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Bluestem NEWS

ATTENTION

High School
Seniors
Apply NOW
for the
Bluestem Electric
Educational
Scholarship



Application Deadline
December 18, 2009

Bluestem Electric Offers Scholarships to High School Seniors

The Trustees of Bluestem Electric Cooperative, Inc., will be awarding six \$500 scholarships and four \$250 scholarships to high school seniors whose parents are members of Bluestem Electric Cooperative.

The scholarships will be awarded to the top 10 candidates who complete a two-stage process.

The first stage will include an application and test that must be completed and returned to one of the Bluestem Electric Cooperative offices (in either Wamego or Clay Center) by December 18, 2009.

In the second stage, a panel of judges will interview the finalists in January 2010.

For more information and to obtain an application contact your high school counselor after November 14, 2009, or the Bluestem Electric Cooperative, Inc., at 785-456-2212 or 785-632-3111.

Nominating Committee Report

The Trustee positions whose three-year terms will be expiring are: District 1 & 2, Position at Large, Robert Ohlde, Linn; District 3, Position 2, Dean Blanka, Wamego; and District 3 & 4, Position at Large, Delbert Eichman, St. George.

The election of all candidates will be held by mail ballot in December. Each member will be mailed one ballot for the candidates in their district. Ballots will need to be returned to the cooperative office by December 31, 2009.

2010 Committee Nominations

- ▶ **District 1 & 2, Position-At-Large**
Robert Ohlde-Linn
- ▶ **District 3, Position-2**
Dean Blanka-Wamego
- ▶ **District 3 & 4, Position- At-Large**
Richard A. Ridder-St. George
Charles William Pence-Alta Vista

Distribution Power Lines are Not Batteries, but Research is on the Way!

From an outside perspective, generating and distributing electricity may look a little like herding cats. When power is needed, it must be instantly on hand. When it's created, it must be immediately moved to where it can be used. And because it can't be easily stored, supply and demand must be kept in perfect balance—a precise dance where a misstep could lead to an outage.

Unlike other utilities that manage tangible resources like water or natural gas, electric co-ops can't keep extra electricity on hand—power can't be stored in a warehouse or a large tank. It's safe to say that if we could—for example, if massive batteries were designed that allowed us to keep reserve megawatts at the ready—providing power reliably and safely would be significantly easier, and kilowatt-hours would be more affordable.

Stored electricity has several valuable uses. For one, renewable energy sources like wind and solar aren't always at the ready when electricity is needed. Wind often blows strongest at night when electricity demand is low. But if that unused energy could be stored and put to work the next day, a wind farm would be much more produc-

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Just How GREEN is Bluestem?

Q How is Bluestem Electric's purchased power generation currently earth-friendly?

A Bluestem utilizes green power. Bluestem does not generate power, but we distribute it. We buy the power from Kansas Electric Power Cooperative, Inc. (KEPCo) located in Topeka at wholesale rates and distribute it at a cost as low as possible to our members.

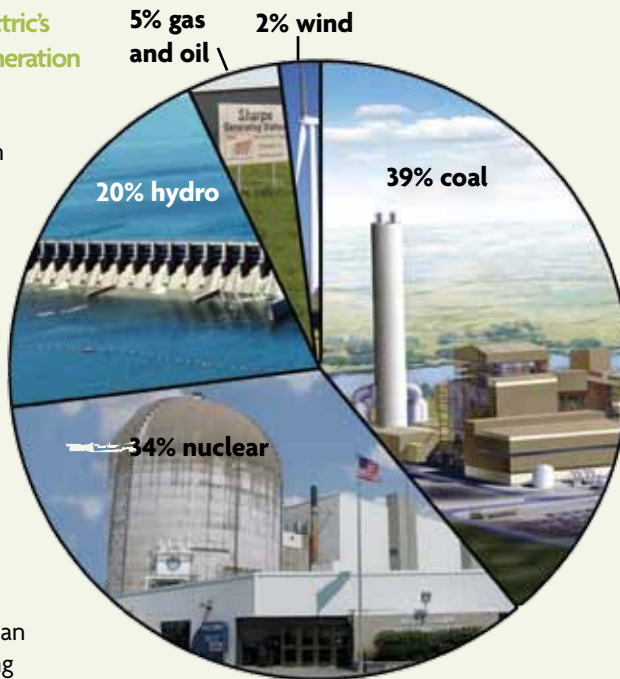
KEPCo is considerably greener than most generating companies, because KEPCo has more than 50 percent non-CO₂ emitting generating sources. This means their generated power is more than 50 percent green. Twenty percent is from hydro-power, 30 percent is nuclear power; and the remainder is purchased from Westar Energy's mix—which includes all of the wind and nuclear that Westar produces. Consequently Bluestem Electric is very earth-friendly and is indeed greener than most electric utilities.

