

## **MICHIGAN-BASED OAK ELECTRIC SERVICES, INC. FORMS NEW GREEN DIVISION FOR SALES AND INSTALLATION OF SMALL COMMERCIAL AND RESIDENTIAL WIND TURBINES**

*As the benefits of renewable wind and solar energy programs become better understood, Oak Electric Services, Inc. has positioned itself nationally to be a leading source for sales, installation and service for those types of energy sources across the United States and Canada*

“We are seeing major changes taking place for those of us that operate businesses in the energy field, says Gary Pipia, a third generation electrical contractor and owner of Waterford, Michigan-based Oak Electric Services, Inc. The new renewable “Green Initiatives” like wind and solar are adding a different type of power generating alternative for businesses and homeowners, where the benefits are not a total replacement for existing electrical sources...but really a means of helping to reduce electrical usage, carbon footprint and ultimately the cost from traditional energy providers. In some cases, a system may have the ability to give back electricity to the power grid by relaying generated power not being used with the added benefit of a “buy back” program from the electric utility.”

Pipia explains further, “We began investigating small wind turbine systems early in 2008. A small wind turbine is a wind-powered electric generator system that is rated for capacities of 100 kW or less. It typically includes the turbine and blades, tower, inverter, wiring and foundation. Through our investigation of the potential market, we found that Michigan was one of only five states including California, Minnesota, Illinois and Rhode Island that have utility “buy-back” rate programs to promote renewable, distributed generation technologies like small wind. We believed that this type of policy encourages customer-sited generators to generate renewable energy in excess of personal needs. Our investigation also revealed that the single most effective driver for the industry continues to be the financial incentive programs offered by the state, and grid-connected, residential systems in the 1-10kW range constitute the fastest growing market segment. ”

“We installed our first residential small wind turbine in the summer of 2008 at the home of Bert and Lynn Klein in Howell, Michigan”, Pipia recounts. Mr. Klein is a very energy conscious homeowner having recently installed a geothermal heating and air-conditioning system that was significantly reducing those energy costs. He visited us at a local home show where we were exhibiting both solar and small wind turbine systems. After visiting his home we determined that a wind turbine would be more effective than a solar system to accomplish his desire to reduce his utility costs even more, while at the same time being a good citizen by doing his part to help provide a small level of renewable energy. At the Klein home we installed a 3.7 kW Skystream wind turbine on a 30-ft pole located on a hill on the property. At about the same time, we were asked by Dr. Randal Kaufman, a homeowner in Manchester, Michigan to provide a 5 kW wind turbine that will generate approximately 5 kW and will be combined with his existing 4 kW solar system to meet most of his power needs. He too, has a geothermal heating system that has significantly reduced his heating costs. Dr. Kaufman’s wind turbine system is a ReDriven unit that is equipped with hydraulic cylinders at the base for ease of installation and servicing of the 80-ft tower that mounts the wind turbine with blades of 18-feet in diameter.”

Pipia adds, “The first wind turbines we installed have been Skystream models, but since that time we have become an exclusive dealer here in Michigan for ReDriven Power, Inc. and more recently for Swift, a Grand Rapids-based manufacturer of wind turbines that can be mounted and installed on the rooftops buildings and structures. We found that inquiries and application needs required that we offer a wider range of alternatives. That’s not difficult to do here in North America since the American Wind Energy Association recently reported that there are now at least 49 different companies manufacturing small wind turbines. Soon we will have our own Skystream 3.7 kW wind turbine on a 30-ft pole installed at our central office facility in Waterford, Michigan. This will allow us to generate our own useful data with respect to operating parameters and realistically determine how much electrical energy a small system like this in our area can return to the power grid.”

The State of Michigan and the Federal government have new policies in place that provides Residential Renewable Energy Tax Credits. For example, In October 2008, the Federal Energy Improvement and Extension Act of 2008 extended the personal tax credits made available through the Energy Act of 2005 and established a new tax credit for small wind-energy systems and geothermal heat pump systems. Now a 30% tax credit is available for small wind turbine systems with no maximum credit. Previously in 2008 there was a \$4,000 maximum credit. In February 2009, The American Recovery and Reinvestment Act of 2009 removed the maximum credit amount for all eligible technologies (except fuel cells) placed in service after 2008. This Act will be effective through December 31, 2016 and is can be applied to a home that is not the taxpayer's principal residence.

Specifically, in the State of Michigan, wind turbine and solar installations qualify for a 100% property tax exemption. Also, the Michigan public Service Commission has established a statewide net metering program; also known as the Clean, Renewable and Efficient Energy Act that established electric interconnection and net metering rules. Net metering occurs when customers with renewable energy generators produce electricity in excess of their needs, providing power back to the serving utility and receiving a credit for power they supply to the system. This statewide net metering program means residential and business customers can add small renewable energy electric generation projects onsite and get credited for the energy they produce in excess of their needs. This will be credit at the full retail rate depending on the utility supplier. Today these ranges from 10-12 cents per kilowatt hour...but all indications are that those costs will probably rise.

Pipia summarizes, "Oak Electric has been actively exhibiting at a number of regional and local builder's shows and we are finding that the interest in both wind and solar power generation is very high and we've been actively quoting a wide range of home and business applications. However, homeowners and businesses located in Southeastern Michigan need to understand that the return on the initial investment for a wind turbine will be unpredictable and most likely in the 6 to 30 year range. Installation costs vary with local zoning, permitting and utility interconnection costs but a small wind turbine can cost anywhere from \$10,000 to \$50,000 installed, depending on turbine size, application and

service agreement from the manufacturer. But in the end, wind speed will be a major determining factor for the investment and the ROI. Most small wind turbines need at least 8 mph of wind speed to operate. Larger units with longer blades can operate with as low as 3.5 mph wind. And, according to the American Wind Energy Association a 10% increase in wind speed results in a 33% increase in available power. The wind turbine is only going to produce a small portion of a home or businesses usage. For example, a typical home uses approximately 10,000 kilowatt-hours (kWh) of electricity per year or about 830 kWh per month. Depending on the average wind speed in the area, a wind turbine rated in the 5 to 15 kW range would be required to make a significant contribution to an 830 kWh per month demand. Looking at another example, a 1.5 kW wind turbine will meet the needs of a home requiring 300 kWh per month in a location with a 14 mph annual average wind speed. The average wind speed in Southeast Michigan is 11-12 mph at 98 feet and obviously less the lower you go.”

“Finally,” Pipia says “We are beginning to see better ROI improvement as energy rates increase, new net metering buy-back programs at retail rates now take effect, and state and federal tax credits have been put in place. Combine those factors with the value that alternative energy systems add to a property, and you are going to see businesses and homeowners have some hedge against future energy price increases.”

Oak Electric Services is an electrical contractor that provides electrical service for the industrial, commercial and residential markets in Metro Detroit and Southeast Michigan. Over the past ten years, Oak Electric has also specialized in stand-by generator installations for industrial, commercial and residential markets as well. They are a Preferred Vendor for DTE and one of Michigan’s largest dealers for Generac power systems. In addition Oak Electric is an authorized dealer for AEE Solar Systems, Swift and ReDriven Power, Inc. wind turbines.

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