

# **RES-e Regions: WP 4: Specific technology promotion**

## **Technology Selection Wales: Domestic/Community-Scale Wind**

### ***Background***

Wind is now accepted as the most likely method for Wales to reach its target of renewably-generated electricity. Wales has a strong history of production of energy from wind, starting with small enthusiasts (for example, at the Centre for Alternative Technology), and moving rapidly into the mainstream. In 1993 a 30MW windfarm was established at Llandinam, Mid Wales. At the time this was the biggest installed capacity in Europe. Wales continues to be a popular choice for wind farm developers, with rapid increase anticipated as large offshore projects become more commonplace.

### ***Current situation***

Wales currently has 280MW installed capacity, with more than 300MW additionally approved or under construction. Many of the developments attract local opposition, although this usually diminishes considerably once the turbines have been installed.

Large wind farms are a very cost-effective way of generating renewable energy, but there are additional benefits which can be accrued from working on a smaller scale. These benefits often offset the disadvantages of lower efficiencies of scale and can result in a very positive attitude towards wind energy from local communities, with a value on the developments which stays within those areas. As the major wind developers have considerable expertise, influence and financial backing, MWEA has decided to concentrate on domestic and community-scale wind power.

### ***Barriers***

- Large investment cost – Up-front costs are considerable, and traditional financing is biased against investments with more than a 5 year payback.
- Controversial – There are a small number of very vocal opposition groups which vociferously oppose wind farms. Environmental groups can find themselves on opposing sides.
- Lack of grid access – The grid in Wales is only sufficiently developed to take large devolved inputs in a few areas. This is much less of a barrier for domestic-scale installations.
- Lack of definitive and clear planning guidelines – The regulations are currently being reviewed. This should be far less of an issue when the latest technical advice (TAN8) is published, but small installations are not mentioned in the draft version of TAN8.

## ***Opportunities***

- One of the best wind resources in Europe.
- Strong support from the Welsh Assembly Government, rising public support.
- Technology improvement at domestic level – ‘Plug and Play’ models entering the market and certain to increase take-up and hence visibility.
- Extra potential for rural communities – Returns on investments largely benefit disadvantaged rural communities, often creating local employment, income and other value.
- Rising wholesale energy prices continually improve the economic arguments for all forms of renewable energy.

## ***Target Groups***

Domestic users and community groups. It has traditionally been a very difficult task to persuade ‘normal’ homeowners to install wind turbines, due to the level of expertise and effort required, both for installation and grid connection. This should become straightforward with two models specifically designed to plug straight in to standard electrical sockets reaching mass production stage in the next few months.

MWEA has a very strong tradition of working with community groups, and there is often the potential to empower and invigorate communities by demonstrating the advantages of their own renewable energy production.

The main target groups are:

- Community groups
- Schools
- Interested individuals
- Municipalities

## ***Actions needed***

The actions needed for decreasing the barriers and to stimulate the development in the region which could be implemented through this project are as follows:

- Promotion of small-scale wind technologies
- Assistance with financing arrangements and feasibility studies
- Information about the particular benefits for individuals and community groups
- Providing expertise and information about planning in order to smooth the passage towards development

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