

SP Distribution and SP Manweb

Network Innovation Allowance Annual Summary 2025-26



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Innovation plays a practical and increasingly important role in how we prepare our distribution network for the future.

As Director of Processes and Technology, I see our Network Innovation Allowance portfolio as more than a pipeline of new ideas; it is a structured way of solving real problems on the network, developing new operational capability and building the evidence we need to move the right solutions towards deployment.

That matters as our system becomes more data-rich, more decentralised and more dependent on faster, smarter decision-making.

Christian Armitage
SP Energy Networks Director
of Processes and Technology

If you have an idea to share or would like more information on a specific project, please contact our innovation team at: innovation@spenergy.co.uk



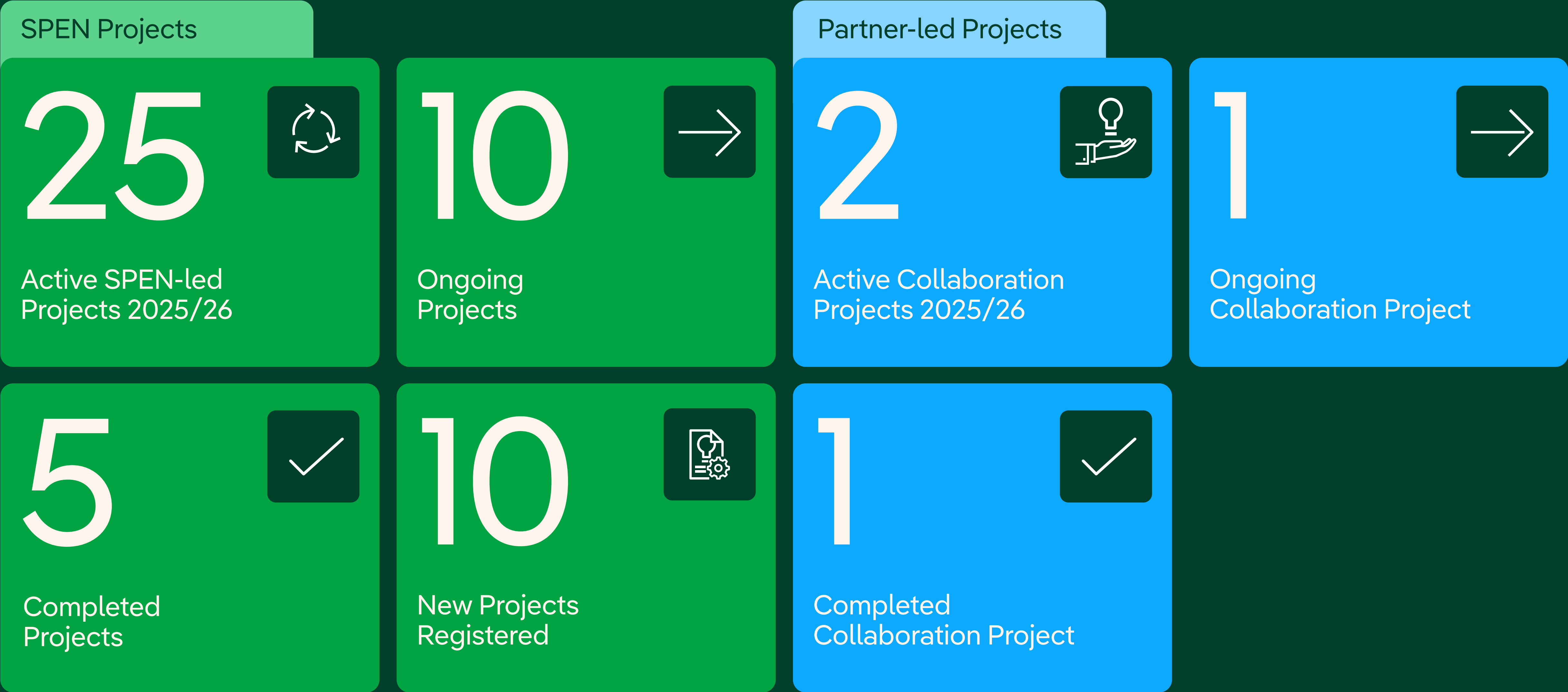
During 2025/26, our innovation activity continued to reflect the six strategic themes that shape our distribution portfolio: Power Electronics, Network Resilience, Whole Energy System, Data & Digitalisation, Sustainability, and Consumer Vulnerability. What gives those themes value is the range of projects sitting behind them and the way they work together as a balanced portfolio. Some projects are focused on immediate operational challenges, some on customer and social outcomes, and others on the data and digital foundations we will rely on in the years ahead. Taken together, they give us a practical route to strengthening DSO capability while responding to the wider demands of the energy transition.

This year, several projects have continued to show that innovation can create tangible value when it is closely aligned to network need. Real Time Fault Level Monitoring Stage 2 has progressed from prototype development to independently verified, type-tested equipment, with multiple devices now operating across live networks and supporting standards, guidance and processes being developed to enable wider business-as-usual deployment. Alongside this, Active Fault Level Management has moved closer to operational deployment, with the system architecture, functional requirements and SCADA integration developed and tested alongside SPEN Control Engineers. Together, these projects are strengthening our ability to use existing network headroom more effectively, enhance operational visibility and improve access for renewable generation and other low-carbon technologies.

