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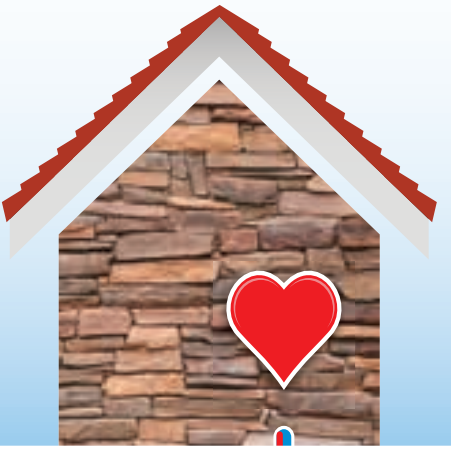

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10 A FIBER RUNS THROUGH IT

In rural Illinois there are miles and miles between homes. Financing broadband infrastructure, like the fiber optic cabinet on the cover, is tough. But, electric and telephone cooperatives are finding a way.

Volume 73, No. 6, October 2015

The Cooperative Way

Committed to the life improvement business

During October we celebrate Cooperative Month. But why? Are cooperatives still relevant? Do they impact your life today? Do they help improve life in the communities they serve?

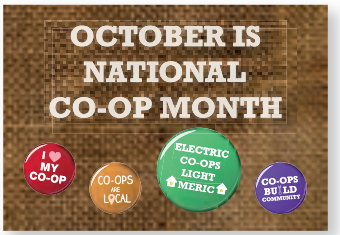
Since you are reading this column in an electric cooperative sponsored magazine, I'll assume you belong to at least one cooperative.

Electric service came first to rural areas more than 75 years ago because the cooperative business model worked. Later, when people saw this cooperative demonstration worked for electricity, it sparked the creation of telephone, water and now internet service cooperatives. In this issue you can read more about how co-ops are providing internet services in rural areas and using their cooperatively-built fiber network to add smart grid features as well.

The common thread is they are all in the life improvement business and based on the cooperative business model and principles.

Okay, but what else can cooperatives do? If you are involved in farming or an agriculture-related career, cooperatives are pervasive. From the GrowMark FS supply and grain network that provides fertilizer, herbicides and seeds for its farmer members, to Farm Credit Services that finances those inputs, to local farmer-owned grain elevator cooperatives, to producer cooperatives like Prairie Farms Dairy — cooperatives have a very large footprint in the farm community.

What if you are not involved in agriculture? Well, let's look at a typical day for just about any of us. You start your day with a glass of Sunkist fruit juice and a piece of toast spread with Land O'Lakes butter. You head for work, dropping off your child at a local daycare center along the way. After work, you visit your credit union to make a deposit and you stop by the grocery store to pick up food for dinner. Later that evening, you review your homeowner's insurance policy.



You've just done business with several cooperatives.

From large cooperatives such as Sunkist and Land O'Lakes to credit unions, many insurance companies, lots of food-producing enterprises, and a number of daycare centers — cooperatives play a part in virtually every facet of our lives. More than 100 million Americans are members of the 47,000 cooperatives operating in this country alone.

Cooperatives function in virtually every economic sector and country around the world. There are producer-owned cooperatives like those in agriculture. There are worker-owned cooperatives that are found in almost every industry from food stores and restaurants to taxicab companies. And there are consumer-owned cooperatives like your electric cooperative. Consumer-owned cooperatives also include housing, healthcare, insurance, financial services, child care and more. Is there a need for a product, or a service in your area? Chances are a cooperative might be a viable and possibly the best solution.

Cooperatives are private enterprises — not part of government. To be sustainable they must operate on sound business principles and practices. Cooperatives are not-for-profit businesses which return any earnings, not needed to pay expenses, to the member-owners proportionally based on their participation, or reinvest those earnings in the cooperative as the members choose.

A cooperative is owned and controlled by those it serves. Its consumer-owners set the policies that control the business and share that control equally. The members elect a board of directors, officers and committee from its own ranks. The board of directors, in turn, hires the management and provides the governance for the business. Each member has not only the right, but also the responsibility, to speak up at meetings, vote, and to make suggestions about ways the cooperative can better serve its members.

