



FUSION

Unlocking the value of Local
Network Flexibility



WHO ARE WE?

We are SP Energy Networks, part of the Iberdrola Group, leaders in sustainable innovation. As a Distribution and Transmission Network Operator we keep electricity flowing to homes and businesses throughout Central and Southern Scotland, North Wales, Merseyside, Cheshire and North Shropshire.

We do this through the network of overhead lines and underground cables which we own and maintain.

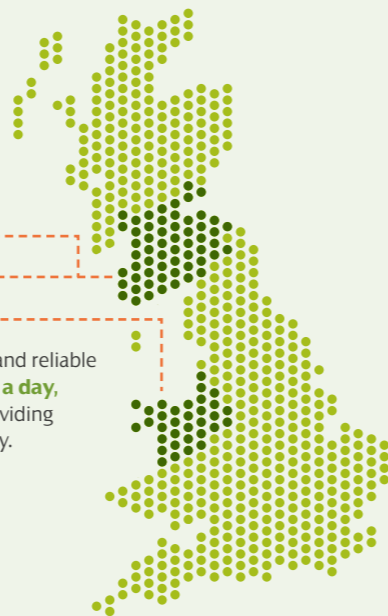
Our three regulated electricity licences are:

SP Transmission (SPT)

SP Distribution (SPD)

SP Manweb (SPM)

Our aim is to deliver a safe and reliable electricity supply **24 hours a day, 365 days a year** whilst providing exceptional value for money.



FUSION

SP Energy Networks is aiming to make the transition to becoming a Distribution System Operator (DSO).

FUSION represents a key element of that transition. As the electricity system changes from a centralised to decentralised model, it enables a smarter and more flexible network to function.

The increase in Distributed Energy Resources coupled with the increasing load demand from low carbon technologies such as electric vehicles has fuelled a need to create an active distribution network capable of managing modern customers' needs.

Our innovative FUSION project is trialling commoditised local demand-side flexibility through a structured and competitive market, based on the Universal Smart Energy Framework (USEF).

FUSION will enable Distribution Network Operators and all market actors to unlock the value of local network flexibility in a competitive and transparent manner. This will be enabled by applying the appropriate functions and structures defined in USEF.



PROJECT PARTNERS

Project Partners	DNV GL, Origami Energy, PassivSystems, Imperial College London (Academic partner), SAC Consulting, Fife Council, The University of St Andrews.
Collaboration with	ENA Open Networks Project.
Working in Coordination	SSEN & ENWL: Project Transition, WPD: Electricity Flexibility and Forecasting System (EFFS)

BENEFITS FOR CUSTOMERS

- FUSION will unlock flexibility in the distribution network: this means it can be procured by a range of market actors. Aggregators will be able to operate to aid the development of the flexibility market. By facilitating this neutral market, network flexibility will be accessible to all parties.
- For the Distribution Network Operators, constraint management will be trialled, alleviating localised network congestion without requiring costly and time consuming network reinforcement. This will provide excellent value for money for customers. The creation of a flexibility market will go beyond existing bilateral trading of flexibility, providing a whole systems approach to realising the value of flexibility.
- Customers will also be empowered to commoditise their flexibility thanks to new routes to market for existing and emerging flexibility providers in the distribution network.
- This smarter use of the distribution network assets means significant carbon and environmental benefits. The system favours renewable energy sources and facilitates the uptake of low carbon technologies.

TIMESCALE

Stakeholder Forum

Our Stakeholder Forum connects and communicates with multiple groups across the industry. There is continual feedback and information exchange as the project progresses across local, national and international levels.

October
2018

Evaluation of Flexibility in East Fife

A comprehensive assessment of the available flexibility will be made in the East Fife area. The assessment will include customers connected at all voltage levels. Customers, as potential flexibility providers, will be invited to complete an Expression of Interest (Eoi) and have their sites assessed to determine the potential flexibility that could be provided to the local community. The full flexibility potential in East Fife will be mapped and determine the specific trial locations.

USEF Framework Implementation within GB

All activities within USEF are within work package 3 of Fusion. This includes the due diligence of USEF against the GB legal, regulatory and market frameworks, both current and future settlement arrangements. The due diligence will be the basis of a public consultation, culminating in a reference plan for USEF in the Grid Market. It will inform Fusion as well as a blue print for the GB energy industry.

Deployment and Demonstration of USEF in East Fife

The trial will involve an open tender for the procurement of the flexibility contracts with aggregators in East Fife. Operational interaction with aggregators will be implemented using a cloud-based platform. The actual procurement, dispatch and remuneration of demand response and local generation. At the end of the trial, a full evaluation will be undertaken.

2023




Process and Technology Readiness

Implement the requisite processes and network flexibility planning tools that integrate with SP Distribution's existing network management tools to identify short-term and long-term flexibility requirements. We will implement USEF processes with market participants looking to participate in the trials. FUSION will develop and implement a cloud-based procurement platform through which SP Distribution engages participating aggregators and flexibility providers.

Knowledge Dissemination

Throughout Fusion, tangible and valuable learning will be generated, captured and disseminated. Fusion will maintain ongoing evaluation and reporting, and will make learning available to all stakeholders through a range of appropriate dissemination methods. Integration and coordination with ENA Open Network Workstream 3, DSO transition, will be principle to the knowledge dissemination strategy.

CONTACT US

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