Q In what ways does Bluestem Electric currently promote green-energy?

A The most reliable way to tap into renewable energy is to use a geothermal heating and cooling system in your home, because geothermal is solar—using the earth which is heated by the sun.

The most popular way to use geothermal is by tapping into the underground temperature by using water as a medium circulated through a piping system buried in the ground and then extracting it with a geothermal heat pump.

Geothermal heat pumps are being used by a great number of new



More than 50 percent of Bluestem's power generation comes from "green" sources.

homes being built and as a replacement of older heating and cooling systems on Bluestem's electric lines. Considering that propane is very expensive and with federal tax credits, Bluestem rebates and a reduced electric rate for a geothermal system, Bluestem considers this the best way to promote green energy.

Q What is Bluestem's view of future green investments?

A Bluestem is all in favor of green power, but we want to pay the lowest price for power that can be found for our members.

That's what an electric cooperative does for you, our members. Electric cooperatives are member-owned and created for the purpose of providing reliable power—at as reasonable a price as possible.

Bluestem can boast about being green—because we are green. Bluestem also recognizes that our members want inexpensive sustainable power no matter what source it comes from.

Distribution Power Lines are Not Batteries

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tive and cost effective.

Stored energy could also give the electric grid a needed boost during periods of peak demand—the electric utility industry's equivalent of rush hour traffic, when people come home in the late afternoon and turn on lights, dishwashers, and all the other comforts of home. That spike in demand is currently met by switching on natural gas-fired generators, which are expensive to operate. A battery could do the same job for a lot less.

And a battery tucked beside the local substation serving your home could keep lights on should a power line leading into that substation fail. The whole process would likely happen without so much as a light bulb flickering, keeping you warm and comfortable while repairs are made.

Because of these potential benefits, electric co-ops are leading the way in searching for a better battery. The Cooperative Research Network (CRN), an arm of Arlington, Va.-based National Rural Electric Cooperative Association, is looking to put large-scale batteries to the test through three projects (in South Carolina, Alaska, and Hawaii) that could win federal funding before the end of the year. Each would demonstrate how batteries could be used in different ways.

Success could lead to major breakthroughs. If the technology proves effective and affordable, electric co-ops could better stabilize the price of electricity and increase reliability. Herding those cats may one day be a little less complicated.

ENERGY EFFICIENCY TIPS

A Better Way

BY DOUG RYE

Many people think that I am against renewable energy systems, such as solar and wind. I can assure you that I am not.

I admire those who live off the land and use our natural resources wisely. There are, however, only a few in this country who are living "off the grid." There are a goodly number of others that are generating part of their energy needs from solar, wind or water. In my dreams, I could do that. I could just live at the deer camp and use my little six-inch, 12-volt television while cooking my dinner on a wood or propane stove. I could get my light from a battery or propane-powered lantern and my water from a well with a hand pump.

Actually, I have done that and totally enjoyed it for about... five days. After that, I wondered how the pioneers made it.

Well, in real life, I think one of the most important discoveries ever is electricity. I consider it an absolute blessing.

For the cost of a hamburger, fries and a small drink per day, I can do many wonderful things in our house, such as heat, cool, cook, refrigerate, light and watch football. Make your list and you will agree.

With that said, I do not believe in wasting any of our energy resources. I think that producing some of our energy from solar or wind is a noble thought, but I have a better way.

In the early 1980s, I was working for the federal government to provide low-income housing. In that role, I was responsible for the installation of about 1,000 solar systems. The U.S. government wanted it done and I did it. It was an exciting time. Two of the systems had 220 solar panels each. Everyone was

impressed. Folks would say, "Oh boy, Doug has got it going."

An engineer from Huntsville, AL, had a different view, however. He told me I would see the day when I would not want my name associated with these projects. I thought he was crazy. But, unfortunately, he was right.

Both systems were total failures in less than 10 years. In fact, nearly all of the systems failed in less than 15 years. I thought there must be a better way.

Just over a year ago, I had the opportunity to work with a company that was willing to purchase, install and monitor a quality solar voltaic system and a quality wind generating system.

