

## 1970s House, IP9 2EL

### Nigel Hunt –

He says:

At my home near Ipswich in rural Suffolk, East Anglia I have spent some enjoyable time on several projects to make us more eco-friendly & green living. None of them are going to save the planet, but every little helps. Renewable energy is certainly going to become more important in the future, particularly using small-scale installations.

Over the last 20 years, I have introduced many alternative technology projects to save energy and money.

My website describes them all in detail [www.alternativetechnology.info](http://www.alternativetechnology.info)

I have five photovoltaic panels mounted at roof level providing electricity to charge two large carbon fibre batteries in my workshop.

I have had a medium sized, professionally installed, solar hot water system installed at my house. This is because I have been so impressed with the idea of solar energy, that I decided I wanted a thermal system large enough to provide all our hot water, in the summer months, for the whole house.

I have now had a large professionally installed, grid-tie solar PV system installed at my house. This is because I have been so impressed with the performance of the technology, that I decided I wanted a system large enough to support the electricity consumption of the whole house. It was very expensive, but I believe it was worth it, as it drastically reduced our carbon footprint at a stroke. We could have bought a new luxury car for the same price, but which would benefit the environment more?



I have a small wind generator in the garden which charges a large carbon fibre battery in my workshop. The generator is a WG910 Rutland Windcharger from Marlec rated at about 60 watts which has performed reliably for 10 years or so.

Two large carbon fibre batteries in my workshop are used to provide standby AC and DC lighting for the house

### Key features

- Solar PV panels & grid-tied system
- Solar hot water system
- Wind turbine
- Standby Battery power charged with solar power
- Loft insulation
- Wood stove
- Solar Water Feature
- Rainwater recycling
- Hybrid car
- Chicken keeping

### Overview

**Age, Type:** 1915-2000, Domestic

**Cost of measures:** £11,000

I have upgraded the insulation of the house by increasing the thickness of the loft insulation. When the house was built in 1975, loft insulation was not considered to be very important. Consequently only 50 mm of fibreglass insulation was in place.

I investigated what extra insulation I could provide. Wickes builder's merchants had a 3 for the price of 2 offers on 150 mm rolls of rockwool insulation. I spent about £140 and half a dozen return trips to Ipswich to get enough to do the whole loft across the rafters. This gave me a decent total insulation thickness of 200 mm, but in fact 270 mm is recommended in the UK now. The difference last winter was quite noticeable. We have the upstairs radiators on a separate heating circuit with its own thermostat and in the evening the upstairs heating rarely came on at all. This shows that the heat from downstairs was previously escaping through the loft, forcing the upstairs heating to come on.

I am now in the process of increasing the insulation thickness still further to the latest Building Regulations Standard of 270 mm.

### **Design process**

I got several quotes for Large Solar PV system and Solar Hot Water system & had long discussions with suppliers to devise most suitable systems. I got Building Regulations Approval for Solar Hot Water system. All other features were DIY.

### **Evaluation**

I am very passionate about all things green. I grow vegetables, keep chickens and drive an electric car.

We achieved a 71% carbon reduction in our home according to our Old Home - Superhome survey.

Sustainable Energy Academy case study  
<http://www.sustainable-energyacademy.org.uk/?s=capel&cat=33>

### **Funding**

Low Carbon Buildings, Energy Saving Trust grant for Solar PV, £2,500 Babergh Council grant for Solar Hot Water, £500.

### **Professional Contacts**

- ❖ EvoEnergy in Nottingham  
<http://www.evoenergy.co.uk/>  
Telephone: 08448 150 200
- ❖ Solarworks of Lavenham  
<http://www.solarworks.co.uk/>  
Telephone: 0800 781 4004
- ❖ A.C. Butler Heating and Plumbing of Ipswich  
<http://www.acbutler.com/>  
Telephone: (01473) 748387

Bury St Edmunds Toyota supplied our Auris Hybrid car & Ebay provides many DIY materials for home made projects.

If you have any specific questions about this case study, these can be directed to the building owner via the website

[www.greensuffolk.org/sgbn](http://www.greensuffolk.org/sgbn)