

CASE STUDY 3 - DOMESTIC MIXED RENEWABLES

Fachongle Isaf, Cilgwyn, Newport

Fachongle Isaf was the home of John Seymour and Self Sufficiency in the 60's and 70's. Members of his family still live here and the traditions spread out into the wider community.



WOOD HEATING & COOKING

In 2004 we installed an Envirofire pellet stove heating the two storey Granny flat. It is very easy to use. It uses 60W to turn the Auger and send the heat into the air, it is huggable and keeps a teapot warm.

Pellets are collected about twice a year from Pembrokeshire Bioenergy. They are made of compressed sawdust and are dry and energy dense, for wood. They come from Northern Ireland. The stove cost £2,000 installed with flue, after a £600 grant, from Beacon Stoves. The flat is sheep wool insulated, lime mortared, and is warm by design and costs little to heat. The living flame draws people in and warms psychologically.

In the main house we replaced a Rayburn with a Stanley Errigail, a cast iron old style simple range. Its virtues are easy lighting, very quick top cooking for the supper, an instant warm kitchen. Its vices are very slow oven and very little hot water. A year later we imported two Austrian Lohburger ranges for neighbours which heat radiators, cook, and space heat on modest intake of well dried wood. They are technically clever, burning at 1000 degrees, which burns the gases and tars which hold twice as much heat as the chunk of carbon you see.

Most new wood stoves (Clearview, Woodwarm, Stovax) work with the air coming from above, any good local stove shop e.g. Arcade, Beacon Stoves, will advise. We bought from Jack of Stacks and Stoves, Goodwick.

SOLAR HOT WATER

Four years ago Jamie Ashe roof mounted two Genersys solar thermal panels. The cost today is still only £2,450 after £400 grant. They are truly miraculous, we expected hot water in the Summer, but because the seasons have merged we get hot water from May into October, whenever the sun shines even for a short time. This means we quickly adjusted our washing habits to the sun. I disabled the immersion heaters and we became off-grid for hot water as well as heating. With a fuel efficient thermal range this would be a civilised option. As it is the

family endure tepid showers at times! On cold or non-sunny days the water is heated from cold to tepid so again large savings. With lifestyle adjustments solar thermal is worth its weight in gold as well as carbon saving.

BIOFUELS

I became Celtic Biodiesel's first private customer after seeing the old oil which they transestrify with ethanol into a diesel equivalent. Now there is a rush on old veg oil, and limited supplies. The green gold rush has pushed ethanol prices up so

biofuel tracks mineral diesel at a little distance behind. Biodiesel has caused some filter problems in older vehicles in our user circle, but there are ways to avoid this. The others have no problems, and experience greater efficiency in the summer, less in the Winter. I have a 1000 litre tank and lots of satisfied neighbours. I am also replacing car use with bike and bus, and choosing meetings and events according to the transport to them. Others in the yard are car less, one family uses bikes exclusively.

WINDPOWER

My neighbours installed a 6kW 9m Iskra wind turbine in Feb 08. Planning was turned down by the Park but it got permission on appeal. I was uncertain if it would be worth it, not being on a hilltop. However it exceeded everyone's expectations including the installer, Nick Dorrell. It is grid connected so the owners get money for all electricity exported and a smaller sum for all electricity produced, including what they use, through the ROCS (Renewable Obligation Certificates). It is a good investment, returning about 5% on the £25,000 minus a £2,500 grant. This year the returns will leap up, while returns on shares crumble. Again lifestyle adaptation - power tools come out with the wind, greatly magnifying carbon and money savings. You see a brewing storm as an energy feast arriving.

Wind turbines show and make some noise, however even the people living 50 yards away don't notice or mind the whirring sound.

OVERALL LESSONS ON RENEWABLES: I have met a few people who had bad deals with the wrong equipment for the site, so look well before leaping. But most people on the green wave feel they are surfing into the future, not drowning in debt. The feel-good factor of empowerment is even more enriching than the free or low cost energy.

With thanks to Vicky Moller

USEFUL CONTACTS

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The PV Array powers the garden watering system above