Project ID	DIP024
Long Title	Early Learning of Low Voltage Network Impacts from Estate PV Cluster
Short Title	Early Learning
Keywords	Small-scale; Town; Domestic; Multi-sector/Grid; Electricity; Solar PV; Power Quality & Grid Integration; LV Grid Monitoring; Data Acquisition;
Location (Town, Region, Country)	Crickhowell	South Wales	Wales
Latitude and Longitude	51.89N		3.18W
OSGB code	SO 19 22
Status	Complete
Start Date	2011
End Date	2013
Description	A new low carbon housing development of roughly twenty houses which have been developed by Melin Homes in Crickhowell, South Wales. The estate features high efficiency houses each equipped with photovoltaics. Traditional network studies indicate that voltage limits would be exceeded without an overlay of existing 95sq mm LV cable. The scheme provided a low cost opportunity for early learning of photovoltaic (PV) voltage impacts and validity of existing electricity network design assumptions. Installation of two different size LV cables in parallel to the existing cable, with linking facilities at each end, provided a real life, on load, capability to change the impedance of the feeding LV cable and measure resulting changes in voltage performance.
Sectors	Domestic
Funding Sources	Low Carbon Network Fund
Budget £	£20,000
Partners	Western Power Distribution
Energy vectors	Electricity
Scale (lab/site /small/community/region/national)	Small
Technologies demonstrated	LV grid monitoring, network data acquisition, solar PV
Economic models demonstrated	Deferred network investment
Other concepts demonstrated	Grid constraint mitigation
Industry engagement	
Consumer engagement	20 households
Project Reports (incl. links)	Closedown report: https://www.westernpower.co.uk/docs/Innovation/Closed-projects/Early-Learning/Early-Learning-Closedown-Report-FINAL-

	v2.aspx
	Library: http://www.smarternetworks.org/project/wpdt1004/documents
Datasets (incl. links)	
Website/social media	https://www.westernpower.co.uk/Innovation/Projects/Closed-Projects/Early-Learning.aspx
Information sources	http://www.smarternetworks.org/project/wpdt1004