

Cerne Abbas Village Hall Solar Panels & LEDs



Project cost
£37,851.83

Estimated Savings
20 tonnes of CO₂ per year

Equipment / Installer
20 kWp solar PV rooftop array (66 panels) and solar diverter – Dorset Energy Solutions,
68 LED light fittings - EC Electricals

**Grant
awarded:
£17,040.88**

**Estimated
Annual
Savings:
20 tonnes
of CO₂**

The Project

As part of Cerne Abbas Village Hall's plans to become carbon neutral they installed a 20 kWp solar PV array on their south facing roof space. And replaced old fluorescent light fittings with 68 highly efficient LEDs.

Getting started

Spurred on by a rise in environmental awareness, the committee of Cerne Abbas village hall decided it was time to act and do their bit to steer the village towards a zero-carbon future. Unsure of what needed to be done to achieve this they reached out to Low Carbon Dorset for guidance. After a site-visit Low Carbon Dorset technical officer Erik produced an energy report for the committee which listed recommendations on how to reduce energy use and costs. This gave the committee members a good understanding of what needed to be done and they set about contacting local suppliers and gathering quotes.

Solar PV Panels:

One of the biggest opportunities to reduce the carbon emissions of the hall was to take advantage of its south facing roof by installing solar panels. It was estimated that the roof could fit a 20 kWp array, double what the hall used on a day-to-day basis. Any excess electricity



generated by the panels would feed in to the national grid (unfortunately at no financial gain to the hall as the feed-in-tariff scheme (FITs) ended prior to the project beginning). Regardless of the lack of financial incentive the committee made the forward-thinking decision to install as many panels as their roof could take and maximise their electricity generation.

When the price of battery storage comes down, they plan to invest in a battery so they can make the hall self-sufficient in its energy use. This will involve storing any excess energy generated in peak times and using it when their panels are not generating as much in the evenings and winter months.

The panels are estimated to save around 9 tonnes of CO₂ each year and cost £18,800. Low Carbon Dorset provided a grant to cover 40% of this cost.

LEDs

With the potential to reduce the energy used by the hall's lighting by 90%, a switch to LEDs was a no brainer for the village hall committee. They replaced 78 low efficiency fluorescent light fittings with 68 LEDs at a cost of £19,050 (40% of this cost was paid for by a Low Carbon Dorset grant). This measure alone will save 11 tonnes of CO₂ and £2.2k in energy bills each year!

Other recommended measures:

Further recommendations were made in the hall's energy report which included turning down room thermostats to below 20°C, further ceiling insulation and an additional standing induction hob to reduce the gas used for cooking. The committee can apply for additional grants from Low Carbon Dorset to help fund any of these measures up until June 2020.



“The support and guidance we received from Low Carbon Dorset was invaluable. Their knowledge and expertise helped us achieve our carbon reduction goals.”

Tom Kirkham – Cerne Abbas Village Hall manager