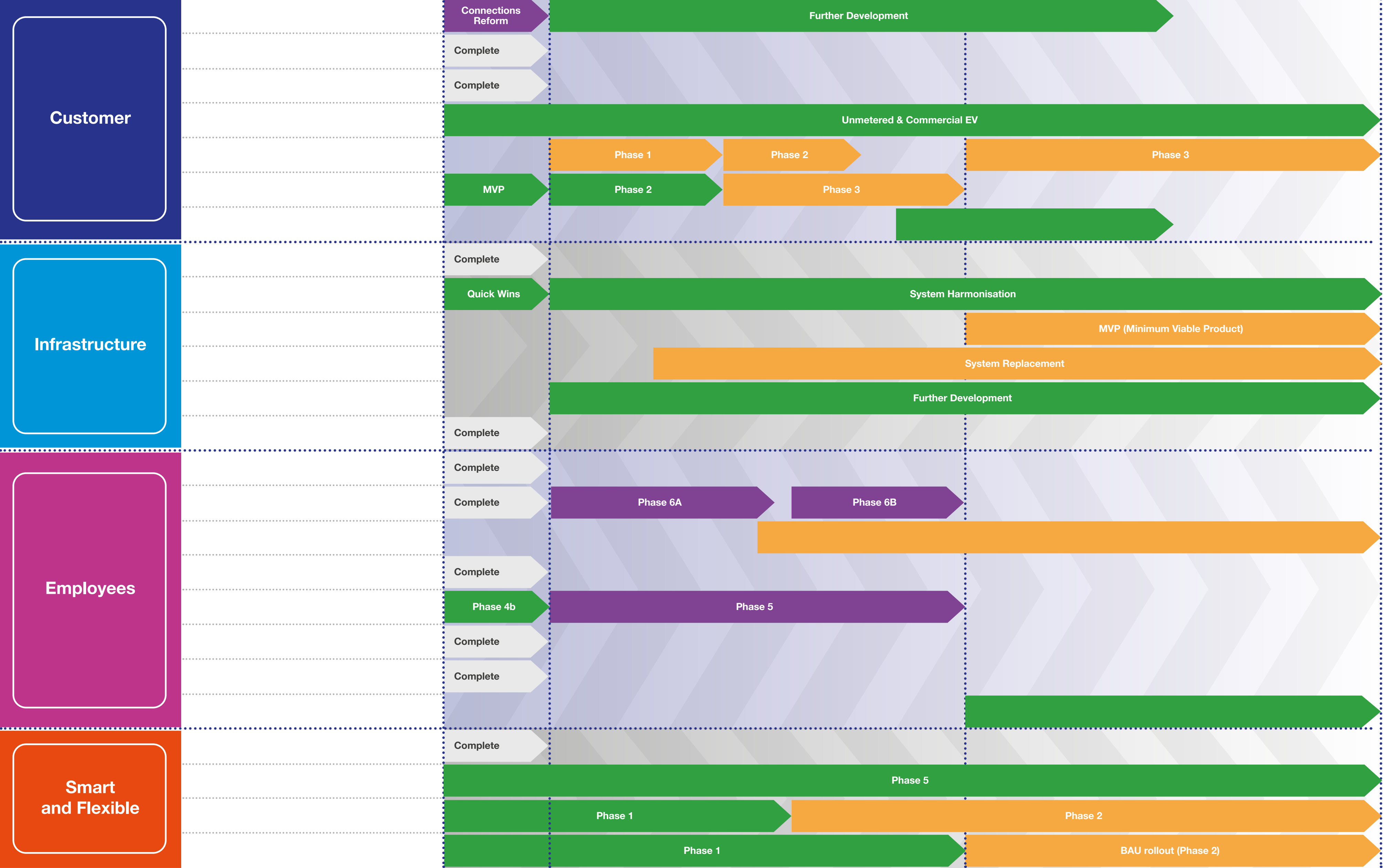




- In-flight
- Pending start-up
- Future initiatives

Customer Portal

Start date: 01/12/2022

End date: 31/09/2026

Category: Customers

Key contact: Osa Omokaro

Contact role: Product Manager

Contact email: osa.omokaro@nationalgrid.com

Description

A customer portal will allow NGED to build on existing high levels of customer service by instantly providing customers with the support and access they need.

The portal will provide customers access to raise enquiries and track the progress of their connection application, interact and view their own enquiries by uploading connection details and accepting quotes, and viewing historic and future data relating to their connection.

Customers using the portal will be presented with information tailored to their needs in a clear and simple layout and given the option to speak directly to the responsible team or person.

Drivers

NGED customers have historically received industry leading levels of customer service through traditional communication methods. The addition of a customer portal will complement NGEDs approach to customer service by providing an alternative method for customers to access their data when they need it.

Benefits

Improved customer service

Instead of contacting NGED's customer support team, customers can track the latest information of their enquiries directly online.

Reduced workload for customer facing functions

The portal will reduce the number of enquiries from customers asking for the latest updates on their requests.

Reduced time in processing enquiries

Our planners can provide customers updates for enquiries promptly and get notified of new enquiries in Crown, as opposed to getting enquiries through emails.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system, coordination of asset registration.

User types

Internal: Operation.

External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria

Customers able to view and update their enquiries using a personalised portal, reduce volume of traditional communications, increased customer satisfaction.

Progress and output

A customer portal has been rolled out that integrates with on-prem systems. Work is now underway on cloud-based solutions to underpin the future end-to-end process and execute on new customer journey designs required to deliver in ED3. Development is underway for the internal facing element of the Customer Hub, digitising the journey for large scale generation applications related to Connections Reform. The second iteration of the Evidence Submission portal is planned to launch by September in preparation for the NESO evidence submission window. This is a tactical solution, utilising on-prem systems and Enigma, with the future aspiration of bringing this functionality into the Customer Hub.

