



The Regional Sales Co.

22 Main Street, Tweedmouth, Berwick upon Tweed, TD15 2AA
Sales Office Tel 08707 656820 Fax 0870 3120013
David Hobhouse 07860 763192 Sarah Hart 07850 230000
Email: info@regionalsales.co.uk



The Vertical Axis Wind Turbine (VAWT)

Alvesta Ltd (based in Devon) manufactures and installs one of the world's most efficient wind turbines, an Australian VAWT, designed to withstand mini-tornados with minimal maintenance. Electricity production can be used on site or sold back to the grid, or a combination of both. Inclusion of storage cells significantly enhances the production of electricity, reducing pay back times. This can be as low as three years in good wind sites. The VAWT has many advantages over the more usual "propeller" type horizontal axis wind turbine (HAWT).

- Self starting at low wind speed, NO shut down at higher wind speed
- Trellis tower (possibly with no concrete) or tubular tower
- No directional changes required, only one axis of movement, very robust
- Lower maintenance, no moving parts/feathering on blades
- Lower noise levels, as low as 45db at 5m, no conning, less than the wind itself
- Disturbed turbulent wind acceptable, allowing more site flexibility
- Suitable for rural, urban and industrial situations

Micro-generation of electricity through wind turbines is one of the most cost effective of the clean energies, particularly if you have a windy site, given the increase in payments made by energy suppliers for "green" energy. ROCS entitlements are due to increase for micro generation up to 50KW.



Factors Affecting Wind Turbine Choice

Choice of site is particularly important. Ideally you want a high average wind speed. The power available varies according to the cube of the wind speed – so a 5 m/s wind generates almost twice the amount of power that a 4 m/s wind speed does. The higher the average wind speed the better and generally a mean wind speed of at least 5.5 m/s is required for the site to become economically viable. The turbine comes with a choice of tower height and electrical outputs, and also lends itself to later up-grading. VAWTs, world wide, have practically no record of bird kill incidents. They are more acceptable to the planners and neighbours, with their lower rotational speeds. Other renewable technologies maybe more suitable to your site and we will be happy to advise.

Planning Permission

We offer a planning application service whereby we will produce all the necessary support documents, prepare the full planning application and submit it to your local planning authority. We charge a small non-refundable fee for this service, but if you subsequently place an order with us we will discount the cost in full from your invoice.

Guide Pricing.

The Alvesta VAWTs are available in nominal power ratings of 3kw to 100kw. The smaller turbines come with three or six blade configuration, and the larger ones with six or twelve blades. A choice of tower heights from 6 to 15 metres is available, depending on site and wind conditions. Below are some example prices. The cost per megawatt hour generated decreases with increases in average wind speeds and with the size of the turbine installed (though the overall capital cost increases). As a very rough guide the average UK house, in average wind conditions, would need a 2.1kw turbine to generate 4,400kw hours per year.

Installation costs will depend on the site, distance from connection etc, but will normally be in the region of £2-4000 for a smaller turbine.

Prices do not include site preparation, cabling, ground works, grid connection, installation, delivery, battery provision or VAT. They do include an alternator and an appropriate inverter.

Please contact us to discuss your situation and the options available. We can arrange a site visit.

Alvesta also manufacture Bio Digesters, and supply under floor heating systems and heat pumps.