At the root of all cooperatives is a foundation of principles. Perhaps the best way to understand what a cooperative is, and how it operates, is to look at the seven cooperative principles. They are: voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training and information; cooperation among cooperatives and concern for community.

Cooperatives will remain viable and relevant if they continue to honor these principles, focus on the future and remain committed to their life improvement mission. ■

Former Illinois State Senator N. Duane Noland is the President/CEO of the Association of Illinois Electric Cooperatives, Springfield and a member of Shelby Electric Cooperative.

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Clean Power Plan final regulation unveiled in 1,560 pages

In early August, the U.S. Environmental Protection Agency (EPA) issued its final Clean Power Plan rule, a rule limiting the carbon dioxide emissions from existing power plants. While the rule is 1,560 pages long and complicated, in general it is designed to reduce coal-fired generation, while promoting the increased use of renewable energy, like wind and solar.

In this rule, each state was given an individual emissions reduction target to meet by year 2030, with initial compliance beginning in 2022. For our state, Illinois is mandated to reduce emissions by 31 percent from 2012 levels, by 2030. To get to this target, Illinois EPA will be responsible for drafting the state's compliance plan, with the initial plans due next September. IEPA has been gracious to work with AIEC and other stakeholders to get their input, and we anticipate that process will continue.

There has already been a legal challenge to the rule filed by a coalition of 17 states, and there will likely be many more legal challenges.

Last year, co-op members across the U.S., and across Illinois, sent in over 1 million comments to the U.S. EPA advocating for an "all-of-the-above" energy strategy, one that incorporated natural gas, nuclear, renewable energy, and coal. Thank you to those that participated. We are hoping that co-op members will again make their voices heard, and visit www.action.coop to sign on to a letter being sent to the White House asking for a delay in the Clean Power Plan until the courts have ruled. ■

Wood waste market research could benefit Illinois business

The U.S. Forestry Service (USFS) is working with sustainability experts at the University of Illinois, Western Illinois University (WIU), and the Metropolitan Mayors Caucus to investigate the use of wood waste by businesses as a cheaper and renewable source of heat energy.

An estimated nine million tons of renewable wood in Illinois could be utilized to displace the use of petroleum-based propane. Wood can be a less expensive alternative. USDA, which oversees the USFS, is particularly emphasizing wood fuel derived from wood debris from national forests in Illinois.

A USFS matching grant of $249,328 will allow the U of I's Illinois Sustainable Technology Center (ISTC), WIU's Illinois Value-Added Sustainable Development Center (VASDC) and the Metropolitan Mayors Caucus (MMC) to evaluate wood as an alternative to propane for heating in the Greenhouse, Nursery, and Floriculture Production sector in Illinois.

The two-year project will examine scientific, economic and cultural aspects that would support the expansion of wood energy markets based on low-value wood residues. The project's goals are to: (1) promote the use of wood to displace the propane currently used for space heating within the Greenhouse, Nursery, and Floriculture Production sector in Illinois, and (2) evaluate the compatibility of grain farming and animal production facilities, care facilities, correctional centers, schools, universities, etc. with the use of wood as fuel.

The team will build on an ongoing UIUC/ISTC project funded by the Illinois Department of Transportation that has found pelletized prairie grasses, grown on roadside right-of way areas, can be successfully used as fuel for heating while simultaneously offering economic and environmental benefits.

"This collaboration integrates expertise in business, technology, marketing, education, and outreach aimed at a focused goal," explained Principal Investigator Nandakishore Rajagopalan. "We will start with the Greenhouse, Nursery and Floriculture sector in Illinois (the 12th largest in the nation) to stimulate stable growth in the wood fuel market." ■

Illinois Touchstone Energy Co-ops at Farm Progress Show

Several Illinois Touchstone Energy cooperatives showed attendees at the world's fair of agriculture, the 62nd Farm Progress Show in Decatur, how to save energy and be safe around electricity. Attendees from across the country and the world were able to check out the "Energy Efficiency Wall" with insulation and air sealing examples. The cooperative energy experts also demonstrated new LED lighting for homes, farm shops and outdoor security and answered questions about electric energy use.

