

Wind Turbines

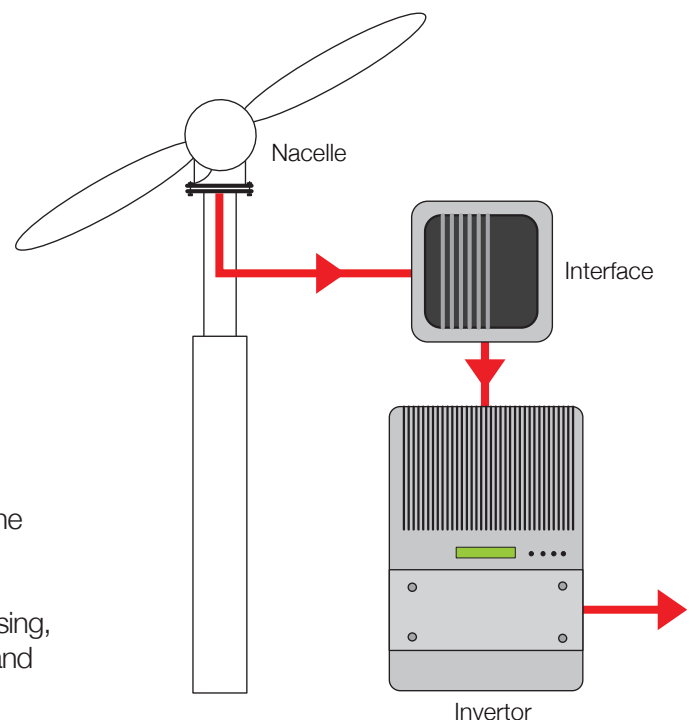


Along with Scotland, Ireland (particularly the west) has the best available wind resource in Europe. Using a modern high quality wind turbine you can harness this free energy and convert it into useful electricity. On a suitable site a well designed wind turbine will produce electricity 70% to 85% of the time and over the course of a year, will produce about 30% of its rated power output.

- **Sell your excess electricity to your electricity provider.**
- **Future proof against rising electricity costs.**
- **Improved Building Energy Rating (BER).**
- **Adds value to your property.**
- **Fully automatic & safe.**
- **Demonstrated reliability & performance.**
- **Low Maintenance and long life.**
- **Can also be used as 'Stand-alone' off grid system**

How it works (the basics)

- 1** The wind turbine is comprised of a tower, topped by an enclosure called a nacelle, and the rotor.
- 2** The nacelle houses the electrical components such as the electrical generator and other control equipment.
- 3** Wind causes the rotor to spin. This rotational movement is converted to electrical energy in the generator.
- 4** The power generated is connected, via interface / inverter equipment to your main distribution board and is used in the same way as electricity drawn from the power grid.
- 5** When the turbine is producing more power than you are using, the surplus is fed back to the grid. At times of higher demand the shortfall is made up by power drawn from the grid.



Installation

The output from a wind turbine is very sensitive to wind speed. Serious consideration must be given to positioning of the turbine to maximize performance and reliability. Not every site will be suitable for a wind turbine, even if it is a very windy site.

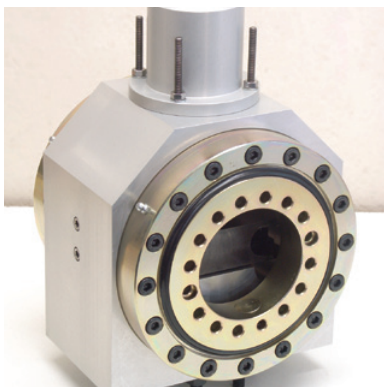
A typical large 4 bed house will use about 5000 kWh/yr. On a reasonably good site the Eoltec 6kw Scirocco turbine can produce around 15,000 kWh/yr (Up to 25,550kWh/yr has been recorded on very good sites.) If a site is suitable a turbine can be installed on a new build or existing home or business.

Wind Turbines are fully compatible with:

Direct Electric Heating, Grid Connected Systems, Off Grid systems with battery storage or a hybrid of these systems.



Eoltec Scirocco 6kW Wind Turbine.



Sealed slewing rings for blades and yawing, sealed centrifugal pitch mechanism.

Installation process

- Planning permission, as required, should be secured before work commences.
- Your application for grid connection must be submitted and agreed with your electricity provider before work commences.
- The tower foundation and cable trench are excavated.
- The equipment is delivered to site.
- The foundation steelwork is prepared and the foundation is cast. Curing takes about two weeks (depending on conditions).
- Cables are laid and the trench is backfilled.
- Preparatory electrical work is carried out.
- Once the concrete is cured the tower and turbine are assembled and erected.
- The electrical connections are completed.
- The system is tested, commissioned and handed over.
- Complete installation should take no more than 3 to 4 weeks.
- A post commissioning check and service is carried out after about 4 weeks.