The strength of the portfolio is also in its breadth. WARMTH completed its discovery phase during the year, helping us understand how a Warm Home Prescription approach could be adapted for DNO operations and used to improve the targeting of support for customers in vulnerable situations. Projects such as ORION, OPTIMA and Future Up are enhancing our advanced analytics, AI-enabled predictive capabilities, supporting more informed decisions on asset management, outage coordination and the future electrification of heat and transport. At the same time, DMP and Cyber V-PROTECTS are strengthening network resilience through improved operational intelligence, greater visibility of critical network assets and enhanced cyber resilience, across operational technology environments. These are not standalone ideas; they are part of a wider effort to make the network more responsive, more resilient and better informed.

That work sits within a wider business context, but the role of innovation is very clear. SP Energy Networks' Net Zero Transition Plan points to electricity demand doubling over the next decade, and our innovation portfolio is helping us prepare for that by improving how we understand, operate, and develop the network. It is also helping us connect strategic ambition to real action – whether that is better supporting vulnerable customers, reducing barriers to low-carbon connections, or creating the digital capability required. As energy transition accelerates, innovation will remain critical in helping us deliver the network our customers and communities will depend on. Our focus is not only on developing new ideas, but on deploying proven solutions, embedding new capabilities and delivering operational value at scale. I'm proud of what our teams and partners have achieved during 2025/26, and I'm confident that the learning, tools and capabilities developed through these projects will continue to help SP Energy Networks deliver a smarter, more resilient and Net Zero-ready network.

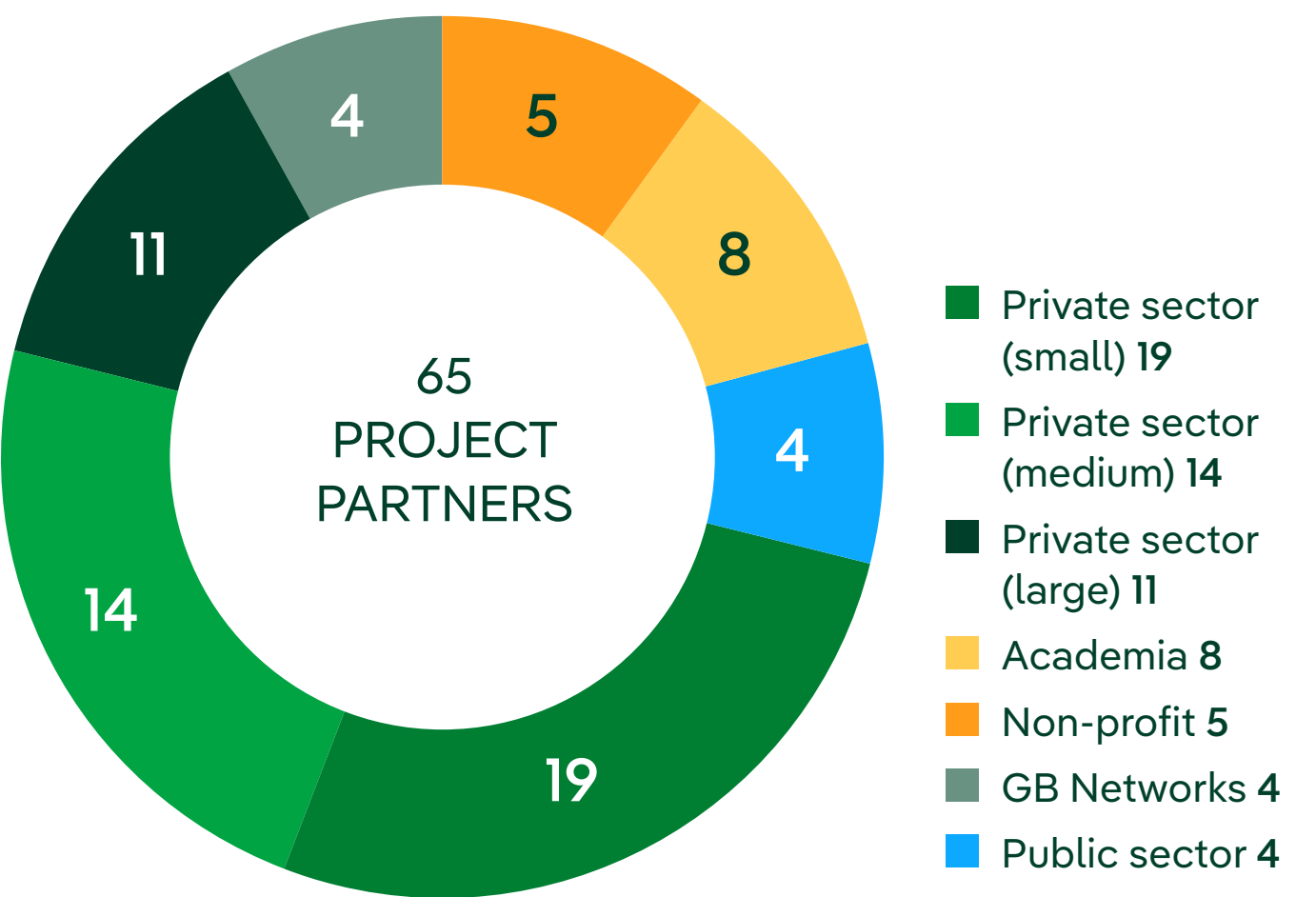
Network Innovation Allowance Portfolio Summary



Our Innovation Strategy

At the heart of our Distribution Innovation Strategy is a clear ambition: to ensure the network is ready for the pace and scale of the energy transition, while continuing to provide a safe, reliable and resilient network for customers across SP Energy Networks (SPEN).

