovery	Apr 26
10179797	SIF	Project CLEAN GREEN – Discovery	Jun 26
NIA_CAD0119	NIA	Accuracy of Electronic Volume Conversion Systems When Metering Blends of Hydrogen and Natural Gas	Sep 26
NIA_CAD0121	NIA	Understand the Value of Remote Detectors	Oct 25
NIA_CAD0122	NIA	Air Ingress in Multi-Occupancy Buildings (MOBs)	Feb 26
NIA_CAD0123	NIA	Domestic Air Ingress Mitigations	Feb 26
NIA_CAD0124	NIA	Biomethane Economic Analysis	Sep 25
NIA_CAD0125	NIA	Excess Flow Valve (EFV) Durability	Mar 26
NIA_CAD0127	NIA	Net Zero Multi-Vector Assessment	Mar 26
NIA_CAD0128	NIA	Air Ingress in Commercial (Non-Domestic) Installations	Apr 26
NIA_CAD0129	NIA	Low-Carbon Conversion of Non-Domestic Properties Utilising Distributed Natural Gas	Jul 26
NIA_CAD0130	NIA	Calorific Value Gas Sensor	Jul 26
NIA_CAD0132	NIA	PE Service Pipe Disconnection	Jan 26
NIA_CAD0133	NIA	Retractable Probe	Aug 26
NIA_CAD0134	NIA	Constant Load Testing	Sep 26
NIA_CAD0135	NIA	Inspection for Repurposing of Pipelines for Hydrogen Service	Jul 26
NIA_CAD0137	NIA	Hybrid Heating Systems (HHS) Acceleration Route	Sep 25
NIA_CAD0138	NIA	Hybrid Heating / Project 10	Mar 27
NIA_CAD0139	NIA	Finding the Hidden Vulnerable – Stage 2	Jul 26
NIA_CAD0141	NIA	Hydrogen Blending - Direct Injection Feasibility Study	Mar 26

Project reference	Funding	Name of project	End date
NIA_CAD0142	NIA	Development of Technical Readiness for Bends and Tees	Feb 27
NIA_CAD0143	NIA	The Role of Gas Distribution Networks in Dispatchable Power	Mar 26
NIA_CAD0145	NIA	Internal Stress Corrosion Cracking Pipeline Screening Tool gas	Oct 26
NIA_CAD0147	NIA	Reducing Green Gas Costs Through BioCO2 Sequestration	Mar 26
NIA_CAD0148	NIA	Technical Readiness for Large Diameter Ball Valves (TRL)	Feb 27
NIA_CAD0149	NIA	Welding Residual Stress Analysis Phase II – Testing	Sep 27
NIA_CAD0150	NIA	Exploring the Role of Biomethane Hybrids in the UK	Jan 26
NIA_CAD0152	NIA	Network Blending Blueprint	Dec 26
NIA_CAD0154	NIA	Biomethane HP Storage Injection	Aug 26
NIA_CAD0157	NIA	AI-Driven Policy Transformation for Hydrogen Blending in Gas Distribution Networks	Oct 26
NIA_CAD0159	NIA	Validation of Olfactory Assessment Methodology for 100% Hydrogen Networks	Sep 27
NIA_CAD0160	NIA	AI for Modelling and Optimisation of Maintenance Policies for Hydrogen Assets	Dec 26
NIA_CAD0161	NIA	Leveraging AI to Drive the Evolution of Standards to Optimise and Enhance the Safe Operation of Energy Networks	Dec 26
NIA_CAD0162	NIA	GVA and Macro-Economic Impact of Biomethane	Feb 26
NIA_CAD0163	NIA	RTN Modelling – Biomethane	Aug 27

