

Project ID	DIP059		
Long Title	Low Carbon Hub		
Short Title			
Keywords	Region; Multi-sector/Grid; Electricity; Solar PV; Wind; Bioenergy; Power Quality & Grid Integration; Smart Grids; Active Network Management; LV Grid Monitoring; Energy Strategy Development;		
Location (Town, Region, Country)	East Lindsey	Lincolnshire	England
Latitude and Longitude	53.36N	0.10W	
OSGB code	TF 40 87		
Status	Complete		
Start Date	2012		
End Date	2015		
Description	<p>The Low Carbon Hub for East Lincolnshire was designed to test a variety of new and innovative techniques for integrating significant amounts of low carbon generation on to electricity distribution networks, in an effort to avoid the costs and other issues that would normally be associated with more conventional methods of network reinforcement.</p> <p>Lincolnshire, being on the east coast, makes it suitable for a wide range of renewable generation types. These include onshore and offshore wind farms, large scale solar Photo Voltaic (PV) and energy from bio crops. However, many generators cannot connect to the distribution network closest to them due to the effects their connection would have on the operation of the existing network. These generators thus tend to require long, new underground cable installations to connect them to more robust sections of the network. This is inevitably a very expensive solution that frequently destroys the business case for the generator. However, Western Power Distribution (WPD) continued to receive a high volume of connection enquiries from developers throughout the life of the LCH – a situation that strengthened the justification for this project.</p> <p>Through the Low Carbon Hub, the project sought to explore how the existing electricity network could be developed ahead of need and thus deliver low carbon electricity to customers at a significantly reduced cost in comparison to conventional reinforcement.</p>		
Sectors	Domestic, non-domestic		
Funding Sources	Low Carbon Network Fund		
Budget £	£3.5 million (£2.8m from LCNF)		
Partners	Western Power Distribution, FACTs Provider		
Energy vectors	Electricity		

Scale (lab/small/community/region/national)	Region
Technologies demonstrated	LV grid monitoring, smart controls, active network management, network data acquisition,
Economic models demonstrated	New commercial models, deferred network investment
Other concepts demonstrated	Grid constraint mitigation, DNO-generator engagement
Industry engagement	
Consumer engagement	
Project Reports (incl. links)	<p>Closedown report:  <a href="https://www.westernpower.co.uk/docs/Innovation/Closed-projects/Lincolnshire-Low-Carbon-Hub/CNT2002-LLCH-Close-Down-Report_v1-0-Final-2.aspx">https://www.westernpower.co.uk/docs/Innovation/Closed-projects/Lincolnshire-Low-Carbon-Hub/CNT2002-LLCH-Close-Down-Report_v1-0-Final-2.aspx</a></p> <p>Library:  <a href="http://www.smarternetworks.org/project/cnt2002/documents">http://www.smarternetworks.org/project/cnt2002/documents</a></p>
Datasets (incl. links)	
Website/social media	<a href="https://www.westernpower.co.uk/Innovation/Projects/Closed-Projects/Low-Carbon-Hub.aspx#FAQLink187;javascript:void(0);">https://www.westernpower.co.uk/Innovation/Projects/Closed-Projects/Low-Carbon-Hub.aspx#FAQLink187;javascript:void(0);</a>
Information sources	<a href="http://www.smarternetworks.org/project/cnt2002">http://www.smarternetworks.org/project/cnt2002</a>