Next steps

Our 'Everyday Homes' customer segment has been identified as a priority delivery for the first iteration of the Customer Hub, due to the significant volume of applications associated to this journey and a direct link to the ED2 BMCS incentive. Discovery is now underway on low voltage applications for new connections (LVSSA) or Service Alterations, with plans to start development mid-2026. Development of the large-scale generation journey remains a priority and forms the basis of the Connections element of the Ofgem ED2 Digital Re-Opener. Strategic conversations are ongoing regarding the future roadmap and areas of focus regarding digitisation of customer journeys for the remainder of ED2.

Virtual Site Visits

Start date: 01/02/2023

End date: 31/12/2024

Category: Customers

Key contact: Kate Shehean

Contact role: Project Manager

Contact email: kshehean@nationalgrid.co.uk

Description

Virtual Site Visits provides a digital way of contacting our customers (in a FaceTime like way) to allow customers to share issues across the network such as meter boxes or fallen cables.

Drivers

By implementing a virtual site visit tool, NGED will improve customer service through traditional communication methods. Through a virtual site visit tool will shall Improve customer service and network availability while reducing wasted visits and our carbon footprint.

Benefits

Better transparency

Adopting virtual audits/inspections as part of CiC inspection policy provides better transparency of the post acceptance inspections for ICP Audits.

Increased efficiency

Replacement of some site visits ensures the customer experience is faster, safer, easier and more efficient.

Improved customer experience

Reducing the need to send connections staff to sites allows for a greater focus on customer needs and requirements.

Strategic theme

Operational efficiency/improved network availability.

EDTF recommendation

Digitalisation of the energy system.

User types

Internal: Operation.

External: Commercial, consumer, local authorities and regulators, energy section, third sector.

Success criteria

Reduced site visits due to instant customer resolutions, while improving customer service.

Progress and output

Has been built in Amazon Connect in place to support with Customer video calls.

Next steps

BAU change and enhancement.

Click 2 Connect

Start date: 01/02/2023

End date: 01/09/2026

Category: Customers

Key contact: Tricia Chapman

Contact role: Lead Scrum Master

Contact email: patricia.chapman@nationalgrid.com

Description

An innovative self-service firm quote tool where customers can directly view quotes at the best value, through the Customer Portal.

Click-to-Connect is able to use data to assess the capacity on the network and the ground conditions for a connection to provide customers with a firm quote.

Drivers

Providing an improved customer service and increasing efficiency for the connection journey by enabling our customers to self-serve firm connection quotes where possible.

Benefits

Improved time to quote for our customers

Our customers are able to obtain near real-time quotes at a time and place of their choosing.

Digitalisation of the connections experience

By enabling customers to directly make enquiries and receive quotes online.

Delivering net zero

Reduction in early site visits results in business efficiency savings supporting NGED's drive to net zero.

Reduced workload through increased customer self-service

Customers will be able to directly receive quotes via the Customer Portal, reducing the need for planners to provide quotes.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system, maximising the value of data, visibility of data.

User types

External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria

Allowing LV customers to obtain firm self service quotations.

Progress and output

Work associated to Click 2 Connect (self-serve quotations) was put on hold in order to facilitate necessary work for Connections Reform. In the intervening period, the Connections playbook was introduced which emphasises face-to-face contact and site visits with customers, contradicting the fundamental underlying logic for self-serve quotations.

Next steps

Work relating to the wider strategy around self-serve quotes will be picked up as part of the Customer Hub initiative and clarity will be obtained through the customer journey design work on exactly which market segments would benefit from automated quotations.

Self Service Tools

Start date: 01/09/2022

End date: 31/03/2027

Category: Customers

Key contact: Osa Omokaro

Contact role: Product Manager

Contact email: osa.omokaro@nationalgrid.com

Description

Our self service tools will be accessible online tools that enable our customers and installers to request or inform us of domestic LCT connections without needing to use the ENA form. The tools will provide the customer with an instant response with a formal NGED letter emailed to the customer or installer within 3 days.

Drivers

This tool will improve customer service and the speed of service as well as automating work instructions which may be created of the back of the information provided.

Benefits

Improved customer experience

This too will provide the customer with a fully self service solution which improves the speed of service and therefore the standard of service.

Reduces workload

Increased self-service reduces workload for planners as less time is spent on dealing with enquiries.

Improved efficiency

Customers receive a faster service and planners are able to allocate their time more efficiently.

Strategic theme

Operational efficiency/improved customer service.

EDTF recommendation

Digitalisation of the energy system, coordination of asset registration.

User types

Internal: Operation.

External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria

Increased number of customers utilising our online self service tools and a reduced number of application being processed by a person.

Progress and output

Customers are able to self-serve digital applications across numerous market segments on the NGED website. LCT customers are also able to self-serve utilising multiple routes including; Connect Direct, Domestic self-serve tooling and by submitting email applications. LV customers have the ability to self-serve budget estimates by using the online budget estimate tool available on the NGED website. Enhancements have recently been made to the Budget Estimate Tool user experience, including a price book update, better signposting for exclusions and improved performance. This has resulted in a significant reduction in unsuccessful estimates and abandonment rates, which is expected to positively impact customer feedback. Recent enhancements to the Connect Direct platform and integration with CROWN have significantly improved the auto-approval rate for LCT customers, resulting in an enhanced customer experience and an increase in business efficiency.

Next steps

New customer journey experience design is underway, with the focus being on lifting business processes out of CROWN and providing the customer with an enhanced user experience via a new customer portal. The EATL tooling used for budget estimates is currently being upgraded, which should provide NGED with more opportunities to address additional customer pain points associated to mapping and EV charger estimates. Work is underway to address the channel strategy for LCT applications and how Connect Direct will integrate with the Customer Hub and new cloud-based platforms.