The solar system cost more than \$50,000 installed. The system is monitored daily and has produced an average of 409 kilowatt-hours of electricity per month. This would save about \$50 per month on an electric bill. A simple payback would be \$50,000 divided by \$50 per month equals 1,000 divided by 12 equals 84 years. I think there is a better way.

The wind turbine cost \$15,000 installed and has produced about 58 kilowatt-hours a month. This would save about \$7 per month on an electric bill. That would calculate into a simple payback of 180 years.

Now I know I have a better way. And being the nice guy that I am, I plan to tell you about it next month. See you then.

DOUG RYE, is a licensed architect and the popular host of the "Home Remedies" radio show. You can contact Doug at 888-Doug-Rye. Source: Arkansas Electric Cooperatives Corporation.



Doug Rye

I think one of the most important discoveries ever is electricity. I consider it an absolute blessing.



Happy Thanksgiving!

Bluestem's Offices Closed for the Holiday

Bluestem wishes our members a happy Thanksgiving.

We would also like to remind you that our offices will be closed Thursday and Friday, November 26-27, in observance of the holiday.

Ready to Embrace the Winds of Reality? BY P.J. GRIEKSPoor



PJ Griekspoor

“We’re not thinking this through, and we’re moving too fast with the land leases and the turbines when we don’t have dependable technology or a way to move anything we manufacture to market.”

Let me start off with this: I am not against wind-generated electricity.

But neither am I a wind enthusiast, convinced that the fledgling technology is the great, green hope of energy future. Call me a realist. Even a pragmatist.

And that is why I am delighted that T. Boone Pickens has decided he won’t build the world’s biggest wind farm in the wilds of Texas where nary a transmission line roams.

Not because we won’t have the wind power, but because T. Boone said right out loud, in print, what I’ve been saying for two years: We’re not thinking this through, and we’re moving too fast with the land leases and the turbines when we don’t have dependable technology or a way to move anything we manufacture to market.

T. Boone was all about building transmission lines himself and not waiting for the pokey Texas government a few months ago. Then, he got a good look at the price tag, and even his deep pockets clenched up.

Public utilities have seen that price tag, too. That’s why Westar is already asking to extend its reach a little deeper into ratepayers’ pockets. Its board of directors realizes there’s not going to be a return that investors will buy into, and the public will need to foot the bill.

The highly touted Spearville to Oklahoma and Wichita line that Westar and ITI Great Plains have been fighting about for a year is projected to cost about \$800 million. That’s for 160 miles of line—\$5 million a mile.

The governor says that will bring “western Kansas” wind power to Wichita. He must not drive across Kansas very often. When I make the trip to western Kansas, it is a long way from Spearville to the Colorado border. And it is a long, long way north to the Nebraska border, right through the country that is supposed to be the “best wind in Kansas.”

Maybe right, maybe not

Maybe spending that money and building those lines is the right thing to do. Building the infrastructure to allow us maximum use of a valuable renewable resource might be the best way to pay our grandchildren back the money we are borrowing from them to

stimulate our economy.

Or maybe the whole potential of wind-generated power is overestimated and lines to every windy hill in western Kansas would be a colossal waste of money.

We need to know which before we count on building turbine factories and digging deep holes in the shortgrass prairie becoming an integral part of our economic future.

Our governor envisions thousands of Kansans at work building turbines, hauling them into the countryside and setting them up. If somebody wants to gamble that we’ll build the lines after the fact, that might actually happen. If it does, we could well end up with a great big factory running about 30 percent of the time with no way to move its sporadically plentiful product to market.

But maybe there is a better way.

Before we start cranking out a lot of turbines just like the 687 that T. Boone now has for sale, it might be a good idea to get some engineers busy figuring out how we can build better ones.

Maybe we could even get something that could give us better than 30 percent of name-plate production.

Can you picture a factory installing a piece of production equipment that only runs a third of the time?

Would you buy a combine that could only cut 1 out of every three acres of wheat? Or plant seed with a 30 percent germination rate?

Then why should we build an electrical generation system that works only 30 percent of the time?

The bottom line is this: Wind is not ready for prime time, and to his credit, T. Boone saw that. That is why he pulled the plug. Too bad his epiphany is unlikely to get the press his vision received.

PJ GRIEKSPoor is the editor of *Kansas Farmer* magazine. She joined *Farm Progress* after 18 years with the *Wichita Eagle* editor, designer, and reporter covering agriculture, agribusiness, oil, gas, biofuels and the bioeconomy. Reprinted from the August 2009 edition of *Kansas Farmer*, by permission. Copyright 2009 Farm Progress Cos.