Aligned with the Innovation Strategy set out in our RII0-ED2 commitments, our strategy enables us to test new solutions, generate practical learning and accelerate the deployment of approaches that improve network performance, customer outcomes and whole-system efficiency. This strategy has helped us deliver £30.45m to date across our distribution network, which has been supported by collaborating with a diverse range of stakeholders and project partners. It has brought together expertise across academia, networks, industry and the public sector and demonstrates our commitment to fostering a strong, collaborative innovation ecosystem.



Our Innovation strategy is structured around six themes that reflect the key challenges and opportunities facing the distribution network:

- Network Resilience
- Whole Energy System
- Data & Digitalisation
- Sustainability
- Consumer Vulnerability
- Power Electronics

Together, these themes provide a clear framework for addressing the challenges and opportunities arising from the evolving energy system. This approach supports a well-balanced innovation portfolio that delivers value for customers and stakeholders while preparing the business to meet the challenges of Net Zero.

Network Resilience

As society becomes increasingly dependent on electricity for transport, heating and everyday life, maintaining a secure and resilient electricity supply remains a key priority. Innovation is focused on improving network resilience, increasing operational visibility and strengthening the network’s ability to respond to changing environmental, operational and customer requirements. Through advanced monitoring technologies, enhanced network intelligence and proactive asset management approaches, reliability can be improved while continuing to deliver value for customers. Our innovation portfolio includes projects such as **Real Time Fault Level Monitoring (RTFLM)**, which provides real-time visibility of network fault levels, helping to manage network constraints, facilitate the connection of low-carbon technologies and strengthen system resilience through more informed operational and investment decisions.

Whole Energy System

Achieving Net Zero requires greater coordination across electricity, heat, transport and local energy systems. Our innovation activities are strengthening the tools, data, partnerships and planning approaches that improve understanding of interactions between energy vectors, inform investment decisions and facilitate coordinated infrastructure development.

Innovation projects such as **Net Zero Industrial Pathways (NZIP)** are advancing a whole energy system approach to industrial decarbonisation, improving forecasting confidence, informing coordinated network investment and strengthening the resilience of the future energy system as demand patterns continue to evolve.

Data & Digitalisation

Data and Digitalisation is a key enabler of the future distribution network and central to the transition towards a more intelligent, flexible and efficient DSO model. We are advancing digital capabilities that enhance network visibility, improve data quality, and strengthen forecasting, automation and analytics, enabling more responsive network operations, faster connections, improved customer service, and more efficient utilisation of network assets.

Our innovation portfolio is accelerating this transition through projects such as **ORION** and the **Device Management Platform (DMP)**, which enhance asset visibility, enable predictive analytics and improve real-time monitoring capabilities, supporting better investment decisions and a more reliable and resilient network.

Sustainability

Sustainability is a core pillar of our innovation strategy, supporting the delivery of a resilient, low-carbon and environmentally responsible energy system.

Innovation is focused on reducing environmental impacts, improving resource efficiency and promoting circular economy principles across network construction, operation and maintenance. Through environmental, economic and social sustainability initiatives, we are enabling sustainable network development while delivering long-term value for customers, communities and the wider energy system

Consumer Vulnerability

Delivering a successful energy transition means ensuring that no customer is left behind. Consumer Vulnerability remains a core pillar of our innovation strategy and reflects our commitment to supporting a fair and inclusive transition to Net Zero.

We are continually exploring new approaches to better understand and address the diverse needs of consumers who may be vulnerable due to financial, social, health or personal circumstances. As part of our innovation portfolio, the **PSR Resilience System** project is enhancing our understanding of customers in vulnerable situations by improving the quality and accuracy of vulnerability data, enabling more responsive support and improving customer outcomes.

Power Electronics

Power electronic technologies play an increasingly important role in enabling the transition to a smarter, more flexible and lower-carbon electricity network. To support this transition, we are developing advanced monitoring, protection and control solutions that improve network visibility, enhance operational flexibility and help manage increasingly complex network conditions. These innovations support the integration of low-carbon technologies, unlock additional network capacity and enable faster, more cost-effective customer connections while maintaining safe and reliable network operation.

Project Highlights

Our projects across our network range in scale and scope to deliver the most impact and benefit to our customers and stakeholders. For this summary report we have highlighted case study examples with significant learning to demonstrate our strategy in action.

You can find the full list of our projects towards the end of this report and online at the [Smarter Networks Portal](#).

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Registered ID:	Registered value:	Project start date:	End date:	Status:	Link
NIA_SPEN_0097	£1,980,000	March 2024	June 2026	Live	Real Time Fault Level Monitoring Stage 2 (ED-2) ENA Innovation Portal

Network Resilience

Real Time Fault Level Monitoring Stage 2 (ED-2)

Providing real-time visibility of network fault levels, this project is helping unlock capacity, reduce reinforcement costs and support the continued growth of low-carbon technologies.