Customer Relationship Management System (CRM)

Start date: 01/09/2022

End date: 31/12/2026

Category: Customers

Key contact: Mitch Golder

Contact role: Project Manager

Contact email: mgolder@nationalgrid.co.uk

Description

Customer Relationship Management system is a technology or system that supports customer service activities. A CRM is designed to capture and interpret customer data, both structured and unstructured, and to support the management of customer related operations by automating processes and workflows and helping to organise and interpret data to support the business in engaging with customers more effectively.

Drivers

Ensuring a seamless experience from initial contact to delivery of a new connection is key to meeting the needs of our customers and supporting the decarbonisation of the distribution network. The needs of new connections customers are changing rapidly and therefore the system required to support both customers and the business needs to be agile and adaptable.

Benefits

Data consolidation

Consolidation of customer data into a single system will improve communication and insight resulting in improvements to customer satisfaction.

Improved customer service

Customer enquiries will be dealt with more efficiently and progress made more transparent to customers.

Digitalisation

CRM will utilise digital tools including AI to improve customer service.

Improved visibility

Having an integrated and tracked record of all customer enquiries, requests and engagement in one place enables a 360 view of customers.

Strategic theme

Improved data management, increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system, maximising the value of data, visibility of data.

User types

Internal: Operational, contact centre, data and digitalisation, web provider.

External: All Customers (indirectly).

Success criteria

New connections enquiries are raised and managed in a new CRM, implementation of automated workflows for appropriate enquiry categories, faster time to quote and connect, visibility of connection progress provided to customers.

Progress and output

Currently assessing requirements to meeting business and stakeholder requirements, improve business efficiency, respond future market requirements and provide improvements in customer experience.

Next steps

We have scoped out our initial requirements for a CRM and are now undertaking a gap analysis to ensure we have captured all of our requirements for the CRM. We shall then look to move out to tender with the final scope.

Network Opportunity Map

Start date: 16/05/2022

End date: 31/12/2026

Category: Customers

Key contact: Adrian Anderson

Contact role: Product Manager

Contact email: adrian.anderson@nationalgrid.com

Description

The current network capacity map provides an indication of the networks capability to connect large-scale developments to major substations. Increasing the granularity to include distribution substations is imperative in enabling customers to make informed decisions.

Through a CIM compliant, eclectically accurate' mapping solution that is automatically updated as and when changes are made to source systems, end users will see one map with HV and LV network layers.

Drivers

Capacity maps allow customers to check the capacity and load of power generation connections in different geographical areas. These maps show the network of available hosting capacities and help customers find the installation location, saving time and money.

Benefits

Improved Capacity Visualisation

Next Gen maps provide the ability to see multiple network nodes/connection capacities simultaneously, in a user friendly visual tool which is up to date.

Improved data quality provided to the customer

Reduced time spent on customer enquiries (no disparity between customer views and post-enquiry quotation).

Decreased energy costs via optimised asset deployment

Commercial connection company can see where the cheapest location to connect is (without needing to update network) at one place. They could then reduce connections and cost.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system, coordination of asset registration.

User types

Internal: Operation.

External: Commercial, Consumer, Local authorities and regulators, energy section, third sector.

Success criteria

Electrically accurate substation headroom for BSP's and Primary's displayed on an easily accessible map for all customers based of off data available from the CDP.

Progress and output

The initial product is now live.

Next steps

Planning has begun to migrate the Network Opportunity Map into a more comprehensive tool with expanded capabilities for users. Development is expected to begin in late 2026.

On Cloud Data Platform

Start date: 01/2026

End date: 09/2026

Category: Customer

Key contact: Peter Wilcock

Contact role: Product Manager

Contact email: peter.wilcock@nationalgrid.com

Description

Digital Twin: The Digital Twin provides a digital representation of the physical network. For NGED, the physical network includes cables, overhead lines, poles, circuit-breakers, and many other components that make the electricity network. The electricity network is represented as data points across many on-prem systems that lack integration and harmonisation. The Digital Twin will provide a physical and electrical network topology, consolidating the core systems and providing instant access to a near real-time, digital view of the network to support and augment decision-making.

WebFOCUS consolidation: WebFOCUS is a legacy, on-premise reporting software. This project aims to migrate, replace, and rebuild the WebFOCUS reports into a modern, cloud-first architecture.

Drivers

- Cloud-first
- EJPs
- Financial savings

Benefits

- Cost saving
- Increased time-to-insight
- Improved situational intelligence
- Improved network planning
- Increased flexibility
- Reduced curtailment
- Fault reduction
- Better connections optioneering
- Improved data governance posture

Strategic Theme

- Cloud
- Network intelligence

EDTF recommendation

Maximising the value of data, visibility of data.

User types

All

Success criteria

Success will be achieved when the Digital Twin delivers a trusted, near real-time representation of the physical and electrical network, with fully integrated and harmonised data across ADMS, CROWN, and EO, enabling improved decision-making for planners and operational teams.

Integrated Network Model

Start date: 01/10/2023

End date: 30/09/2025

Category: Infrastructure

Key contact: Sam Rossi Ashton

Contact role: Project Manager

Contact email: srossiashton@nationalgrid.co.uk

Description

Our core data systems (NMS, GIS, EAM) contain duplicate data but are relatively disparate and as such data mismatches are difficult to address. Additionally, we have limited ways to generate CIM/CGMES 3.0 compliant data. Integrated Network Model (INM) a master data management solution which creates a reconciled version of our asset data and highlights data discrepancies. This solution will be made available to other applications.

Drivers

The need for a CIM Compliant single source of truth for NGED data that can benefit both customer and NGED platforms.

Benefits

A single source of truth of asset data

INM stores all asset data in one single place, enable us to meet the Ofgem requirement for CGMES 3.0 compliant data and promote interoperability between numerous internal systems.

