

Project ID	DIP065		
Long Title	Network Equilibrium		
Short Title			
Keywords	Region; Multi-sector/Grid; Electricity; Power Quality & Grid Integration; Smart Grids; Active Network Management; LV Grid Monitoring; Energy Strategy Development;		
Location (Town, Region, Country)		Devon/Somerset	England
Latitude and Longitude	51.02N	3.11W	
OSGB code	ST 22 24		
Status	Ongoing		
Start Date	2015		
End Date	2019		
Description	<p>The focus of Network Equilibrium is to balance voltages and power flows across the distribution system, using three Methods to integrate distributed generation within electricity networks more efficiently and delivering major benefits to distribution customers.</p> <p>The Problem that Network Equilibrium addresses is that electricity infrastructure in the UK was originally designed and developed for passive power distribution requirements. As a result, the integration of significant levels of low carbon technologies (LCTs) within our present electricity networks can cause voltage management and thermal issues. For business as usual (BAU) roll-out we need to develop solutions, which take a strategic engineering approach, considering the whole system and not solving constraints on a piecemeal basis. The Problem will be investigated using three Methods, and their applicability to 33kV and 11kV distribution networks assessed.</p>		
Sectors	Grid		
Funding Sources	Low Carbon Network Fund		
Budget £	£13.1 million		
Partners	Western Power Distribution, National Grid, SP Energy Networks, Newcastle University, Parsons Brinckerhoff		
Energy vectors	Electricity		
Scale (lab/site/ small/community/region/national)	Region		
Technologies demonstrated	LV grid monitoring, smart controls, active network management, large-scale smart grid		
Economic models demonstrated	Deferred network investment		
Other concepts demonstrated	Grid constraint mitigation		
Industry engagement			

Consumer engagement	
Project Reports (incl. links)	Library: http://www.smarternetworks.org/project/wpdt206-2/documents
Datasets (incl. links)	
Website/social media	https://www.westernpower.co.uk/Innovation/Projects/Current-Projects/Network-Equilibrium.aspx
Information sources	http://www.smarternetworks.org/project/wpdt206-2