Overview

Real Time Fault Level Monitoring Stage 2 is developing an innovative solution to provide continuous visibility of fault levels across the distribution network. As increasing volumes of low-carbon technologies connect to the system, fault level constraints can become a barrier to new connections and network operation. The project aims to provide accurate, real-time information that enables network operators to make more informed decisions, unlock additional capacity and reduce the need for traditional reinforcement.

Benefits

Unlocking network capacity: Real-time visibility of fault levels can enable more effective use of existing network infrastructure, helping facilitate new low-carbon technology and distributed generation connections without unnecessary reinforcement.

Reducing network costs: Improved understanding of network conditions supports more targeted investment decisions, reducing the need for costly reinforcement and delivering better value for customers.

Supporting smarter network operation: The solution provides network operators with improved operational awareness, enabling faster and more informed decision-making as network conditions change.

Enabling the energy transition: By addressing an increasingly important network constraint, the project helps remove barriers to the connection of low-carbon technologies and supports progress towards Net Zero objectives.

Over
£600,000
in benefits realised to date

Progress

The Real Time Fault Level Monitoring (RTFLM) project has made strong progress, successfully advancing from an initial prototype to a **fully developed and type-tested solution**. The device has undergone **independent validation** at the Power Networks Demonstration Centre (PNDC) and VEIKI high-voltage laboratories, confirming the accuracy and reliability of its measurements.

- Ten RTFLM devices were commissioned across strategic network locations, with data being collected across all intended scenarios.
- Seven RTFLM devices operated for an extended period, providing data that enabled completion of filtering mechanisms to minimise network noise impacts.
- RTFLM device successfully captured the first 33kV real-time fault level measurements within the SPD licence area.
- RTFLM device demonstrated the ability to measure fault level coupling across two transformers in a radial distribution network.

Next steps

The project is now focused on completing the remaining activities required for business-as-usual adoption. Key next steps include integrating the RTFLM with the AFLM application once the separate AFLM trial system is deployed and completing the split busbar measurement functionality. Further development and testing of the IEC104 communications interface will be undertaken within the SCADA development environment to validate both operational performance and cybersecurity compliance prior to deployment. In parallel, the BAU policy and supporting documentation will be finalised to support operational rollout. Ongoing dissemination and knowledge-sharing activities with DNOs and wider industry stakeholders will continue to maximise the benefits and learning from the project.

Whole Energy System

Net Zero Industrial Pathways (NZIP)

Providing a clearer picture of how industry will decarbonise, NZIP is helping align future network investment with real-world energy demand and supporting the transition to a Net Zero economy.

Overview

Net Zero Industrial Pathways (NZIP) is developing a whole-system understanding of how industrial energy demand may evolve as businesses transition towards Net Zero. Building on previous work undertaken in North-East Wales, the project is engaging with industrial stakeholders across SPEN's licence areas to develop evidence-based decarbonisation pathways and improve understanding of future electricity, hydrogen and wider energy requirements. The outputs will help inform network planning and investment decisions, ensuring infrastructure is aligned with future industrial decarbonisation needs.

Benefits

Improved forecasting confidence: Direct engagement with industrial stakeholders provides a stronger evidence base for future energy demand forecasts, improving understanding of how industrial consumers are likely to decarbonise.

Enhanced network planning: Site-specific energy mapping and decarbonisation profiling help identify future network requirements, supporting more targeted and efficient investment decisions.

Supporting industrial decarbonisation: The project explores a range of decarbonisation pathways, including electrification and hydrogen adoption, helping to identify the infrastructure needed to support industrial customers on their Net Zero journey.

Whole-system decision-making: By linking industrial demand forecasts with wider regional planning activities, the project supports a more coordinated approach to network development and energy system transition planning.

Progress

The project has successfully engaged a broad range of industrial stakeholders across the SP Energy Networks licence areas, creating a strong foundation for future analysis. Initial industrial profiling has been completed, alongside the development of a structured methodology for assessing industrial energy demand and emissions. Early decarbonisation pathway scenarios have also been produced, with project outputs already contributing to wider planning activities, including SPEN's Distribution Future Energy Scenarios and Network Development Plan processes.

Next steps

The next phase of the project will focus on expanding stakeholder engagement and refining site-level energy and decarbonisation data. Further work will develop regional industrial decarbonisation pathways and translate these into clearer infrastructure requirements, helping inform future network planning and investment decisions. As the project progresses, opportunities to enhance modelling approaches and broaden engagement will continue to strengthen the quality and value of the outputs.



Registered ID:	Registered value:	Project start date:	End date:	Status:	Link
NIA_SPEN_0121	£2,500,000	September 2025	August 2027	Live	Device Management Platform ENA Innovation Portal

Data & Digitalisation

Device Management Platform



Creating a single view of smart network devices, this project is improving operational visibility, enhancing efficiency and building the digital foundations for the network of the future.

Overview
The Device Management Platform (DMP) is developing a scalable digital solution to provide visibility and control of smart operational technology devices across the network. As the number of connected devices continues to grow, the platform will help monitor performance, identify faults and support more efficient management of network assets. By bringing together device information within a single system, the project aims to improve operational visibility, data quality and decision-making across the organisation.

Benefits
Improved device visibility: The platform provides a centralised view of operational technology devices, enabling engineers to better understand asset performance, detect issues earlier and manage a growing device estate more effectively.

