

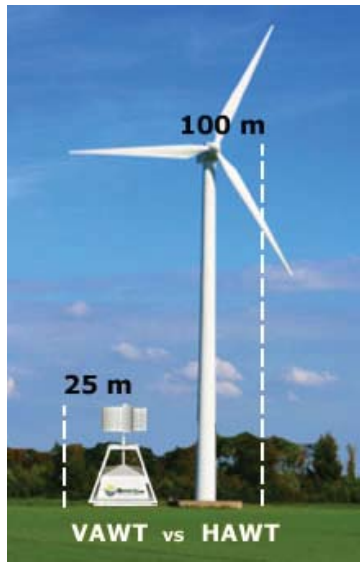
Spring 2009

Greene County, Ohio News

Green Technology in Greene County

Don Knoth is a successful Greene County entrepreneur whose latest venture is Twenty First Century Energy (TFC Energy), which is busy developing alternative wind energy systems designed for efficiency in low-speed wind conditions. TFC Energy is in the Research and Design phase and has partnered with University of Dayton Research Institute (UDRI) for the last three years and more recently with other strong Ohio strategic partners to bring Knoth's vision of a Vertical Axis Wind Turbine (VAWT) to production as early as 2010.

The biggest difference between TFC Energy's VAWT and traditional Horizontal Axis Wind Turbine (HAWT) is that they target different renewable energy sources with the vertical axis performing efficiently in low-speed wind conditions versus the horizontal axis that require high-speed wind conditions. As a result, they are not in direct competition with each other. Most of Ohio and nominally, over half of the United States, has low-speed wind conditions (4.4 to 5.6 m/s). In addition to the benefit of no carbon emissions, the VAWT in development by TFC Energy is business friendly by being both efficient and low cost. The VAWT is also much smaller than the traditional HAWT—25 meters high versus 100 meters high.



Not only is the company committed to bringing green technology to reality through the VAWT, it also provides energy to its headquarters through the use of solar panels. TFC Energy has completed the installation of a 41 kW solar photovoltaic (PV) system which consists of 190 Sharp polycrystalline silicon PV panels with 216 watts maximum power. TFC Energy qualified for the Advanced Energy Grant Program through the ODOD to offset the costs of the solar panels.

TFC Energy has two unique services that may be of interest to local business and industry. They can make rapid 3D prototyping parts on either their Stratasys FDM 400mc or their Objet Eden 500V prototyping machines. TFC Energy is also one of the few commercial businesses in the area that has a wind tunnel onsite which they use to test their scalable prototype rotors (e.g. wind turbines) for design optimization. TFC Energy rents wind tunnel time at their corporate headquarters at 1 Herald Square, in Fairborn, Ohio.

For more information on TFC Energy, visit <http://www.tfcenergy.com> or contact Karen Diehl, Director of Integration, at sales@tfcenergy.com.

**Find out more about what's happening in
Greene County!
Visit www.co.greene.oh.us**