

# COMMUNITY RENEWABLE ENERGY AT LOCAL LEVEL

## Lynemouth Resource Centre



Lynemouth Community Trust was set up in December 1998 to assist with the regeneration of the village. In 1999 the trust was able to secure funding to purchase and refurbish the current building for use as a resource centre. The centre opened in September 2000, and provides training opportunities and employment guidance mainly for young adults and other unemployed people of the village, as well as an information technology suite, which provides computer and internet access.

REALL was contacted for help with assessing if any renewable energy technologies would be suitable for the community centre. REALL organised and funded a feasibility study which enquired into the viability of wood fired heating, wind power, photovoltaic panels, and solar water heating.

The centre was assessed for two forms of wood heating - fired by logs and fired by woodchips. Long log systems use 500mm lengths, which are loaded into the boiler every morning, and the boiler runs flat out to heat water in a highly insulated accumulator tank. The heating needs of the building are then met by this heated water. Automated woodchip systems use mechanical means to convey fuel into the boiler, which is controlled by timers and thermostats, and can fire throughout the day, in accordance with demand.

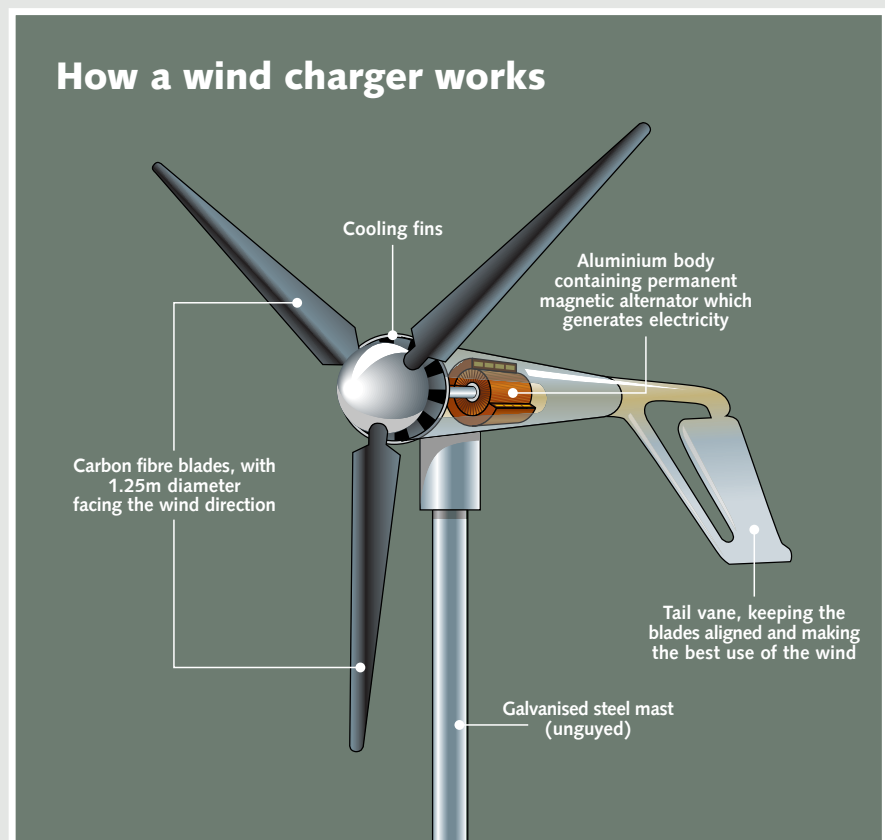
Wind turbines come in all sizes - from the very small to those designed for wind farms. They all work in the same basic way. They are on high towers to lift them above any shelter such as trees and buildings, and into higher wind flows. Turbines turn into the wind, so that the turbine is always in the optimal position to produce the maximum electricity. As the wind passes over the blades, it causes them to rotate. As they do so, they turn a generator which produces electricity. Any surplus power can be sold to the grid or used to charge a battery bank to be used when there is little or no wind.

Photovoltaic (PV) panels generate electricity when daylight stimulates a reaction within the panels. Although they generate more in summer, they do not need bright sunlight to function. PV panels make a bold environmental statement, but when used on buildings which are connected to the mains electricity

supply, often do not provide a good economic return on the investment.

Solar water heating, however, is generally more economically viable. When sunlight falls on these panels it heats a liquid inside them, which passes through the heating coils in a well-insulated hot water tank to heat the water inside. These tanks also have an immersion heater or second heating coil, powered by a standard boiler, to bring the water up to temperature if necessary for washing purposes.

However, for community groups, funding for such installations is always an issue, and usually 100% external funding is required. This is generally the reason it takes community groups some time to implement recommendations. Lynemouth Community Centre is still considering the report, and is also installing a wood pellet burning stove.



# CLEAN GREEN TECHNOLOGIES



## Solar water heating

Over a year, solar water heating can provide about 60% of a typical family's hot water.

## Solar photovoltaics

PV panels generate electricity from the sun, produce no CO<sub>2</sub> and are maintenance free.



## Wood heating

Heating with wood is carbon neutral as growing trees lock up the CO<sub>2</sub> emitted by burning them.



## Micro wind power

In an open location wind turbines make a useful contribution to electricity supply.

## Hydro power

For buildings near a river, hydro can generate power with no pollution.



## Ground sourced heat pumps

Heat from the ground for underfloor heating or extra large radiators. Uses electricity efficiently.

## Funding for renewables and energy efficiency

There are various funding sources for renewable energy and energy efficiency at both local and national level. Advice on funding is available from your local rural community council:

### Community Action Northumberland

Tower Buildings, 9 Oldgate, Morpeth  
Northumberland NE61 1PY

### Durham Rural Community Council

Park House, Station Road, Lanchester  
Durham DH7 0EX

### Tees Valley Rural Community Council

Queensway House, Queensway  
Middlesbrough TS3 8TF

**REALL** was run by Community Action Northumberland and Durham Rural Community Council and operated in conjunction with partners. Funding has now come to an end, and Community Action Northumberland can no longer supply specialist renewable energy advice, although Community Action field workers are able to offer general guidance.

Funding for **REALL** was received from:

Community Action  
Northumberland



## Further information

Further information about community ownership of renewable projects is available from the **Department of Trade and Industry**. [www.dti.gov.uk/files/file15108.pdf](http://www.dti.gov.uk/files/file15108.pdf).

Information about energy co-operatives - **Energy4All**

Tel: 01229 821028, Email: [info@energy4all.co.uk](mailto:info@energy4all.co.uk)  
and web: [www.energy4all.co.uk](http://www.energy4all.co.uk)

Information about energy matters for communities may be obtained from **Café**.

Community Helpline 08701 261444, email [café@est.org.uk](mailto:café@est.org.uk) and web [www.est.org.uk/cafe](http://www.est.org.uk/cafe)

Small scale renewables may be seen on the **Tynedale Renewable Energy Trail** and there is an exhibition at Kielder Castle, open from Easter to October. [www.tynedalerenewableenergy.org.uk](http://www.tynedalerenewableenergy.org.uk)

The **SEED** Programme

**Community Renewables Initiative**

**PB Power and RC Engineering**