Enhanced operational efficiency: Automated monitoring and defect management processes reduce reliance on manual interventions, helping teams respond more quickly to issues and improving the efficiency of day-to-day operations.

Better quality data: Improved access to accurate and consistent device information supports asset condition monitoring, investment planning and more informed operational decision-making.

Future-ready digital capability: The platform is designed to support increasing volumes of data and emerging technologies, creating a scalable foundation for future network digitalisation.

Progress
Since its launch in September 2025, the project has built a solid foundation, with substantial advancements across requirements definition, platform capability assessment and future operating model design. Key deliverables – including the product vision, device capability evaluation, market benchmarking and future-state process mapping – have now been completed. Collectively, these outcomes have established a clear direction for the programme, validated the platform’s ability to meet current business needs, and positioned the organisation to effectively support evolving operational demands and future growth.

Next steps
The subsequent phase of the project will focus on developing and trialling a Minimum Viable Product (MVP) to validate the platform’s core functionality. Further work will refine the platform architecture, strengthen integration with existing systems and support real-world testing across a representative range of devices. Insights gathered through testing will help shape future development and support progression towards large-scale deployment across the network.

Data & Digitalisation

ORION – Digital Transformer Platform

By turning large volumes of transformer data into actionable insight, ORION is helping transform asset management from condition monitoring to condition prediction.

Overview

ORION is developing an integrated digital platform to provide a single, consolidated view of transformer health across SPEN’s asset fleet. By bringing together data from multiple sources and applying advanced analytics, the project aims to improve understanding of asset condition, support predictive maintenance and enhance decision-making. The solution will enable asset managers to move from reactive interventions towards a more proactive and data-driven approach to transformer management, helping optimise performance and reduce the risk of failure.

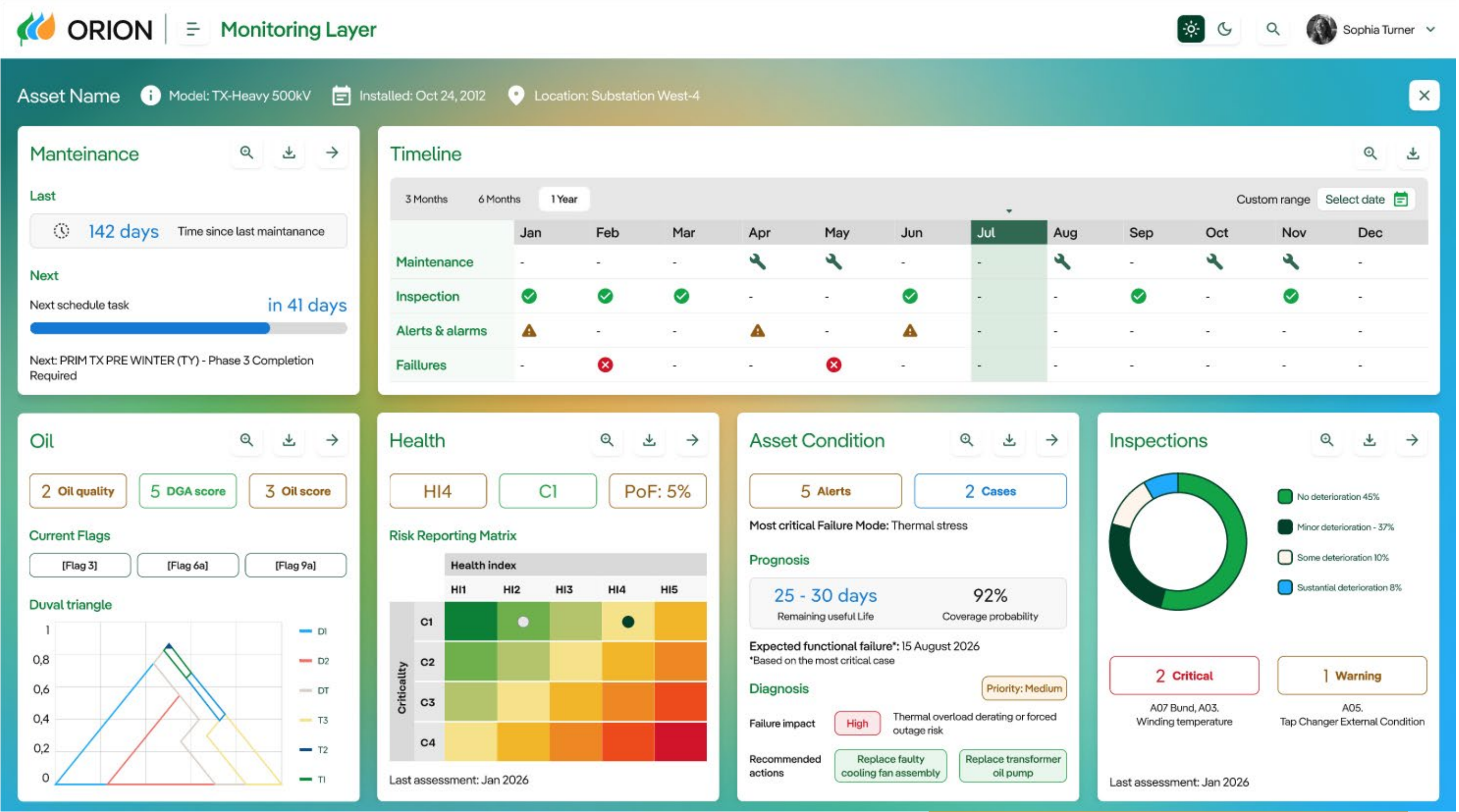
Benefits

The project will improve visibility of transformer condition by combining data from multiple sources into a single, accessible platform. This enhanced understanding of asset health will support more informed maintenance and replacement decisions, reducing the likelihood of unplanned failures and network disruption. Automated analysis and advanced modelling capabilities will also improve operational efficiency by reducing manual data processing while providing deeper insight into asset performance. Ultimately, the platform will help optimise investment decisions, extend asset life where appropriate and support a more reliable and resilient electricity network.

