

## Steps toward self-sustainable living

"We're children of the '60s," said Darrell Hanschen of rural Jackson. "I've always been interested in using renewable energy. And when I found out about the 30 percent federal tax credit being offered in 2009, I decided there wasn't a better time to do it."

His first step was to have an energy audit done on his home to find out where he was losing conditioned air. The more he could reduce his energy needs, the less electricity he would have to produce. By using an infrared camera and conducting a blower door test, the auditor identified cracks that needed to be sealed and areas in his attic that needed additional insulation. As the result, he sealed up leaks, increased the attic insulation to R-50 and replaced windows with energy-efficient thermal-pane (that qualified for a federal tax credit).

Hanschen researched wind and solar products on the internet and began contacting dealers. He found, though, that most of them were more interested in selling systems for commercial applications.

Once he settled on a supplier, a company representative visited his home and brought along wind charts. Studies showed that the northwestern corner of Missouri is the most optimum place in the state for wind power. Although the representative warned that wind generation is not best suited for this area, Hanschen says he was "adamant" that he wanted wind energy.

The installer put a program on Hanschen's computer so he can see how fast the blades are going and how much power it is producing. "It hasn't worked out the greatest," says Hanschen,

"although it is the most impressive looking. If I had it to do over again, I wouldn't spend the money on the wind system."

He is more satisfied with the output of the solar panels, specifically, the four small panels (1 1/2' X 4') installed on his home's rooftop that power a separate solar hot water heater and attic fan.

"It is fabulous," says Hanschen. Although the cost of the system (including installation) was approximately \$6,000, he thinks it will return his investment in five to six years. He says the solar-powered hot water heater provides hot water year round except on rainy days.

There are 32 solar panels atop the shed with a capacity of five kilowatts (5,000 watts) per hour. The installed cost of this system in the summer of 2009 was approximately \$25,000. This powers a two-stage 23 SEER heat pump with a two-stage gas furnace as backup. The heat pump works efficiently down to about 30 degrees, and the gas furnace provides auxiliary heat.

Anyone who is interested in purchasing renewable energy systems should contact Citizens Electric before purchasing equipment. A Net Metering Application must be completed, and CEC's engineering personnel will help ensure that safety equipment is installed to protect linemen who may be working on power lines down the road. In addition, CEC will install net metering at the location to track the amount of electricity being used for the home and any excess power delivered onto the grid.

Since the solar-powered system was installed in April 2010, it has consistently produced electricity every month and reduced their electric bills.

"While it may take a while, we believe the solar panels will eventually pay for themselves," said Hanschen. "The important thing is that we have been able to keep our home cooler in the summer and warmer in winter, while still paying lower electric bills than we did before we installed the solar panels and wind spire."



*Hanschen's wind spire is four feet wide by 20 feet high, has four blades and spins like a circle. The capacity with an eight-mile an hour wind is 1.2 kW (1,200 watts). The installed cost of the wind spire in November 2009 was approximately \$11,000.*

Front and back cover news provided by CEC.

## Food storage could be eating up potential savings

Nearly 80 percent of those who responded to the recent Member Survey indicated they have more than one refrigerator. In fact, over 1,500 of the 4,600 members said they have one refrigerator and one freezer, and more than 2,000 have two or more refrigerators and freezers. In some cases, members said they have as many as six units!

It's likely that many of these spare appliances are 10 or more years old and operating in unconditioned (not heated or cooled) spaces where compressors must work harder to operate. In addition, basements and garages are typically areas where dirt, dust and pet hair can gather onto coils and rubber seals.

Many of us think we are saving lots of money by purchasing frozen foods in bulk and filling freezers with wild game and garden vegetables. That may not be the case if you are operating inefficient refrigeration units.

Find out how much it's costing you to operate your refrigerator or freezer by going to: <http://www.energystar.gov/index.cfm?fuseaction=refrig.calculator>. Enter the approximate model year and capacity along with the price per kilowatt hour which is \$0.1002.

If you find it would be worthwhile to retire your oldest units (up to 5), call JACO Environmental at 1-877-395-5537 to schedule a pickup. They will haul the appliance away and send you a check for \$35 once it has been recycled.



## Energy efficiency incentives for businesses

Between now and December 31, 2011, commercial and industrial (C & I) members who make specific upgrades to lighting and heating, ventilation, and air conditioning (HVAC) could qualify for incentives through Wabash Valley Power Association, Citizens' power supplier.



The C & I energy efficiency program offers incentives for retrofitting interior lighting and HVAC equipment in existing facilities. The amount of the incentive depends upon the type of improvement.

"We encourage all of our business members to look into this special incentive," explained Citizens' CEO Van Robinson. "We believe offering incentives to reduce demand for power makes sense, given the high cost and challenges of building new power plants," Robinson added. "With the help of our energy efficiency programs, we're striving to keep electricity affordable for years to come."

Apply online at [www.cecmo.com](http://www.cecmo.com) or call (573) 883-5339, ext. 119 for additional information.

### Scholarships available for High School Seniors

Your high school senior could win \$500 toward the college of their choice by applying for a Citizens Electric scholarship. Six scholarships will be distributed among the following schools: Oak Ridge, Saxony Lutheran, Perryville, St. Vincent, Ste. Genevieve and Valle. Apply with your high school guidance counselor who sets the deadline and will award the scholarship.

CEC also awards one-\$500 "at-large" scholarship to a graduating senior who lives within Citizens' service territory but doesn't attend one of the schools listed above. At-large applications are available at [www.cecmo.com](http://www.cecmo.com). The deadline to apply for this particular scholarship is April 19, 2011. The winner is selected by a third-party who is not associated with Citizens Electric. For additional information on the "at-large" scholarship, call Denise Gibson at (573) 883-5339, extension 106 or email [dgibson@cecmo.com](mailto:dgibson@cecmo.com).

### It pays to be on time

Congratulations to **Dennis Brooks** who won \$100 for paying on time in January. You still have a chance to win, because the drawing has been extended. So make sure your payment is received in CEC's office by the original bill due date, and you could be the next winner.

### NOTICE OF 2011 ANNUAL MEETING OF SHAREHOLDERS

#### CITIZENS ELECTRIC CORPORATION

Date: Thursday, April 21, 2011  
Time: 6:30 p.m.  
Location: American Legion Hall  
98 Grand Avenue  
Perryville, MO 63775

Doors open at 6:00 p.m. for registration.

All shareholders of record as of March 1, 2011, will be sent via U.S. mail at the end of March a packet of annual meeting information which will include the official meeting notice and a proxy ballot.

Shareholders unable to attend the meeting in person are encouraged to return their executed proxy ballot to Survey & Ballot Systems by April 20, 2011, using the envelope provided in the packet.