

# ENERGY

By Celeste Huttes



Chris Dial (left) gives Ken Zindel a hand in mounting solar modules to the completed racking.

## HARVESTING THE SUN CENTRAL ILLINOIS FARMER USES THE POWER OF RENEWABLE ENERGY.

**Y**ou could say it was a lucky break that led Ken Zindel to renewable energy. “I was at a national farm show and was looking for a place to take a break, so I went into this room and they were talking about renewable energy,” he recalls. “It was pretty ironic that I went to this session at all.” Still, a seed was planted that day.

### MEETING HIS ENERGY NEEDS

**A**fter he returned home, Zindel began exploring his options for renewable energy. He reached out to his local electric cooperative and began working with WindSolarUSA, a development company that helped him determine the optimal system size, type, and placement to meet his energy needs.

To his own surprise – just four months after that fateful farm show – Zindel’s 1,500-acre farm in Moweaqua, Illinois, began producing homegrown power, along with the customary corn and soybeans.

The ground-mounted solar array system he installed in June 2015 is capable of producing more than 18,000 kilowatt-hours (kwh) per year.

“Renewable energy is a great opportunity to help the farming community levelize energy costs,” says Michelle Knox, founder of WindSolarUSA.

Zindel can attest to that.

“I built my system big enough to support my yearly need for electricity,” he says. “I still pay a location charge, but my electricity costs have pretty much zeroed out.”

### EARTH, WIND, AND SUN

**W**ith wide-open spaces to harness the wind and sun – and access to plant-based fuels and manure – renewable energy is a practical option for many farmers. Solar energy is particularly appealing these days, due to advances in technology and plummeting costs.

“In Illinois, solar performs better in summer; wind does better in fall and winter,” says Knox. “You could probably get more annual production from wind, but you’re looking at double the cost.”

As an added benefit, solar energy is virtually maintenance-free.

“The glory of solar is that it’s very low maintenance. There is really nothing you have to do,” says Knox.

In contrast, wind turbines have moving parts,

so maintenance is required over time.

Regardless of the source, all sustainable fuels offer an environmental benefit. For example, in its lifetime, Zindel’s solar power system will eliminate an estimated 378 tons of carbon dioxide from the atmosphere. The positive effect is equivalent to planting 8,800 trees.

### DIY SAVINGS

**W**hile he appreciates the environmental benefits, Zindel says, “it was strictly about saving money for me.” He was able to save even more by installing much of the solar array himself, following blueprints by rack manufacturer Iron Ridge.

“The rack took a little finesse, but it wasn’t too bad. With two of us working, we installed the solar panels in one day,” says Zindel. “It’s not rocket science.” He did, however, hire a licensed electrician to connect the solar array to the grid.

“I pull energy from the ▶

grid when I need it. When I produce more than I need, the system sends the energy to the grid,” says Zindel, who is paid for excess electricity by his local electric cooperative.

“Ken achieved significant savings because he used his own skill set to install most of his system,” says Knox. “He’s a great example of what many agricultural providers can do.”

### GETTING STARTED

If you’re thinking about producing your own power, your local electric company can help you avoid missteps along the way. Brian Cuffle of Ameren Illinois (a regulated Midwest utility) urges customers to reach out before breaking ground on renewable power projects.

“Our focus at Ameren Illinois is to guide customers through the standardized regulatory process that’s in place,” he says. “We don’t want anybody to start work and then have to redo it because it doesn’t meet standards.”

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— Michelle Knox

A qualified vendor is another important ally. “In Illinois, installers must be certified with the Illinois Commerce Commission to demonstrate that they have a certain amount of training. That gives our customers an idea of whom to call,” says Cuffle. “We encourage customers to get several different estimates.”

After installation is complete, Ameren Illinois conducts an inspection and site test to make sure the renewable power system interconnects with the utility’s system safely.

“We look for a specific type of inverter, an AC safety disconnect, and proper signage,” says Cuffle. “We are 100% focused on the safety of our workers and our customers.”

### REWARDING RENEWABLES

Potential power producers can also get a helping hand from the government, including a 30% federal tax credit for wind and solar power systems. Additional funding may be available through the USDA’s Rural Energy for America Program (REAP) loans and grants. Beyond that, some states help fund projects through the sale of renewable energy credits.

In the face of today’s

### INTERESTED IN PRODUCING RENEWABLE ENERGY ON YOUR FARM?

Start with your local utility or electric cooperative. Also, be sure to visit the online Database of State Incentives for Renewables and Efficiency ([dsireusa.org](http://dsireusa.org)) to learn about any funds available in your state. **SF**

financial incentives (which covered more than 40% of his project costs), Zindel found renewable energy impossible to ignore.

“It looked like a no-lose proposition to me,” he says. “It took a little risk on my part, but in the current climate, renewable energy is not a hard decision.”

In fact, renewable energy may be the next frontier for farmers who already know a thing or two about harnessing the power of Mother Nature. **SF**