Progress

- Historical transformer datasets have been successfully integrated and analysed, providing valuable insights into asset performance, condition trends, and fleet-wide health indicators.
- Advanced analytics capabilities have been developed, including anomaly detection models that utilise smart substation data to identify potential issues at an earlier stage.
- Data-driven monitoring capabilities have been enhanced, improving visibility of transformer condition and supporting more effective risk-based asset management.
- Platform development has progressed in line with recognised industry standards, ensuring the solution is aligned with industry best practices and future integration requirements.
- Initial predictive modelling capabilities have been established, laying the foundation for forecasting asset condition and potential failures before they occur.

Collectively, these developments are strengthening transformer health assessment capabilities, enabling more informed, proactive, and efficient asset management decisions.



Next steps

The next phase of the project will focus on further developing and validating predictive models to improve the early identification of transformer deterioration and potential failures. Additional datasets will be incorporated into the platform to enhance analytical accuracy and expand diagnostic capabilities. As development progresses, testing and refinement activities will support preparation for initial user deployment, demonstrating how the platform can improve maintenance planning, resource allocation and long-term asset management decisions.

Improving visibility of transformer condition by combining data from multiple sources into a single, accessible platform.

Registered ID:	Registered value:	Project start date:	End date:	Status:	Link
NIA_SPEN_0104	£800,000	April 2025	June 2027	Live	LCT Determinator ENA Innovation Portal

Energy System Transition

LCT Determinator

Knowing where low-carbon technologies are connecting is just as important as connecting them. LCT Determinator is providing the insight needed to plan the network with greater confidence and precision.



Overview

- Developing a data-driven solution capable of identifying heat pumps and electric vehicle chargers connected to low-voltage networks using information gathered from existing monitoring devices.
- The project aims to improve visibility of low-carbon technology uptake, helping network operators better understand where electrification is taking place and how future demand is likely to evolve.
- By improving understanding of customer adoption patterns, the project will support more targeted network planning, reinforcement strategies and investment decisions as the transition to low-carbon technologies accelerates.

Benefits

Improved network planning: Better visibility of heat pump and EV charger uptake enables more accurate forecasting of future demand, helping ensure network investment is targeted where it is needed most.

More efficient reinforcement decisions: Understanding where low-carbon technologies are being adopted allows network upgrades to be prioritised more effectively, reducing unnecessary expenditure and improving resource allocation.

Supporting the energy transition: Earlier identification of changing demand patterns helps remove potential barriers to electrification and ensures the network is prepared for increasing adoption of low-carbon technologies.

Enhanced customer outcomes: Proactive planning supports timely network improvements, helping customers connect and benefit from technologies such as heat pumps and electric vehicles more easily.

Progress

The Project has established signatures for HPs and EV Chargers and has met the project aim to define the current and harmonic signatures for a range of HPs and EV chargers. The project has deployed power quality monitors on three test LV networks to gather data and establish the electrical profiles of these devices.

Threepwood Consulting has also collected harmonic signature of other high load electrical devices, so that the heat pumps and EVs can be distinguished from typical loads in domestic properties. This is beyond the original scope but was required to meet the aim of LCT detection, based on harmonic signatures.

Algorithm Development: The project has developed a model of the Cambridge test network, but the efficacy of the digital twin approach was quickly understood to be limited, due to the stochastic nature of background harmonics on LV networks, which are impossible to reproduce in a network model. The LCT detection algorithm has been iteratively refined through heat pump event data collected from site and comparing these with real-world LCT event data from the Cambridge test network. This modified stage has provided a reliable detection mechanism that can be applied to real-world networks, with a preliminary accuracy of over 80%. This figure will be verified and refined using more monitoring data and LCT detection machine learning.

Earlier project activities included the development of a digital twin of the Cambridge test network to explore whether network modelling could support low-carbon technology detection. Extensive field testing has started ahead of schedule due to the digital twin work being descope. The tests are validating the algorithm’s accuracy and robustness in diverse conditions. Necessary adjustments are being made, ensuring the solution is practical and accurate for LCT detection.

Next steps

Expand field trials: Additional testing across a wider range of network environments will further validate and improve the detection algorithm.

Refine analytical capability: Continued development, supported by additional data collection and machine learning techniques, will help improve detection accuracy and consistency.

Prepare for deployment: Project outputs will be consolidated into a comprehensive methodology that can support wider adoption and improve visibility of low-carbon technology uptake across the network.

