



Open

OpenLV is a groundbreaking project that's making local electricity data openly available

Community, Business and
Academia Case Studies

Case Studies

The OpenLV project is trialling an open software platform in electricity substations that can monitor substation performance and electricity demand

The LV-CAP™ platform is designed to integrate with third party products to enable network control and automation, and increased customer participation in network management. The platform will host applications provided by a diverse set of developers, such as community groups, businesses and universities, providing a variety of services to network operators, communities and the wider industry.

As part of the OpenLV project, the software is installed in 80 Low Voltage (LV) distribution substations located in Western Power Distribution's (WPD) licence areas – the Midlands, the South West and South Wales.

This leaflet provides a summary of some of OpenLV's community, business and academia projects.

More details can be found on the OpenLV website

www.OpenLV.net

The OpenLV project is making local electricity network data available to community groups and organisations, companies and universities.



The project is working with seven community groups to present and use their local electricity data in new ways. For example, showing the times of day when it is cheaper to run appliances, flagging up times when electricity generation results in lower CO₂ emissions, using substation data to see if it's possible to generate more renewable energy in the area, or using information to develop new projects to make neighbourhoods more sustainable.



The OpenLV project team is also working with a range of companies and universities, supporting them to use LV network data to provide benefits to Distribution Network Operators, community groups, the wider industry, the research community and, of course, customers. The project is working with organisations wanting to control loads such as battery storage, hot water tanks, EVs and renewable generation in the most effective and efficient manner for the local electricity network.



Community

Bath and West Community Energy (BWCE)

BWCE aims to engage local residents in testing a local, sustainable community energy ownership model.

Exeter Community Energy

The project is developing a smartphone app that enables people to see how their energy use has an effect on the local grid.

Marshfield Energy Group

A web app using OpenLV data will allow local people to see real-time energy patterns in the village, alongside grid carbon intensity data.

Owen Square Community Energy Initiative

The project will use substation data to promote take up of low carbon technologies by local households and will match up storage, solar PV and heat pumps to optimise network capacity.

Rooftop Housing Group

An app will give residents access to real-time electricity demand and carbon emissions with the aim of raising awareness and changing behaviour around energy use.

Tamar Energy Community

A web app is being developed to allow people to see electricity data for the local substation, with information about carbon intensity, electricity costs and local solar PV generation.

WHG Housing Association

An app will use OpenLV data to help residents make the most of an Economy 10-type tariff by alerting customers when peak and off-peak tariffs are in operation.



Business & Academia

Egnida Group – SGIP (Smart Grid Interface Project)

This project will seek to build a software application that uses substation data from the OpenLV platform to control batteries and smart heating to reduce peak load on the local substation.

Haysys – FeederNet System

Haysys will connect its FeederNet technology to LV-CAP™ to prove the system can accurately monitor an LV substation and the OpenLV platform can be utilised.

London Business School – Electric Mobility as a Service Operations Impact on Community Networks

The project will visualise the impact of Electric Mobility as a Service (EMaaS) on LV networks, proposing a dynamic pricing model to maximise benefits to transport and electricity networks.

Orxa Grid – Predicting Voltage Limit Violations

Orxa Grid is developing an application to run on the OpenLV platform which will forecast future voltage profiles and generate voltage alerts based on those predictions.



The OpenLV Team



EA Technology
www.eatechnology.com



Western Power Distribution
www.westernpower.co.uk

Project suppliers



Nortech
www.nortechonline.co.uk



Lucy Electric GridKey
www.lucyelectric.com



CSE
www.cse.org.uk



Regen
www.regensw.co.uk

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Watch our video and find out more
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