CIM/CGMES model generation

The data could be understood by any programmes (e.g. connection companies can import and analyse the model easily).

Automate regulatory submissions

INM automate regulatory report generations.

Facilitate more efficient HV planning

INM automates the source modelling for Sincal so the data can be updated more regularly and no manual update needed.

Enable faster operations of Active Network Management (ANM)

For the control systems.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data.

User types

Internal and External customers.

Success criteria

GCGMES 3.0 compliant model that is used by internal and external customers.

Progress and output

Initial solution productionalised.

Next steps

CGMES3.0 Upgrade.

ADMS Harmonisation

Start date: 01/10/2023

End date: 31/03/2028

Category: Infrastructure

Key contact: Brad Purnell

Contact role: Programme Manager

Contact email: brad.purnell@nationalgrid.com

Description

The objective is to standardise NGED's Critical National Infrastructure ADMS systems across all four regions. This includes aligning system configuration, symbology, and diagrams to ensure consistency.

Drivers

A single ADMS configuration means reduced resources to implement version control and testing and reduced IT Hardware. This will result in a single way of working across DNOs.

Benefits

Streamline business operations

By removing inefficiencies caused by running four unique systems.

Enable a data cleanse across the disparate systems.

Drive network performance, efficiency and security

Through the creation of a centralised dataset.

Support future aspirations to meet net zero.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data.

User types

Internal: Digital Grid.

Success criteria

Improved business operations through the harmonising of four unique systems.

Progress and output

ADMS Harmonisation Project has successfully delivered a series of incremental, well-controlled configuration releases across SWES and SWAL that progressively aligned these systems across all four NGED licence areas, standardising single-line diagrams, logon pages, connectivity classes, several voltage and section-state colours, tracing colours, and OLI/OD documentation. The changes reduced regional variation, improved consistency and user familiarity across licence areas, and demonstrated strong Agile delivery maturity by safely implementing significant visual and operational updates in a live environment, supported through tight change and governance and effective Control Centre / business feedback loops.

Next steps

The next phase of ADMS harmonisation will focus on completing SWES dressing symbol alignment by copying approved symbols from Dev to Prod in controlled, non-disruptive releases, followed by a single consolidated, user-impacting release to transition Component Classes once all dressings are validated - Dressing symbol changes start with 132kV in FY27 Q1, then 33kV and 11kV. In parallel, remaining connectivity and section-state colours will be aligned across South Wales and South West to Midlands existing configuration, alongside further voltage colour harmonisation for 11kV, 6.6kV and single-phase networks, and an Operational Alarms harmonisation release across all four licence areas planned for FY27 Q1.

LV World

Start date: 01/07/2022

End date: 31/12/2027

Category: Infrastructure

Key contact: Jason Bullock

Contact role: CNI Manager

Contact email: jbullock@nationalgrid.co.uk

Description

The project aims to:

1. Visualise LV monitoring devices connected to the network in ADMS and;
2. Create a model of the LV network within ADMS to better understand activities and power flow in the LV network.

Drivers

Visualisation of LV analogue data within the ADMS to be used for predicting faults before they occur, hence reducing response times.

Benefits

LV Feeder Fault identification

The voltage values between the feeder and busbar can be compared to determine a suspected fuse operation.

Improved visibility of LV network model

Establishing a geographic world within our ADMS enables enhanced visualisation of damage reports against our network assets, faster triage and quicker restoration of customers.

Better understanding of our network

Predict when outage occur before customer calls in.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data.

User types

Internal: Field Operations, Dispatch, DSO.

Success criteria

Getting the LV network data into the ADMS in an available and usable format for all LV monitoring currently fitted.

Progress and output

We've worked with our vendors to make LV monitoring data available in ADMS and our time-series data historian.

Next steps

Following completion of phase 1 we would look to apply the geographic layout of our LV networks within ADMS. The geographic model will help with damage location identification and set the foundation for a future fully-modelled digital copy of our LV network model.

Asset Management

Start date: 01/06/2025

End date: 31/03/2028

Category: Infrastructure

Key contact: David Jowett

Contact role: Product Manager

Contact email: david.jowett@nationalgrid.com

Description

Replacement of NGED system that is used to record assets of NGEDs electricity network.

Drivers

The legacy system is approaching end of life and through its replacement we can introduce a solution that better equips us for managing the assets that will support us in delivering Net Zero.

Benefits

Better quality data

More effective management of electrical assets

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of data, coordination of Asset Registration.

User types

Internal: Digital Grid, DSO, Operations, Asset Management.

Success criteria

Improved asset data quality.

Progress and output

We have initiated discovery on the foundational Asset Management work to build a clear understanding of the current landscape and future needs. As part of this, we have been reviewing and aligning priorities with the business area to ensure focus on the highest-value opportunities.

Our work to date includes assessing and enabling the foundational features required to support robust data management, maximising the value and viability of asset data, ensuring the ability to amend and update information effectively, and enabling actions driven by accurate, trusted data. We recognise that high quality asset information underpins a number of wider organisational commitments, and the effort so far has focused on establishing the foundations needed to deliver maximum value through the build of strong, scalable asset capabilities. This work is being approached with a strong emphasis on supporting broader net-zero objectives through improved, data-driven decision-making.

Next steps

We will continue to engage with the business area to refine priorities, validate assumptions, and ensure alignment with organisational commitments and sustainability goals. The upcoming phase will focus on shaping the capabilities that maximise the value of asset information, ensuring it effectively supports operational needs, strategic initiatives, and the transition toward achieving net-zero outcomes.

What 3 Words

Start date: 01/07/2023

End date: 31/03/2027

Category: Infrastructure

Key contact: Simon Apps

Contact role: Project Manager

Contact email: sapp@nationalgrid.co.uk

Description

An external mapping software product which divides the world into 3 metre squares and assigns each square a unique combination of three words, allowing for more precise locational information where street addresses may be too vague.

