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Energy

Company designs, installs alternative-energy systems

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EDMOMD - Bob Willis first developed an interest in alternative energy sources while he was a student at the University of Oklahoma from 1979-1982.

"I did some wind energy research at OU," he said.

After earning a degree in aerospace engineering and later a master's in business administration, his career took a different route for more than two decades.

His career path changed two years ago when he purchased two alternative energy companies - Ensun and Sunsource - and merged them into a new company.

Willis is now president of Edmond-based Sunrise Alternative Energy, which designs and installs alternative-energy systems including wind, solar and geothermal.

"We like to think of ourselves as solution providers," Willis said. "We provide alternative-energy solutions."

Most of the company's work is residential - new construction and retrofits.

"For people who have a house and want to reduce their energy use, we can help with that," he said. "If they are building a house, we can help them reduce their energy needs."

Many of the customers are in rural areas around the state, but some customers are in urban areas.

"We will go to Rush Springs one day and to Gaillardia the next," he said. "We will have a small ranch house one day and a 10,000-square-foot house the next day."

Most of the customers are homeowners who must be willing to pay an upfront cost for an alternative-energy system. The initial cost is recovered by the homeowner because of lower costs for an energy-efficient system.

"It can take a while to pay it back," Willis said.

Tax breaks are available and additional alternative-energy incentives are proposed on the federal and state levels.

The process starts with an evaluation of the home by Willis and Sunrise Alternative Energy's eight employees.

Solar electric, or photovoltaic technologies, convert the sun's heat into electricity for applications including homes, businesses, remote lighting, signs and security gates.

Solar thermal systems are used for space heating, domestic water heating and pool and spa heating.

Solar PV and thermal panels can be mounted on the roof of a house or building or in another area with direct sunlight. Sunrise Alternative Energy buys the solar panels from a supplier and installs them for customers.

For wind energy, Sunrise employees design the systems, install the turbines, tower kits and accessories and provide technical support. Unlike the large turbines at wind farms, the small individual turbines are used to provide electricity to rural farms or homes in grid-isolated areas and in some suburban areas.

Some wind systems are stand-alone and others are tied into the electric grid.

Sunrise Alternative Energy is a dealer and installer of Skystream 3.7 residential wind generators made by Southwest Windpower of Flagstaff, Ariz.

Geothermal systems are used for heating and cooling systems.

For heating, a geothermal system collects heat from the ground and distributes it through a conventional duct system as warm air. The same heat energy can be used for a radiant floor system or domestic hot water heating.

For cooling, a geothermal system cools a home by reversing the heating process. Instead of extracting heat from the ground, it is extracted from your home and either moved back into the earth loop or used to preheat water in a hot water tank. Once the heat is removed from the air, it is distributed through the duct system in a home.

The selection of wind, solar or geothermal - or a combination - depends on what is best for a particular house.

"We do not use a one-size-fits-all kind of approach," Willis said.

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101 N. Robinson Ave., Ste. 101, Oklahoma City, OK, 73102 |
P.O. Box 26370, Oklahoma City, OK, 73126-0370 | (405) 235-3100
415 S. Boston Ave., Ste. 101, Tulsa, OK 74103 | (918) 295-0098