Northern Gas Networks

Project reference	Funding	Name of project	End date
10167733	SIF	Knapton H2 Storage for H2P Discovery	Dec 25
10168054	SIF	Gas Network Evolution Simulator (Alpha)	Apr 26
10168321	SIF	Non-Data Centres Large Demand Mapping	Dec 25
10179195	SIF	Renewable Energy Harvest (Rd 5 Discovery)	Apr 26
NIA_NGN_492		Rethinking Communication for Digital Exclusion	Jan 26
NIA_NGN_493	NIA	Lotus Notes Logbook Upgrade	Nov 25
NIA_NGN_495	NIA	Control Room Automation	Dec 25
NIA_NGN_501	NIA	Decarbonising Transport with Vehicle Electrolyser	Jun 27
NIA_NGN_503	NIA	Digital Inclusion in Rural & Vulnerable Communities – Phase 1	Jun 27
NIA_NGN_506	NIA	Hydrogen Transition Pathways for Industrial Clusters	Oct 26

Project reference	Funding	Name of project	End date
10157410	SIF	Gas Transmission Asset Resilience Through Network Transitions Discovery	Jul 25
10157588	SIF	B-linepack+	Jan 26
10157596	SIF	Future Operability of Gas for System Integration (FOGSI) Alpha	Jan 26
10157622	SIF	FutureGrid CO_2	Dec 27
10167276	SIF	AI Opportunities for Consumer Centric Engagement	Dec 25
10167285	SIF	Project Remo2val	Jan 26
NIA_NGT0236	NIA	1 mol% Oxygen Exemption for the NTS	Aug 25
NIA_NGT0253	NIA	Hydrogen Impact on NTS Welds	Mar 26
NIA_NGT0254	NIA	Hydrogen Device Trials	Jan 26
NIA_NGT0259	NIA	High-Pressure Venting and Flaring Demonstration for Net Zero Gases Transportation	Mar 26
NIA_NGT0260	NIA	Preferential Emissions Study	Dec 25
NIA_NGT0261	NIA	NTS Pipeline Assessments Phase 2	Dec 25
NIA_NGT0262	NIA	Standardised Biomethane Connections	Mar 26
NIA_NGT0263	NIA	Net Zero Safety & Ignition Risk	Mar 26
NIA_NGT0264	NIA	Equations of State for Net Zero Gases	Oct 25
NIA_NGT0265	NIA	H2 Site Safety Systems	Oct 25
NIA_NGT0266	NIA	Deblending Rollout Strategy Phase 2	Nov 25
NIA_NGT0267	NIA	Pipeline Installation Techniques for Net Zero	Mar 26
NIA_NGT0268	NIA	Impact of Hydrogen and on NTS Oils & Greases – Phase 2	Mar 26
NIA_NGT0269	NIA	Variable Blends Operational	Mar 26
NIA_NGT0270	NIA	Innovative Approach to Policy Document Management	Dec 25
NIA_NGT0271	NIA	Net Zero Impact on Wider Network Contents	Mar 26
NIA_NGT0273	NIA	Recompression Solutions for a Net Zero NTS	Feb 26
NIA_NGT0274	NIA	HyNTS Corrosion	Mar 26
NIA_NGT0275	NIA	Risk of Microbial Corrosion due to Hydrogen Transportation	Mar 26
NIA_NGT0276	NIA	Novel Approach Secure Site Communications	Mar 26
NIA_NGT0277	NIA	Predictive Tool for Unaccounted-For Gas (UAG) Identification	Mar 26
NIA_NGT0278	NIA	Predictive Model for Flood Risk Management	Mar 26
NIA_NGT0279	NIA	Hydrogen Backbone Social Economic Assessment	Aug 25
NIA_NGT0280	NIA	HyNTS Operational Methodologies – Valve Performance Assessments	Mar 26
NIA_NGT0281	NIA	Gas Inhibitors for Hydrogen Pipelines – Phase 3	Apr 26
NIA_NGT0282	NIA	Blending Management Approach Phase 2	Feb 26
NIA_NGT0283	NIA	Clean Power Flexibility Investigation	Feb 26
NIA_NGT0284	NIA	Novel Unified Viewer for NGT Network Performance Twin	Mar 26