Drivers

What3words aims to increase efficiency in incident reporting whilst improving safety for customers and employees.

NGED will integrate what3words into Electric Office and feed this data into ADMS (PowerOn) and asset management software in order to pinpoint customer locations, isolate circuits and coordinate fault response.

Benefits

Greater efficiency

NGED will maximise the efficiency potential for pinpointing customer locations, isolating circuits and coordinating fault response in order to minimise customer interruptions and customer minutes lost.

Improved visibility

NGED will have a clearer view of customer data, enabling NGED to more easily identify customer interruptions.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of data, Coordination of Asset Registration.

User types

Internal: Digital Grid.

Success criteria

We will assess the success of the project based on the following criteria:

- Additional layer into Electric Office to toggle w3w tiles;
- Assets can be assigned a w3w address based on the Electric Office layer, along with the w3w of potential abnormal access routes;
- Asset data relationship and process established to feed asset management software with w3w data;
- Reduction in wasted site visits;
- Minimal effort user adoption;
- Compliance with NGED policies;
- Additional button to access w3w window within CallTaker, and an enhanced search function within GeoView to leverage w3w offline functionality:
 - Improved customer experience;
 - % reduction in call duration for rural incidents;
 - % reduction in time taken for Control Engineers to identify damaged HV assets;
 - Improved coordination in LV fault response;
 - Reduction in Customer Interruptions due to more localised HV switching;
 - Reduction in Customer Minutes Lost due to improved fault response process.

Progress and output

ADMS integration is complete (CallTaker and Geoview).

Next steps

Install and further adoption.

Helicopter Data Project/HeliData Insights

Start date: 01/02/2024

End date: 31/06/2025

Category: Infrastructure

Key contact: Marnie Ellis

Contact role: Project Manager

Contact email: mellis@nationalgrid.co.uk

Description

The main aim of the project is to enable the organisation to realise the benefits of Fugro LiDAR data captured by our in-house Helicopter Unit for enhanced vegetation management processes; aiding the businesses shift from a reactive to predictive operating model and driving efficiency throughout ED2. It is intended that the project will develop proof of concept's (POCs) initiated by the D&D team to provide a visualisation of work tasks via a dashboard, and a visualisation of the current and future proximity of vegetation to the overheard network via a dedicated suite of maps.

Drivers

NGED have committed to enhance the existing Tree Management Programme to ensure the safety, reliability and resilience of the network. By providing a holistic view of defects and risks, the HeliData Insights project will inform and aid work task planning, increase efficiencies, and ensure uninterrupted service for customers.

Benefits

Greater efficiency

Insights gained from helicopter LiDAR data will improve efficiency in identifying and evaluating safety and compliance issues.

Improved visibility

Helicopter data will enable NGED to forecast the future proximity of vegetation to the network, enabling the prioritisation of work tasks and better utilisation of resource.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of data.

User types

Internal: Network Services, Tree Compliance Team, Helicopter Unit, Vegetation Management.

Success criteria

The project will be deemed a success if:

- the POC dashboard is developed and utilised by business and field teams as a visual representation of work tasks for vegetation management; and
- the POC suite of maps are developed and deployed, providing a holistic view of defects and risks to inform work task planning across the network.

Progress and output

Project has gone live.

Next steps

BAU changes and updates.

External Work Management System

Start date: 01/04/2021

End date: 31/03/2027

Category: Employees

Key contact: Daniel Hardman

Contact role: Project Manager

Contact email: dhardman@nationalgrid.co.uk

Description

A new work management system will be implemented to manage the full life cycle of work issued to contractors and other third party service providers. This new system will replace a legacy system and enable the issue, acceptance, variation, completion, invoicing and analysis of services provided contractually by third party organisations through the execution of contracts with a schedule of works. The existing legacy system relies on manual processing of invoices and lack granularity of completed work to support insight and data analysis.

Drivers

Granular data analysis of work orders issued to and completed by contractors and third party service providers will deliver insight and business efficiency. In addition, a new system will provide efficient real-time communication of work status, safety and street works information to support smart and flexible working.

Benefits

Better execution of contracts

It will ensure contracts are legally executed, work orders are efficiently issued and managed through to execution and completion of the work, milestones are updated in real-time from the field, variations to work are agreed, recorded and evidenced and manual processing of invoices is removed.

Greater accuracy

Tailors to users' needs, providing them with more control, accuracy and information.

Improved visibility

Users have improved visibility of external work orders, allowing for better work management and improved efficiency.

Strategic theme

Improved data management, increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of data.

User types

Internal: Design and planning, Operation, Finance, Regulatory.

External: Local authorities and regulators.

Success criteria

Implementation of a new system for use by staff, contractors and service providers, management of work issued in a variety of contracts.

Progress and output

The pilot has been signed off so Exeter and Torquay are now live.

Next steps

BAU updates and changes.

11kV Planning Tool (Sincal)

Start date: 01/01/2023

End date: 31/03/2027

Category: Employees

Key contact: Jordan Demuth-Pike

Contact role: Secondary System Models Manager

Contact email: jdemuthpike@nationalgrid.co.uk

Description

Sincal (a Siemens solution) is an industry leading power system analysis software package for electric and water networks. Sincal models are build using the latest GIS and CROWN data.

Drivers

Planning the 11kV network is becoming more complex as the volume of connection applications increases and new technologies are connected. The project will provide HV planning engineers with a brand new power system analysis tool that provides greater visibility of the HV network to perform power system analysis more efficiently. Phase 5 aims to improve on data integration and automation capability.

Benefits

Greater efficiency

The tool helps engineers to process customer connection applications faster and with higher accuracy. It automates data processing and minimises the time required by 11kV Planners, and others, to carry out specific modelling and design tasks, e.g., contingency and time series data analysis.

