

## UNIVERSITY PROFESSOR USES FARM DEMONSTRATION TO TEACH ABOUT RENEWABLE ENERGY

FAYETTEVILLE, Ark. — A wind turbine is being used as a part of a research and demonstration effort at the University of Arkansas to educate agricultural producers about renewable energy options for their home or operation.

The turbine demonstration, located at the Northwest Arkansas Research and Extension Center, is part of a multi-faceted program organized by Assistant Professor Kate Shoulders. The Renewable Energy Analysis Project (REAP) includes the wind turbine station, solar arrays, an integrated energy station and a mobile renewable energy demonstration unit.

The wind turbine demonstration utilizes wind throughout the day to power a pump that aerates a pond, making it usable for agricultural endeavors. For example, producers could aerate a pond to make it usable for watering livestock in an area that previously did not have a water source.

“The wind energy analysis station harvests energy from the wind and turns it into DC power to run a water pump,” said Shoulders. “With no battery backup, the pump only works when the wind is blowing.”

The benefit from installing a wind turbine depends on the wind capacity of the geographic area. Arkansas has many geographical areas that could benefit from this technology.

“Arkansas is pretty similar overall in its solar and wind opportunities,” said Shoulders.

Shoulders uses the station to help producers understand what circumstances make implementing renewable energy options feasible for their home.

“Some folks are all about living a simpler life,” said Shoulders. “They are excited to hear about how they can cut their energy use.”

Rudy Timmerman, owner of Arkansas Wind & Solar, Inc., finds renewable energy technology to be a valuable tool for farmers in the northwest Arkansas area.

“This [wind or hybrid wind/solar] technology can be used to pump from existing water sources...where it is more convenient for the farmer and their cattle,” said Timmerman.

Saving energy is not the only benefit someone could find with addition of energy saving technology. Property values can increase with installation of green technology, and energy costs can be lowered on the property.

Installing a station like the wind energy station could allow for energy to be available for use at a remote location where electricity would not be readily available, said Shoulders.

For more information about REAP or to set up a tour, contact Kate Shoulders by phone (479-575- 3799) or email [cshoulde@uark.edu](mailto:cshoulde@uark.edu).

Image: turbine-rgbcrop.jpg

Caption: The wind turbine, located inside the Northwest Arkansas Research and Extension Center research fields, uses wind movement to create energy that powers a pump to aerate one of the Center’s ponds.