Project reference	Funding	Name of project	End date
NIA_NGT0286	NIA	HyNTS Operational – Qualification of Pressure Vessels	Mar 26
NIA_NGT0287	NIA	Gas Transmission Data Sharing Infrastructure	Jan 26
NIA_NGT0289	NIA	GGT – Novel Green Gas	Dec 25
NIA_NGT0290	NIA	Use of AI in Learning and Development	Apr 26

SGN

Project reference	Funding	Name of project	End date
10168466	SIF	Green Gas Access	Jan 26
NIA2_SGN0073	NIA	The Fairer Warmth Hub	Mar 26
NIA2_SGN0084	NIA	Hydrogen Fracture Surfaces Assessment	Mar 27
NIA2_SGN0085	NIA	Simplifying Low-Carbon Heat	July 25
NIA2_SGN0086	NIA	H100 Barhole Trials for Hydrogen Network Operations	Sep 25
NIA2_SGN0087	NIA	Flexible Gas Transition Plant – Phase 1 Feasibility Study	Mar 26
NIA2_SGN0088	NIA	IGEM TD1 TD13 Hydrogen Supplements Review	Jan 27
NIA2_SGN0089	NIA	Hydrogen Ignition Risk from Static and Autoignition (HIRSA) – Stage 3	Apr 26
NIA2_SGN0090	NIA	Biomethane Feedstock Mapping and Strategic Growth Planning Study	Feb 26
NIA2_SGN0091	NIA	Unlocking the Role of Nuclear in Low-Carbon Hydrogen and Heat	Mar 26
NIA2_SGN0092	NIA	MASiP Phase 3 (Qualification Testing & Integrated System Development)	Nov 26
NIA2_SGN0094	NIA	Maximising the Use of a Decommissioned Network	Oct 25
NIA2_SGN0093	NIA	Carbon Networks Phase 2	Apr 26
NIA2_SGN0096	NIA	Hydrogen Permeation Through the Oxide Layer – Phase 2	Sep 27
NIA2_SGN0097	NIA	LISTEN – Local Insights Supporting Transparent Energy Networks	Jul 26
NIA2_SGN0098	NIA	Co2 Capture and Methanation Feasibility Study	July 26
NIA2_SGN0099	NIA	Standardising Grid Entry Unit	May 26
NIA2_SGN0102	NIA	Hazardous Areas Impact Mitigation (HAIM) Phase 3	Dec 26
NIA2_SGN0103	NIA	Suitability of 17-4 PH Stainless Steel Gas Components	Mar 27
NIA2_SGN0104	NIA	Hydrogen Blending Implementation Programme Phase 2B	Nov 26
NIA2_SGN0105	NIA	Catalysing Biomethane Growth in the UK	May 26
NIA2_SGN0106	NIA	MOB Transition Pathways – Future Asset Integrity	Mar 27
NIA2_SGN0107	NIA	Digestate Management	Jun 26
NIA2_SGN0108	NIA	MOB Transition Pathways – Regulatory & Strategic Governance	Mar 27
NIA2_SGN0109	NIA	Riser Data Intelligence	Jul 26
NIA2_SGN0110	NIA	Hydrogen Condition and Test Effects (HCATE)	Jan 27
NIA2_SGN0111	NIA	Burst Testing of Internal Sharp Defect in Hydrogen – Conditioning Investigation	Mar 27
NIA2_SGN0112	NIA	Repurposing Gas Pipelines for SAF	Apr 26

Project reference	Funding	Name of project	End date
NIA2_SGN0113	NIA	Decentralised System Resilience (Phase 2)	Jun 26
NIA2_SGN0114	NIA	Bio-LNG Horizon Scanning	Jun 26
NIA2_SGN0115	NIA	Hydrogen Blending Transformation Baselining	Apr 27
NIA2_SGN0116	NIA	Emissions Mitigations Techniques	Apr 27
NIA2_SGN0117	NIA	BioFlex	Sep 26

