



COMMUNITY CASE STUDY

Marshfield Energy Group

Marshfield Village, South Gloucestershire

Background

Marshfield is a village of around 850 households in South Gloucestershire. Marshfield Energy Group is volunteer-led, with support from the Community Land Trust. The local primary school has a 12 kW wind turbine and there are 30 domestic PV installations ranging between 3-4 kW each. The community group has undertaken research in the past, exploring the potential for a solar farm, wind, and anaerobic digester generation schemes.

What is the challenge?

There is a drive to explore options to make Marshfield village more sustainable, and to build a robust model of energy use in the village. There are already a number of electric vehicles in the village and uptake of them is expected to grow. Approximately 4% of the houses have solar panels, however, the local grid currently limits any new single community electricity generation to 100 kW. Marshfield is geographically constrained by its location in Green Belt, the Cotswold Area of Outstanding Natural Beauty, a Conservation area, listed building designations, leading to a lack of hosting sites for low carbon generation schemes.

What is the proposed solution and how is OpenLV enabling it?

All four substations in the village will be monitored by the OpenLV project. The resulting data will provide a very clear picture of electricity consumption for nearly all of the village. Work is underway to also measure the local electricity generation from domestic PV and the wind turbine and attributing this to relevant substations

and feeder routes, giving a complete, detailed picture of electricity usage patterns for the village.

The community group is developing ideas which include increasing public awareness of electricity consumption patterns and behaviour change to reduce demand at peak times. A web app using OpenLV data will allow local people to see real-time energy patterns in the village, alongside grid carbon intensity data. Data from the OpenLV project will also be used to provide an evidence base for a village-wide energy strategy, to assess the potential for additional renewable energy installation, for business planning around potential time of use tariffs for the village, to plan for the expected increase in electric vehicle use, and to assess potential energy storage solutions that could be associated with it. The village experiences supply interruptions; so residents are keen to explore the OpenLV data to understand if changes in their consumption behaviour might improve the reliability of supply in the village.



OpenLV Your local electricity data

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