

Project ID	DIP058		
Long Title	Local Energy Market / Visibility Plugs and Sockets		
Short Title	LEM / VPS		
Keywords	Region; Multi-sector/Grid; Electricity; Heat; CHP; Direct Electric Storage; Power Quality & Grid Integration; Smart Grids; Demand Response; Active Network Management; Virtual Power Plant; Stakeholder Engagement & Behaviour Change; Energy Strategy Development;		
Location (Town, Region, Country)		Cornwall	England
Latitude and Longitude	50.3N	5.1W	
OSGB code	SW 79 49		
Status	Ongoing		
Start Date	2016		
End Date	Undefined		
Description	<p>LEM: The trial will test a variety of different technologies in both domestic and commercial environments so we can learn how the platform will work in a wide range of circumstances. We would anticipate that homeowners would typically be looking for us to automate the process as much as possible, while a business might need or want more control.</p> <p>For example, we might offer a homeowner a new micro-CHP unit that allows them to generate their own energy. We could then automate the process so the unit fires up at peak times of demand on the network and therefore relieves the pressure on the grid. Providing this service, could secure the householder a payment, resulting in lower fuel bills.</p> <p>On the other hand, business owners might combine their existing on-site generation such as a back-up generator with a new energy storage unit and choose to make the decision themselves about whether to export any excess energy to the grid and make some money, or store it for use on-site later.</p> <p>VPS: The Visibility Plugs & Socket project is WPD's NIA funded contribution to a much larger EU funded initiative – the Cornwall Local Energy Market - led by Centrica in Cornwall to create a local energy market and test the use of flexible demand, generation and storage across both domestic and business sectors. The Cornwall Local Energy market project will also involve National Grid and Exeter University.</p> <p>The expertise from both projects will be combined to develop a trading platform for flexibility services to put buyers and sellers in touch with each other. This central 'socket' is a hub to which many different parties can connect using their 'plugs'. This infrastructure and the knowledge of how electricity demand and generation is likely to change as a result of flexibility services allows for greater visibility.</p>		

Sectors	Domestic, non-domestic
Funding Sources	European Regional Development Fund (LEM), Network Innovation Allowance (VPS)
Budget £	£19 million (LEM), £180,000 (VPS)
Partners	Centrica (LEM), Western Power Networks (VPS), University of Exeter, National Grid
Energy vectors	Electricity, Heat
Scale (lab/site /small/community/region/national)	Region
Technologies demonstrated	Smart controls, active network management; large-scale smart grid, storage, CHP
Economic models demonstrated	Local energy market, grid services, new commercial models, deferred network investment
Other concepts demonstrated	Demand response, DNO-consumer engagement, grid constraint mitigation
Industry engagement	c. 50 businesses
Consumer engagement	c. 100 households
Project Reports (incl. links)	http://www.smarternetworks.org/project/nia_wpd_029/documents Videos, FAQs and newsletters at Centrica website (link below)
Datasets (incl. links)	
Website/social media	https://www.centrica.com/innovation/cornwall-local-energy-market https://www.westernpower.co.uk/Innovation/Projects/Current-Projects/Plugs-Socket-Project.aspx
Information sources	http://www.smarternetworks.org/project/nia_wpd_029