

PV Energy Community Case Study:

Phoenix Centre Swansea, Wales



The Phoenix Centre is a community enterprise centre located in Townhill in Swansea, Wales.

The Centre is open Monday-Saturday and hosts a community café, childcare services, a library and IT Suite, sports facilities, conference rooms, and a variety of other activities and events for the local community. The Centre is run by the Hill Community Development Trust, which was set up in 2000 and is a company limited by guarantee with charitable aims.

The Phoenix Centre PV E.CO is connected to the local distribution network, which is owned and operated by Western Power Distribution (WPD).

Prior to the installation of the solar PV system, the centre purchased all of its electricity from a licensed electricity supplier. In September 2016, a 30 kWp solar PV system was installed on the Centre's south-facing roof by a local solar PV Cooperative, Egni.

Egni Co-op develops solar energy on community buildings in Wales. It does this by raising funds from its cooperative share offers to pay for the solar panels. Egni's main purpose is to generate clean energy, enable community projects to be more financially stable and engage the public through its share offers.

Egni receives the Feed-in Tariff generation and deemed export (50% of generation) payments for the electricity generated and in exchange provides the Centre with free electricity.

Batteries are not installed at the site and any electricity which is generated and not used by the Centre is exported to the local distribution network.

DC/DC Power Optimizers are fitted to each of the solar PV modules. This prevents the individual module production being reduced to the weakest performing module on the string; allowing higher energy generation and providing performance feedback for each module.

The Phoenix Centre shows how a community building can be used to harness renewable energy. Through using the energy it generates to power the building, and exporting its surplus back to the local network, the Phoenix Centre system is a good example of grid-integrated community solar.