Improve the visibility and understanding of the HV network

Significantly improved functionality and performance of 11kV modelling to facilitate greater understanding and sharing of network information.

Strategic theme

Improved data management, increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of data.

User types

Internal: Operational, Design and Planning, Distribution System Operator.

Success criteria

Improved connections accuracy and efficiency.

Progress and output

Update Progress And Output to state Phase 1,2,3 & 4 have been completed. Phase 5 has recently concluded.

Next steps

Phase 6 is starting which will deliver further enhancements, particularly in the areas of data integration and automated network analysis.

Internal Work Management System

Start date: 01/05/2023

End date: 31/03/2028

Category: Employees

Key contact: Megan Muir

Contact role: Product Manager

Contact email: megan.muir@nationalgrid.com

Description

Delivery of the new internal work management system will provide us with a platform that can optimise the utilization of our staff to reduce operational expenditure, improve customer satisfaction and provide us with the information we need to plan our business.

Drivers

The volume of work across our business is set to increase dramatically in RIIO-ED2 and beyond. A fundamental step change in the way we currently schedule and manage our work loads is required to ensure we deliver a high quality service for our customers.

Benefits

The new platform will provide a centralised, standard system to **optimise** operational work. This it will help reduce travel time, ensure more tasks are delivered on-time and allow us to respond to customer requests faster than before.

It provides our team support, engineers and managers with far **greater visibility** and insight into day to day operations allowing them to plan and execute work more effectively.

More efficient work order management and able to collect feedback to improve **business processes**.

Strategic theme

Operational efficiency/improved customer service.

EDTF recommendation

Maximising the value of data, visibility of data.

User types

Internal: Operational, Design and Planning.

External: Customers.

Success criteria

Implementation of a new system for use by staff that allows management of internal work instructions and workload.

Progress and output

Requirements have been defined. Development of the MVP (MLP) is currently underway as part of the internal cloud ecosystem, progressing through design and build phases. Front-end and back-end development is actively being delivered by internal Scrum teams, supported by the implementation of cloud-based architecture. Integration activity is in progress, including the extraction and ingestion of data from on-premise systems. Core capabilities are in active development, following an iterative delivery approach with ongoing stakeholder engagement and feedback to refine the solution.

Next steps

Continue MVP design and build across front-end, back-end, integration, and microservice capabilities. Progress and stabilise integration with on-premise systems and data ingestion pipelines. Validate core scheduling, field views, and gate management functionality with users. Capture and define required cloud-based data products to support reporting post-launch.

Envision

Start date: 05/06/2023

End date: 31/01/2026

Category: Employees

Key contact: Sam Rossi Ashton

Contact role: Project Manager

Contact email: srossiashton@nationalgrid.co.uk

Description

Envision is bespoke UI built into iHost (developed by Nortech). This tool facilitates automated data manipulation and time series data storage. It allows the business to access data visualisation features such as interactive trends and custom reports.

Drivers

Existing methods of time-series data processing are not uniform and are done on decentralised spreadsheets and tools, leading to an inconsistent approach throughout the business.

This project aims to develop a consistent approach in managing and processing time series data to enable the DSO team and planner to understand long term loading and asset loading behaviours.

Benefits

Single source of truth

It provides the business with centralised access to time series data and processing capabilities. It reduces the need for individual translation, maximising productivity in the business.

Reduce network load on the source database

It caches data from the Data Logger regularly.

Reduce processing time for load surveys

It reduces the actual loading time for planner (as load surveys will be processed in the system, not with planners' laptops).

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Visibility of data, Maximising the value of data.

User types

Internal: Design and Planning, Operation.

Success criteria

Centrally hosted and supported tool capable of producing interactive trends.

Progress and output

Planner workflow enhancements enhancement.

Next steps

Complete.

Connect LV

Start date: 01/02/2023

End date: 01/03/2026

Category: Employees

Key contact: Adrian Anderson

Contact role: Product Manager

Contact email: adrian.anderson@nationalgrid.com

Description

An LV Connection design and estimation tool with automated costing, up to date capacity margin indications, accurate network models using Greatly Improved Automatic Network Topology performance and user interface (these are enhancements being introduced in phase 4). Phase 1 to 3 focussed on introducing the tool and key features. This tool greatly improves the accuracy of the network model and its alignment with its known state.

Drivers

To support the future needs of LV planning activities, the project aims to develop an efficient connection design and estimation tool (replacing WinDebut) by the innovative use of digitalisation and data handling capabilities to help LV planners to gain greater visibility of the LV network, to deliver design and quotation to customers and offer superior user experience.

Benefits

Connect/LV automatically generated BoM with 'New' and 'Replacement' assets related costs identified on the BoM. Multiple transformer networks can be assessed. Network elements such as Split Phase transformers link boxes are interpreted accurately and network assessments can be carried out. Assessment of configurable networks using link boxes and optioneering capability. This will allow us to:

Increase estimates accuracy

LV Planners are able to get consistent designs and cost estimates quickly for the customers putting us in good stead to meet the future demand.

Reduce the time to do LV studies planners

The production of LV network model will be automated (time saved to create the model manually).

Replace WinDEBUT

An outdated tool which lacks the capability to assess the new LCT load types and is no longer supported.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of infrastructure and assets.

User types

Internal: Design and Planning.

External: Commercial, Consumer, Local Authorities and Regulators, Energy Sector, Third Sector.

Success criteria

Implementation of Connect/LV Phase 4; more efficient and accurate information supporting new connections; improved customer satisfaction.

Progress and output

Phases 1-5 are complete.

Next steps

Design and Development has commenced to migrate ConnectLV to the SaaS equivalent comprised of ConnectStore and the VisNet Suite of products. We will be targeting full transition to the SaaS solution by Q1 2027.