WALES&WEST UTILITIES

Project reference	Funding	Name of project	End date
SIF_WWU_2_4	SIF	Hydrogen-Enhanced Biomethane for Energy System Resilience	Aug 27
NIA_WWU_02_52	NIA	WWU Intermediate Scale Hydrogen Storage Evaluation (HyWISE)	Feb 26
NIA_WWU_02_81	NIA	Understanding Consumer Behaviour for a Just Transition	Feb 27
NIA_WWU_02_82	NIA	Sector Size Assessment	Nov 25
NIA_WWU_02_84	NIA	Hydrogen Combustion Engine Feasibility Study	Apr 26
NIA_WWU_02_85	NIA	Hydrogen Refuelling from the Network	Jan 26
NIA_WWU_02_86	NIA	Hydrogen Storage Feasibility Study – Phase 2	Oct 26
NIA_WWU_02_87	NIA	The Warmth of Community	Sep 27
NIA_WWU_02_89	NIA	Hydrogen Fuel Cell Operating Hub for Repex/Large-Scale Projects	Dec 25
NIA_WWU_02_91	NIA	HyProximity	Apr 26
NIA_WWU_02_92	NIA	High-Pressure Materials Analysis (HPMA)	Feb 26
NIA_WWU_02_97	NIA	Maximising Capacity at Biomethane Sites	May 26
NIA_WWU_02_98	NIA	Energy Explorers	Mar 27
NIA_WWU_02_102	NIA	Network Classifier	Oct 26
NIA_WWU_02_103	NIA	H2 Power – Whole-System Implications	Nov 26
NIA_WWU_02_106	NIA	Effects of Water Ingress in a Hydrogen Network	Mar 26
NIA_WWU_02_108	NIA	Alternative to Overhead / Underground Electricity Cables	Nov 25
NIA_WWU_02_109	NIA	Project Volta	Aug 27
NIA_WWU_02_110	NIA	GDN Gas Quality Forecasting	Oct 26
NIA_WWU_02_112	NIA	Air Ingress in a Live Environment	May 27
NIA_WWU_02_113	NIA	Project Capstone	Nov 27
NIA_WWU_02_114	NIA	Project Evergreen	Aug 27
NIA_WWU_02_115	NIA	Project ARAIA	Dec 26
NIA_WWU_02_116	NIA	Lined Rock Caverns for Flexible Hydrogen Storage – Phase 2	Feb 27
NIA_WWU_02_117	NIA	OptiStore	Aug 26
NIA_WWU_02_118	NIA	Green Gas Gateway	Aug 26

Appendix 2: Glossary

AI	artificial intelligence
ALD	advanced leak detection
BAU	business as usual
CCUS	carbon capture, utilisation and storage
ENA	Energy Networks Association
FEN	Future Energy Networks
FENIP	Future Energy Networks Innovation Process
IMF	Innovation Measurement Framework
KPIs	key performance indicators
MOBs	multiple occupancy buildings
NIA	Network Innovation Allowance
Ofgem	Office of Gas and Electricity Markets
RIIO-2	The regulatory price control period that ran from 1 April 2021 to 31 March 2026
RIIO-3	The regulatory price control period that runs from 1 April 2026 to 31 March 2031
SIF	Strategic Innovation Fund
SMEs	small and medium enterprises
SPC	smart pressure control
TRL	technology readiness level
UAG	unaccounted-for gas
WESP	Whole-Energy Systems Pathway

How to get in contact

Find out more about how each gas network manages innovation:

Cadent Your Gas Network	cadentgas.com/innovation
national gas	nationalgas.com/innovation
Northern Gas Networks	together.northerngasnetworks.co.uk/get-involved/innovation
SGN	sgn.co.uk/about-us/innovation-sgn
WALES&WEST UTILITIES	wwutilities.co.uk/about-us/future-of-energy/innovation

fen future energy networks

For a guide about how innovation projects are delivered visit:

portal.futureenergynetworks.org.uk/innovationprocess