

LV ENGINE

LV Engine is facilitating the uptake of Low Carbon Technologies through the use of a globally innovative Smart Transformer. The project will enhance the flexibility of our electricity network and contribute to the move to a sustainable future.

It will deliver significant financial savings when deployed across the GB network. The successful roll out of LV Engine in Great Britain is expected to represent a saving of £62m by 2030 and £528m by 2050.

The project will stimulate a competitive marketplace for power electronics and Smart Transformers.

ANGLE-DC

Angle DC is a smart and flexible method of creating a controllable bidirectional Direct Current between two sections of our electricity network, Isle of Anglesey and North Wales.

This is the first flexible MVDC (Medium Voltage Direct Current) link in the GB distribution system and will increase the capacity for load and generation connections.

It will effectively enable the integration of increasing volumes of renewable generation and help accommodate the growth of electricity demand.

FITNESS

FITNESS demonstrates a reduced outage and low risk approach to future substation monitoring, protection, automation and control.

This is enabling faster deployment, greater availability, improved safety and greater controllability with a reduced footprint and lower cost than conventional design. It means reduced network costs and constraints, with significant benefits for GB customers.

The goal of FITNESS is to enable GB Transmission Owners (TOs) and Distribution Network Owners (DNOs) to apply a digital substation design approach to future load and non-load related investment.

VISOR

VISOR improves visibility and understanding of the network. It allows us to get more from existing electricity network assets, and ensure the system remains reliable as it continues to become more diverse.

By improving understanding of the network's dynamic behaviour, Visor will provide the System Operator with the means to optimise the full capacity and deliver further capacity release using existing assets.

This project plays an important part in helping to reduce the uncertainty of our rapidly changing energy landscape.

CONTACT US

-  www.spenergynetworks.co.uk
-  facebook.com/SPEnergyNetworks
-  twitter.com/SPEnergyNetwork
-  spinnovation@spenergynetworks.co.uk



FUTURE NETWORKS



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.

OUR KEY PRIORITY AREAS

We're focussing our innovation on 3 priority areas that will ensure we provide outstanding customer service, security of supply and efficient performance at lowest cost

Our three key priority areas:



Deliver Value to Customers



A Smarter Flexible Network



Sustainable Networks

To us, innovation is doing things differently, developing new solutions and advancing ideas. Our Think Big, Start Small and Scale Fast approach allows us to transform our network to meet the needs of today and the future.



INNOVATING

Innovation is at the core of what we do

We recognise the opportunities and challenges for the UK's changing energy landscape as we move to a low carbon economy. We have the drive, ambition and capability to lead the industry by innovating in the best interests of our customers and wider stakeholders.

We're leading the way on the issues that really matter.

Our Innovation Projects are recognised as world leading and the projects we are working on today are firmly centred on meeting the electricity needs of the future.

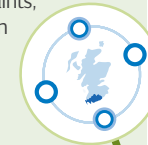
FLAGSHIP INNOVATION PROJECTS

DUMFRIES AND GALLOWAY INTEGRATED ASSET MANAGEMENT

Dumfries and Galloway Integrated Network Management is providing a solution to the constraints customers face when connecting renewable generation.

The project addresses the problem by reducing existing constraints, facilitating new connections in advance of required transmission upgrade works and contributing to carbon reduction targets.

This project is facilitating our customers' low carbon future and monitoring the increasing renewable generation on the electricity network.

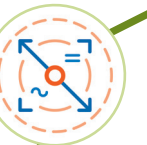


PHOENIX

Phoenix is an innovative project addressing the technical, engineering and commercial challenges which are seen as the main barriers for the roll out of Synchronous Condensers.

Phoenix will provide dynamic voltage control, inertia and short circuit level in the light of the diminishing synchronous generations. The project will enhance the stability of the electricity system and help provide customers with security of supply.

The use of this innovative technology is expected to demonstrate a solution for the existing issues that are currently being encountered on the GB transmission network, due to the progressive closure of synchronous generation plants within thermal power stations.



FUSION

FUSION is implementing a local, open and structured flexible energy market in East Fife. It will unlock the value of local network flexibility.

Prosumers in East Fife are increasingly becoming engaged in the supply and generation of their own energy. The project is designed to work with them and create flexibility within the network.

FUSION is helping to pave the way for our transition to becoming a Distribution System Operator (DSO), while continuing to save costs or customers and reduce carbon footprint.