Major Connections Tracker

Start date: 29/08/2023

End date: 31/03/2027

Category: Employees

Key contact: Simon Apps

Contact role: Project Manager

Contact email: sapps@nationalgrid.co.uk

Description

Major Connection Tracker (MCT) Phase 2 – delivered March 2024

The project is the next phase of the recently released MCT, the new improvements are designed to better facilitate business needs. The changes and additions within Phase 2 are being driven by business stakeholders which have engaged collaboratively with the Digital Project Delivery team to project manage these requirements. The changes will enable multiple teams within the business to use the MCT more extensively and improve business efficiency.

Statement of Works – delivered June 2024

Building Statement of Works Team processes into the MCT to digitise the end-to-end statement of works journey, improve data visibility between departments and create a robust, auditable, semi-automated platform to capture, maintain and report on statement of works data.

Additional phase expected – Quarter 1 2025

Application refinements to build on feedback and improve MCT for PND, Network Services and SoW Team.

Drivers

Regulatory reporting.

Benefits

Current system not suitable for business needs and requirements. Development will enable the business to successfully record PND data in format that can easily be reported on.

Strategic theme

Data and digitisation strategy/Primary System Design requirements/OFGEM reporting.

EDTF recommendation

- Better Quality Data.
- More effective management of electrical assets.

User types

Connections team (reporting) Primary Network Design team.

Success criteria

- Several releases agreed with business that hit criteria set out in the specification.
- User acceptance criteria completed.

Progress and output

Release 1 - Complete.

Release 2 - Complete.

Release 3 - Complete .

Next steps

- Continuous review and adaptation to support with Connections Reform.
- Data from MCT to feed into the Connections Data Dashboard bringing in volume data to underpin and support connections processes.

Secondary System Planning Tool

Start date: 06/12/2023

End date: 31/12/2024

Category: Employees

Key contact: Daniel Clements

Contact role: Project Manager

Contact email: dclements@nationalgrid.co.uk

Description

The project is designed to quantify the current and future utilisation of the LV network and to increase the visibility of future and ongoing reinforcement schemes between DSO and DNO. Improved documentation will enable reporting for ED2 core commitment 1.

Through the ELITE phase it will improve baselining capabilities of DSO System Planning, it will improve understanding of maximum demand across the network.

Drivers

Business requirements for core commitment 1, DSO incentive reporting and regulatory reporting.

Benefits

Greater efficiency

Single source of truth

Data will be collated in a single system as opposed to multiple tools.

Interdepartmental collaboration

All teams using the same software, increasing accuracy.

Improvement of data accuracy

Improved data sharing process to network services.

Strategic theme

Data and digitalisation strategy/DSO.

EDTF recommendation

Maximising the value of data, visibility of data.

User types

Secondary System planning Team and Secondary Network Design Team.

Success criteria

MVP delivered by May next year for teams reporting deadlines to be met.

Progress and output

Solution is developed and is current in test.

Next steps

Preparation for deployment.

EATL ConnectStore/VisNet Migration

Start date: 01/04/2026

End date: 31/03/2028

Category: Employee

Key contact: Adrian Anderson

Contact role: Product Manager

Contact email: adrian.anderson@nationalgrid.com

Description

Connect/LV is a web-based LV load flow and network design application used by approximately 400 Network Planners, developed by EA Technology Ltd (EATL). This is part of a suite of products that also contains ConnectLite and Click-to-Connect. The existing on-premises deployment, currently out of support following expiry of a 5-year contract, is being assessed for migration to EATL's cloud-hosted SaaS equivalent products VisNet Design and Visnet Connect.

Drivers

The 5-year EATL contract has ended, leaving the platform out of support and creating licensing, security and capability risk. On-premises infrastructure is costly to maintain across multiple teams and increasingly limits access to new LV modelling features. EATL are proposing migration to ConnectStore, VisNet Design and VisNet Connect. Regulatory commitments require ongoing utilisation of the latest tooling to meet performance targets.

Benefits

Moving to a cloud-hosted SaaS platform eliminates on-premises infrastructure overhead and reduces staff time across PS&I, Database and Middleware, Mapping and Asset teams. Migration to ConnectStore and the VisNet Suite also unlocks product roadmap benefits, supports digital transformation and aligns connections tools (Click2Connect / ConnectLite / VisNet Connect) with design tooling.

Strategic theme

Increased network insight and operation.

EDTF recommendation

Digitalisation of the energy system.

User types

Internal: ~400 Network Planners (production), DSO engineers, PS&I teams, Database & Middleware, Mapping, Asset & Field Ops teams.

External: EA Technology Ltd (EATL) as vendor.

Success criteria

Chosen platform retains full on-premises feature parity. CROWN integration maintained for customer data and BoM export. NGED mapping data accessible as background layer in new platform. Centralised authentication in place. Field operations trained and CAB approval obtained for new access model.

Progress and output

Project deliverables scoped and delivery plan in place. A contract agreement with EATL is being put in place for the remainder of ED2.

Next steps

Finalise and execute the 2-year interim EATL support contract. Work with EATL to integrate the new ConnectStore cloud platform with NGED data and start to enable the VisNet suite of products for use by NGED. Agree delivery timelines and prepare the users to migrate to the new platform.

LV Network Visibility

Start date: 01/04/2023

End date: 31/01/2025

Category: Smart and flexible

Key contact: Chris Hogg

Contact role: Project Manager

Contact email: chogg@nationalgrid.co.uk

Description

Provide visibility of the LV network to allow NGED to gain better customer supply visibility and insights.

Drivers

Gaining increased visibility of the LV network will ensure that we can better serve our customers today and in the future.

Benefits

Better visibility of the LV Network will help earlier identification of LV faults, assist with LV voltage monitoring and assist with planning decisions and vulnerable customer engagement.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data, visibility of data.

User types

Internal: Operations, Contact Centre, Dispatch, Stakeholder Engagement Office, DSO.

External: 3rd Party Developers.