Registered ID:	Registered value:	Project start date:	End date:	Status:	Link
NIA_SPEN_0113	£445,000	July 2025	January 2026	Completed	VEST Enhancement ENA Innovation Portal

Consumer Vulnerability

VEST Enhancement

A successful energy transition depends on understanding not only where technology can be adopted, but where additional support is needed. VEST Enhancement is helping provide that insight.



Overview

The VEST Enhancement project is upgrading SPEN’s existing Vulnerability in the Energy System Transition (VEST) tool to provide a more detailed understanding of customers who may be at risk of being left behind during the transition to Net Zero. By combining updated vulnerability data with new property-level insights, the enhanced platform will help identify barriers to low-carbon technology adoption and support more targeted intervention strategies. The project will provide valuable intelligence to support customer engagement, network planning and vulnerability programmes across the distribution network.

Benefits

More targeted customer support: The enhanced tool improves identification of households in vulnerable situations, helping ensure support and advice reach those who need it most.

Improved access to low-carbon technologies: By identifying practical barriers to technologies such as electric vehicles, heat pumps and solar PV, the project helps support a more inclusive energy transition.

Greater social value and efficiency: Better targeting of interventions improves customer outcomes while ensuring resources are directed where they can have the greatest impact.

Enhanced network insight: Data-driven understanding of customer vulnerability and technology readiness supports more informed planning decisions and future service improvements.

Progress

Development has progressed across both core elements of the project, including a refresh of the existing vulnerability index and the creation of a new property-level assessment layer. Together, these activities are establishing the framework for an upgraded VEST platform.

The project’s vulnerability index is being updated using refreshed datasets and customer research. The index is used to identify households that may be at risk of being left behind in the energy transition, helping SPEN better target support, engagement activities and low-carbon technology programmes.

A new property-level assessment layer is being developed using EPC data, satellite imagery and machine learning techniques to identify barriers to low-carbon technology adoption.

Stakeholder engagement with SPEN teams and delivery partners is helping ensure the enhanced platform supports operational requirements and future customer support programmes.

Significant Outcomes

- Development of technology-specific adoption scores, adoption rates and market status classifications for targeted intervention planning.
- Introduction of driver and blocker analysis, using Impact Scores and Leverage Scores to provide clear, actionable insights.
- Delivery of operational tools, including an interactive mapping platform and partner-facing outputs to support decision-making and programme design.
- Improved understanding of LCT uptake patterns, enabling more effective targeting of support where adoption is constrained.

Next steps

- Integrate and migrate the VEST platform into SPEN’s business environment to enable operational deployment.
- Finalise the long-term hosting, infrastructure and data management approach for business-as-usual use.
- Use the framework to support vulnerability planning, LCT targeting, partner engagement and future programme development.
- Explore incorporation of additional datasets, including network capacity and constraint information, to further enhance functionality.
- Continue development of the platform to support place-based planning and future energy transition initiatives.

Registered ID:	Registered value:	Project start date:	End date:	Status:	Link
NIA_SPEN_0102	£300,000	April 2024	February 2026	Live	PSR Resilience System (ED-2) ENA Innovation Portal

Consumer Vulnerability

PSR Resilience System (ED-2)

Rather than treating vulnerability as a single category, this project recognises that customer needs are complex and varied – helping SPEN deliver support that is more personalised, informed and effective.

Overview
The PSR Resilience System project is enhancing how SPEN identifies, understands and supports customers in vulnerable situations. By improving the quality, accuracy and depth of information held within the Priority Services Register (PSR), the project is creating a more comprehensive view of customer needs and enabling a more tailored approach to support. A key element of the project is the development of a new Resilience Rating framework, designed to provide a more detailed assessment of vulnerability than traditional PSR categories alone.

Benefits
The project will help improve the identification and support of customers in vulnerable situations by providing a richer and more accurate understanding of individual needs. Enhanced data quality and customer insights will enable more effective targeting of support services and improve the efficiency of operational responses during outages and other network events. By moving beyond traditional PSR classifications, the new approach will also support better customer outcomes, greater customer satisfaction and more informed decision-making across vulnerability programmes.



Progress

- PSR data cleansing completed, with scripts developed to identify and remove inconsistent records and prepare data for enrichment and analysis.
- Data enrichment activities successfully delivered, improving the completeness and usability of PSR records through the identification and addition of key customer data fields.
- Resilience Rating system developed and implemented, creating a structured and objective methodology to assess customer vulnerability using defined customer characteristics.
- Enhanced understanding of PSR data quality achieved, identifying gaps, outdated records, and limitations in existing vulnerability classifications.
- Consumer validation phase prepared, with a controlled live demonstration planned prior to engagement due to the sensitive nature of customer data.

Key Outcomes

- Improved quality, consistency, and structure of PSR data through cleansing and enrichment activities.
- Development of a robust Resilience Rating framework to support more effective identification and prioritisation of vulnerable customers.
- Creation of a more reliable dataset to support future customer vulnerability management and resilience planning.
- Enhanced vulnerability assessment approach, incorporating a broader range of customer characteristics beyond existing PSR codes.

Next steps
The next phase of the project will focus on validating the Resilience Rating methodology and demonstrating the effectiveness of the enhanced system in operational settings. Feedback from users and stakeholders will be incorporated to further refine functionality and ensure the solution is ready for wider deployment. As the project approaches completion, emphasis will shift towards embedding the enhanced system into business-as-usual processes, enabling more targeted and effective support for vulnerable customers.

