

Project ID	DIP042		
Long Title	Fusion		
Short Title			
Keywords	Region; Multi-sector/Grid; Electricity; Power Quality & Grid Integration; Smart Grids; Demand Response; Active Network Management; Stakeholder Engagement & Behaviour Change; Energy Strategy Development; Alternative Suppliers & Tariffs		
Location (Town, Region, Country)	(North-East)	Fife	Scotland
Latitude and Longitude	56.38N	2.94W	
OSGB code	NO 42 21		
Status	Ongoing		
Start Date	2018		
End Date	2023		
Description	<p>SP Energy Networks are working closely with the Energy Networks Association (ENA) on the Open Networks Project. This collaborative work will accelerate our transition to a Distribution System Operator.</p> <p>A key feature of an active distribution network is the ability to draw on network flexibility to alleviate constraints. FUSION will be enabling Distribution Network Operators and all market actors to unlock the value of local network flexibility. FUSION will create a flexibility market to unlock the value of flexibility in a competitive and transparent manner. This will be enabled by applying the functions and structure defined in the Universal Smart Energy Framework (USEF).</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Customers will also be empowered to commoditise their flexibility use of electricity, providing a new route to market for existing and emerging flexibility providers in the distribution network.</li> <li>• Through smarter use of the distribution network assets in this approach, significant carbon and environmental benefits. This is from system benefits, favouring</li> </ul>		

	renewable energy sources in a flexible network, and by facilitating the uptake of low carbon technologies.
Sectors	Multi-sector/Grid
Funding Sources	Network Innovation Competition
Budget £	£7.1 million
Partners	SP Energy Networks, DNV GL, Origami Energy, PassivSystems, Imperial College, SAC Consulting, Fife Council, University of St Andrews, Bright Green Hydrogen
Energy vectors	Electricity
Scale (lab/small/community/region/national)	Region
Technologies demonstrated	Active network management
Economic models demonstrated	Virtual power plant/market aggregation, consumer behaviour change incentives, grid services
Other concepts demonstrated	Demand response, grid constraint mitigation
Industry engagement	
Consumer engagement	
Project Reports (incl. links)	
Datasets (incl. links)	
Website/social media	<a href="https://www.spenergynetworks.co.uk/pages/fusion.aspx">https://www.spenergynetworks.co.uk/pages/fusion.aspx</a>
Information sources	<a href="http://www.smarternetworks.org/project/spden01">http://www.smarternetworks.org/project/spden01</a>