Success criteria

1. Reliable and effective system to cluster Smart Metering no-supply alerts to understand a potential Feeder or LV network fault.
2. Ability to gain an immediate response from a smart meter to understand an individual or set of individual customers' supply status.
3. Automating the historic voltage profiles of individual customers and clustered customers.
4. Understanding of demand and energy profiles for key customer and technology archetypes to inform network planning and build tailored customer energy plans.
5. Data architecture to enable effective end-user access to smart metering and LV monitoring data to inform network planning and customer engagement.
6. Collecting and storing smart metering data as available (in accordance data privacy aggregation requirements) for current and future use.
7. Enabling LV network data to be made available to external users, such as Community Energy groups.

Progress and output

We have baselined products for all use cases working with various business sponsors to ensure we deliver most value as quickly as possible while iteratively rolling out additional functionality.

Next steps

Complete readiness activities to launch products and in parallel develop communications and learning materials to support roll out.

Market Gateway

Start date: 01/11/2022

End date: 31/03/2026

Category: Smart and flexible

Key contact: Adrian Anderson

Contact role: Product Manager

Contact email: adrian.anderson@nationalgrid.com

Description

Market Gateway is National Grid's enterprise-grade digital platform designed to facilitate Flexibility Service Providers (FSPs) in participating in NGED's electricity distribution flexibility programme. When modelling and forecasts indicate potential network constraints, the Energy Management Centre can use Market Gateway to incentivise registered FSPs to increase or decrease demand or generation to relieve network pressure.

The platform provides:

- 1. External UI:** The interface where third parties complete pre-qualification, register assets, fulfil technical requirements, and participate in Trade Opportunities.
- 2. Internal UI (MINT):** The system used by NGED flexibility commercial officers to review eligibility, manage contracts, review asset registrations and oversee trading activity in line with internal processes.

Market Gateway supports onboarding, asset registration, contract management, trade execution, and compliance activities, providing an end-to-end digital process for flexibility service delivery.

Drivers

Existing flexibility service solutions rely heavily on manual and adhoc processes, which are no longer sustainable as volumes increase. Market Gateway transforms these processes into a structured, automated and scalable digital solution aligned with ED2 commitments. It streamlines onboarding, governance, commercial qualification, asset technical validation and the execution of flexibility trades.

Benefits

Lower barrier to entry to flexibility markets

FSPs can participate more easily through simplified and standardised digital onboarding and trading processes.

Increased flexibility service resource efficiency

A single, centralised platform replaces manual workflows and disconnected spreadsheets, allowing NGED teams to manage flexibility services more effectively.

Enhanced data security

Commercial, technical and financial information is processed and stored securely within the new solution.

Strategic theme

Improved Data Management.

EDTF recommendation

Digitalisation of Energy system.

User types

- Internal:** DSO Flexibility teams, commercial officers, operations personnel.
- External:** Flexibility Service Providers and aggregators.

Success criteria

A fully integrated digital flexibility management system that supports:

- Completion of commercial and technical qualification processes.
- Asset registration and compliance validation.
- Issuing and managing Overarching Contracts.
- Provision of Trade Opportunities and operational management of flexibility services.
- Improved auditability, governance, and data quality.

Progress and output

Phases, 1,2 and 3 have been delivered with aa trading activity managed through Market Gateway and the recent introduction of Day Ahead trading.

Next steps

Focus on improving the user journey, optimising the platform, and transitioning to a faster, more scalable architecture while aligning with Market Facilitator initiatives, including Flexibility Market Rules and FMAR implementation.

Distributed Power Flow

Start date: 01/08/2023

End date: 31/03/2027

Category: Smart and flexible

Key contact: Jason Bullock

Contact role: CNI Manager

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Description

Implementation of DPF functionality within trial areas across NGEDs four license areas to enable Power Analysis within our ADMS. (This is a precursor for ANM, Voltage Optimisation and state estimation in ADMS).

Drivers

To enable other projects to progress (ANM, SVO, State Estimation, Pre-Fix).

Benefits

By delivering the DPF Implementation project, NGED will be supporting the ambition to maintain a **safe and resilient network** by enabling the establishment of power analysis and the accompanying processes within the NGED network. There will be benefits to the wider organisation as a result of DPF. For example, NGED will also be able to progress and/or enhance additional solutions such as **SVO, ANM and Pre Fix** amongst others.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data.

User types

Internal: Digital Grid.

Success criteria

Having a DPF system configured and verified within each licence area to allow a wider use of DPF and therefore enabling other projects.

Progress and output

Trial areas are complete in all four of our license areas.

Next steps

Guided by internal stakeholder priorities we are rolling out DPF functionality, by Grid Supply Point, to improve our capabilities. We're also working with other business stakeholders to improve asset data collection to improve the network model.

Primary Outage Restoration Tool

Start date: 01/01/2024

End date: 31/03/2027

Category: Smart and flexible

Key contact: Mangesh Malvankar

Contact role: Project Manager

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Description

Implementing PORT functionality which autonomously reconnects supplies faster via healthy circuits during EHV faults where this adds value.

Drivers

Reduce the manual requirement around the maintenance of sequence schemes and to allow a dynamic approach to restoration of primary outages.

Benefits

More dynamic and quicker restorations to the network and removing the need for manual input.

Strategic theme

Improved data management, Increased network insight and operation.

EDTF recommendation

Maximising the value of data.

User types

Internal: Digital Grid.

Success criteria

Full implementation of the PORT tool across all primary substations.

Progress and output

We've worked with our vendor to test and validate the enhancements to Automatic Power Restoration System (APRS) and Primary Outage Restoration Tool (PORT) to improve restoration of customers in the event of primary substation outages. We've upgraded our ADMS system in order to begin implementation of PORT across our network.

Next steps

PORT will be validated and enabled on a substation-by-substation basis.