The new approach will support better customer outcomes and greater customer satisfaction.

Upcoming Projects

We are excited to present a snapshot of our upcoming projects, which are recently registered and set to progress in the 2026/27 regulatory year. These initiatives are designed to enhance our network’s efficiency, reliability, and resilience, ensuring we meet the evolving needs of our customers and stakeholders.

FutureUp

Registered ID: NIA_SPEN_0131
Registered value: £1,460,000
Start date: February 2026
Link: https://smarter.energynetworks.org/projects/nia_spen_0131/

FutureUp is developing an advanced forecasting platform to help SP Energy Networks plan for the increasing electrification of heat, transport and commercial energy demand. As low-carbon technologies continue to grow, traditional forecasting methods can struggle to capture local variations in future demand. FutureUp addresses this challenge by combining detailed geospatial analysis, stakeholder intelligence and innovative forecasting techniques to provide a more accurate view of future network requirements.

The project will create a unified planning platform capable of forecasting demand at a much more granular level, enabling more targeted network investment and reducing the risk of both under- and over-reinforcement. By improving the quality of planning decisions, FutureUp will support faster customer connections, more efficient network development and a smoother transition to a low-carbon energy system.

Rejuvenation of underground cables

Registered ID: NIA_SPEN_0129
Registered value: £300,000
Start date: March 2026
Link: https://smarter.energynetworks.org/projects/nia_spen_0129/

Rejuvenation of Underground Cables is exploring innovative techniques to extend the operational life of ageing underground cable assets and reduce the need for premature replacement. The project focuses on understanding and addressing the effects of water treeing, a common form of insulation degradation that can impact cable reliability and increase the risk of failure. Through a combination of research, modelling and laboratory testing, the project will assess the effectiveness of advanced cable rejuvenation technologies as a practical alternative to conventional replacement approaches.

By improving asset health and extending cable life, the project aims to enhance network resilience, reduce operational costs and minimise the environmental impact associated with large-scale replacement programmes. The learning generated will help inform future asset management strategies and support the development of a more sustainable and cost-effective electricity network.

Our NIA 2025-26 Portfolio

These tables summarise our full NIA activities for the 2025-26 year. Learn more and stay updated about an individual project by clicking the link to the [ENA Smarter Networks Portal](#).

New Registered Projects	Registration ID	Start
LCT Determinator	NIA_SPEN_0104	Apr-25
Enhanced Asset Visibility & Assessment for Overhead Line Poles (EAVA-OHL)	NIA_SPEN_0108	May-25
Cyber V-PROTECTS	NIA_SPEN_0114	Jun-25
ORION – Digital Transformer Platform	NIA_SPEN_0106	Aug-25
Net Zero Industrial Pathways (NZIP)	NIA_SPEN_0117	Aug-25
Device Management Platform	NIA_SPEN_0121	Sep-25
Agentforce (F&E Voice)	NIA_SPEN_0119	Sep-25
Underground Substation Replacement Phase 2	NIA_SPEN_0116	Sep-25
V2G Commercial	NIA_SPEN_0109	Oct-25
FutureUp	NIA_SPEN_0131	Feb-26
Rejuvenation of Underground Cables	NIA_SPEN_0129	Mar-26

Completed Projects	Registration ID	Started
SMARTer selection of Automatic Sectionaliser	NIA_SPEN_0093	Dec-23
Battery to Bypass Constraints for Smart Local Energy (BBC)	NIA_SPEN_0092	Feb-24
WARMTH (Wellbeing and Resilience through Medical-Thermal Heating)	NIA_SPEN_0110	Mar-25
VEST Enhancement	NIA_SPEN_0113	Jul-25
Substation Criticality POC project	NIA_SPEN_0115	Jul-25

Ongoing Projects	Registration ID	Started
Active Fault Level Management (AFLM) ED-2	NIA_SPEN_0096	Mar-24
Interconnected HV secondary substation battery monitor	NIA_SPEN_0091	Mar-24
Real Time Fault Level Monitoring Stage 2 (ED-2)	NIA_SPEN_0097	Mar-24
Environmentally Acceptable Wood Pole Pre-treatment Alternatives to Creosote (APPEAL) (ED-2)	NIA_SPEN_0098	Apr-24
LV De Mesh	NIA_SPEN_0100	Apr-24
Switchgear Requirements for Future Networks (ED-2)	NIA_SPEN_0101	Apr-24
PSR Resilience System (ED-2)	NIA_SPEN_102	Apr-24
Re-Heat: Enabling Renewable Heat (ED-2)	NIA_SPEN_0102	May-24
Systems Thinking Approach to Innovation Management	NIA_SPEN_0103	Jul-24
X-FacTOR Stage 2	NIA_SPEN_0099	Jan-25

Collaboration plays a vital role in driving innovation. Alongside delivering projects with our partners, we support a range of DNO-led NIA projects that tackle key industry challenges. The table below summarises our involvement in projects led by other networks. More information on these collaborative initiatives can be found in the relevant lead DNO Annual Report or on the Smarter Networks Portal via the links provided.

Collaboration Projects – Completed	Registration ID	Started
Net Zero Service Termination 2 Project	NIA_SSEN_0079	Oct-24

Collaboration Projects – Ongoing	Registration ID	Started
Keeping Comms Open	NIA_UKPN0105	Jan-25

