

THE WHARF HOUSE

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The Wharf House Photovoltaic Project

The Wharf House Company exists to raise public awareness of, and involvement in, the promotion and restoration of the Herefordshire and Gloucestershire canal. It runs a Visitors' Centre with a restaurant, museum, shop and six letting bedrooms. There is an office for the centre manager, a Director of the Canal Trust. It also manages the adjoining restored canal basin. It is wholly owned by the Trust, registered charity, Number 1010721.

Photovoltaic panels of Sharp Nu 185 cells, 46 east facing, 48 west facing, are mounted on the roof of the Centre. Three inverters, a DC distribution board and isolator switches are in the loft. Microgeneration Certification Scheme, MCS, installers, **Evoenergy** undertook the design, supply, installation, testing and handover including thorough tutorial to Wharf House team responsible for overseeing day by day use. A data logger and educational display meter will be attached and operate with a web link.

Motivation. The Wharf House is increasing its activities. Utilities are a major overhead expense. We are committed to going Green. This installation will help the county of Gloucestershire get closer to its Low Carbon target. Electricity coming free allows more money to be used for canal restoration, as will sales of surplus. It will be a powerful educational feature made more effective by its strategic role in furthering the restoration work and by the support materials being prepared to go alongside a display meter. The introduction of Feed-in-Tariffs by the previous government and backed by the present one, make it an even more worthwhile initiative.

The prominence of the photovoltaic roof assures public awareness of this climate friendly measure. There is no shading. It is close to Gloucester city and alongside the busy A40 trunk road. Visitors come daily sometimes more than a thousand a week. Those going into the building will see the display meter and an explanatory panel..

This high visibility of photovoltaic panels is one reason for choosing this technology in preference to other means of producing renewable energy. Much of the energy generated will be consumed on site with saving of CO₂ of 0.46 kilograms per kWh (unit of electricity); more than twice that for solar thermal panels, when replacing natural gas consumption. The profile from thermal panels is a poor match with that of the developing hot water demand. Any PV output not used on site will be exported enabling someone else to benefit, which is not possible with solar thermal, nor heat pumps. In any case, the site is not suitable for a heat pump system. Except for hydro, which will take some time, other technologies are not suitable here. Two consultancies have visited and advised against wind turbines. The very limited space inside the Wharf House is a constant hindrance to activities. Except in the loft, there is no room for more services equipment. Outside, it is likely Local Authority planning would prevent plant close by.

Installation is straightforward. Cost per kilogram of CO₂ saved is well inside what was the specified threshold to remain eligible for Community Sustainable Energy Programme part funding. The Naturesave contribution has helped to tip the delicate balance of available resources and demands on them favourably so that we could proceed. THANK YOU