

# Community Wind Turbine Update

## May 2006



Investigation work continues towards the feasibility of a single community wind turbine to produce income for the island through the sale of electricity. As you will be aware, following detailed work, the whole island was reviewed and a site that is technically possible, has the highest chance of gaining planning permission whilst having the minimum impact on the island was identified on Ruaig Sliabh. Further work is now being undertaken to determine the implications of this proposal and to see if this site could be taken forward to a planning application.

**Bird Survey** - A 12 month bird survey of the site is coming to a close. Bird activity and over-flights of the site have been observed approximately every five days for this period and will now be entered into a computer model which will calculate the probability of collision risk. A report will also be produced detailing the potential for disturbance during construction and the means to minimise any impact, e.g. by timing activity to quiet times of the year.

**Landscape Impact Assessment** – The potential impact of the turbine on Tiree’s landscape is perhaps the biggest concern raised by the community. This concern is being taken very seriously and a £14,500 landscape and visual impact assessment has now been commissioned to consider and model the effects in great detail and to make recommendations to minimise the turbines presence, e.g. colour, height, exact location, etc. Leading specialists in this field, Land Use Consultants (LUC) from Glasgow, are being employed to undertake the work following an industry standard methodology that is recognised by the planners and Scottish Natural Heritage as being high quality and robust. Numerous computer generated images of the turbine will be produced (known as photomontages) taken from key locations around the island. These will include locations both close to and far away from the turbine, from known viewpoints, from the ferry on approach to the island and from neighbouring islands such as Coll and Mull. As part of the study there will be a public exhibition and a leaflet circulated to every household showing the photomontages, and a public meeting to discuss the findings of the work. All will be welcome to attend and input.

**Noise** - The other concern often raised is the potential noise from the turbine. Wind turbines get much bad press about noise from the blades and gearboxes. However, much of this is based on old technology that is now not available. The wind industry has been working hard to minimise noise on new machines. The Tiree Wind Turbine will be a brand new modern machine from Vestas in Campletown designed for Tiree’s conditions. One of the reasons the site has been chosen at Ruaig is because it is far enough away from any property so as not to be heard. If necessary, further studies will be undertaken to prove that this so.

**Finances** – A detailed financial model has been produced allowing us to see the effect of different funding options, interest rates and electricity prices. Discussions with lenders and banks has revealed that the project is very “bankable”, we should have no problem raising the money to purchase and build the turbine. The resulting income to the island ranges from approximately £70k up to £250k per annum, and totals nearly £5million over a 25 year period. It is a profitable project!

**Meteorological Measurements** – Despite, as we all are fully aware, Tiree having the reputation of being a windy place, we need to prove this fact to the banks. Unfortunately the met office anemometer at the airport that records wind speed is too far away from the site to be considered satisfactory, and we need to take on-site readings. When the bird survey is complete, (so as not to interfere with the results), we intend to erect a temporary 50 metre met mast with 3 anemometers to record wind speed, direction and turbulence. This will allow us to assess exact on-site conditions and thereby calculate the exact amount of energy and money we will generate. When this mast arrives, we will need some help to put it up. Anyone who fancies a challenge will be welcome!

***(The added advantage of having this met mast is that it will be at the same height as the turbine allowing everyone to get a feel for what it may look like within Tiree’s landscape).***

**Tiree Renewable Energy Ltd.** – As the turbine will be a commercial trading activity, it has been necessary to establish a new company to develop, own and operate the turbine. This is called Tiree Renewable Energy Ltd. Several people have volunteered to be on the board of this company, we would welcome more people to help and advise.

It is hoped that this company will undertake many more renewable projects on Tiree, (perhaps not at this scale), and a public exhibition and fair is planned for June 17<sup>th</sup> to allow people to see what they could do for themselves on their own properties, business premises or community buildings. Further details soon.

**We are not alone! “Leading from the Edge”** – The TDP Development Manager recently attended and presented at a conference organised by HIE Community Energy Company on Harris, entitled “Leading from the Edge”. The two days focussed on the development of renewable energy technology by communities to benefit the economic and social well being of their own area. The event was truly inspiring and presented a healthy future for remote communities even in the face of rising energy prices. Tiree is not alone in its RE aspirations. Examples of new business opportunities, new jobs, new world-wide patents were common place, and projects ranging from reducing costs for schools, villages halls and business premises to hydrogen powered local transport are springing up all over the highlands. Renewable energy technology can provide Tiree with a wide range of opportunities if we embrace it now. (This does not mean there will be large wind turbines everywhere, RE comes in many forms). If anyone is in any doubt about what is possible, a visit to the Harris Sports and Education Centre which combines the local school with a state of the art swimming pool and sports facility, combining renewable and alternative energy installations is very convincing. The atmosphere in the school is very uplifting attributed to high levels of natural light and each pupil being allocated a set amount of fresh air per day. Even their body heat contributes to the heating of the pool. It certainly beats the cold showers I remember being forced to take to prepare me for swimming in my own school's unheated pool! For more information on the event please visit: [www.hie.co.uk/community-energy.html](http://www.hie.co.uk/community-energy.html)

#### **What will the turbine will do for Tiree?**

A community wind turbine is not being proposed for Tiree for the sake of it. Over the 25 years it will operate, a conservative calculation of the cumulative income that it will provide is around £5 million. This can be spent on anything the community decides is a priority.

Following publication of the draft Tiree Community Development Plan, projects currently top of the list based on your comments include:

- New commercial and enterprise facilities to replace the ageing infrastructure at “The Camp”;
- More affordable housing for both rent and low cost home ownership; and
- Renovation and improvement of Tiree’s harbours.

Listening to your comments, the Board of the new Tiree Community Development Trust (coming soon) will manage and allocate the money to these various projects and many more. An investment plan detailing proposed spending will be produced and circulated to everyone for comment in the near future.

For more information on the Tiree Community Wind Turbine or other renewable energy information, please contact Mark Jennison, tel: 01879-220007 or e-mail: [mark@tireedp.org.uk](mailto:mark@tireedp.org.uk).

A leaflet about the turbine is available for download from [www.tireedp.org.uk](http://www.tireedp.org.uk)

Thanks to HIE Community Energy Company for funding this work and to Airtricity Ltd. for their free met mast.

*(Please note the work of TDP is now being taken over by the new Tiree Community Development Trust).*