Illinois Touchstone Energy Cooperatives also sponsored the Live Line Safety Demo, an electric safety demonstration featuring 7,200 volts of electricity. It's a great experience for kids and adults. To learn more about Live Line Demo check out its website www.livelinedemo.com.

The Touchstone Energy Hot Air Balloon was also flying the American flag each morning and had a late afternoon flight as well. It was a great sight for all the 600 exhibitors, 2,000 students from Illinois and Indiana FFA Chapters, and all of the international visitors.

An Agriculture Career Fair was also held this year. FFA students learned more about agriculture jobs available in today's workplace, the education needed for these jobs, and what internships are available to help them get a foot in the door.

Also, the Illinois Department of Agriculture honored veterans who hope to pass along their agriculture businesses to future generations. "Homegrown by Heroes" is a free branding and marketing campaign for qualifying veterans. The program is a partnership between the Illinois Farm Bureau, Illinois Department of Agriculture, and Illinois Department of Veterans' Affairs. Find out more at www.farmvetco.org. ■

Hoosier Energy adds renewable energy resource

In August, Hoosier Energy announced plans to construct the Cabin Creek renewable energy project, a 4-megawatt landfill gas facility, at the Randolph Farms Landfill. The renewable energy plant will be the fourth landfill methane gas (LMG) facility for the electric power supply cooperative.

Cabin Creek is part of Hoosier Energy's strategy of furthering its all-of-the-above, diversified power supply portfolio that includes coal, natural gas, renewable energy and energy efficiency. "This project is another example of our commitment to provide affordable, reliable and sustainable power to member systems," said Steve Smith, President and Chief Executive Officer of Hoosier Energy.

The 156-acre Randolph Farms Landfill is located near Modoc, Ind., with electric service provided by Whitewater Valley REMC, one of 18 distribution cooperatives in Indiana and Illinois that own Hoosier Energy.

Through the partnership with Randolph Farms, Hoosier Energy will capture landfill methane gas, which occurs naturally from decomposing waste, and use it to generate electricity. Landfill generation projects are instrumental in destroying methane, a potent greenhouse gas.

Hoosier Energy owns and operates two other landfill gas facilities including the 4-megawatt Clark-Floyd landfill methane gas project in Clark County, Indiana, and the 15-megawatt Livingston landfill-gas-to-energy facility near Pontiac, Ill. A third plant, the 16-megawatt Orchard Hills landfill in Illinois, is scheduled to be in service in mid-2016. Other current renewable energy resources include a 13-megawatt coalbed methane facility and 54 megawatts of wind and hydropower generation. Installation of a 10-megawatt solar program is also underway with ten 1-megawatt facilities scheduled to be in operation by the end of 2016. ■

A battery in your house could change the electricity industry

The latest energy gizmo is a battery, about as big as a medium size flat-screen TV that looks good enough to hang on a wall in your home. It could supply backup electricity during a power outage. Or, if you're the kind of person with photovoltaic cells on your roof, you could charge it up from the sun during the day, then run your home at night on stored solar energy.

While this battery will be too expensive for most of us to want in our homes anytime soon, it could lead to innovations in the electricity industry.

"It's one of the first really major steps of modernizing energy storage systems," says Andrew Cotter, program manager for renewable and distributed energy research at the National Rural Electric Cooperative Association (NRECA).

The battery is being made by Tesla Motors, which has formed Tesla Energy to adapt the battery used in its high-end electric cars. Production was scheduled to begin by this fall.

In announcing the Powerwall battery in April, Tesla CEO Elon Musk said, "It looks like a beautiful sculpture on the wall. You don't have to have a room filled with nasty batteries." In fact, appearance and convenience are among the Powerwall's main advances.

The announced prices for the Powerwall are $3,000 for a 7-kWh model designed to run small home appliances as part of a regular daily routine. A 10-kWh model is designed for providing backup in case of a power outage, and goes for $3,500. However, a customer would actually end up paying at least twice those amounts after adding necessary costs like installation and an inverter to change the deep cycle (DC) battery current to household alternating current (AC) electricity.

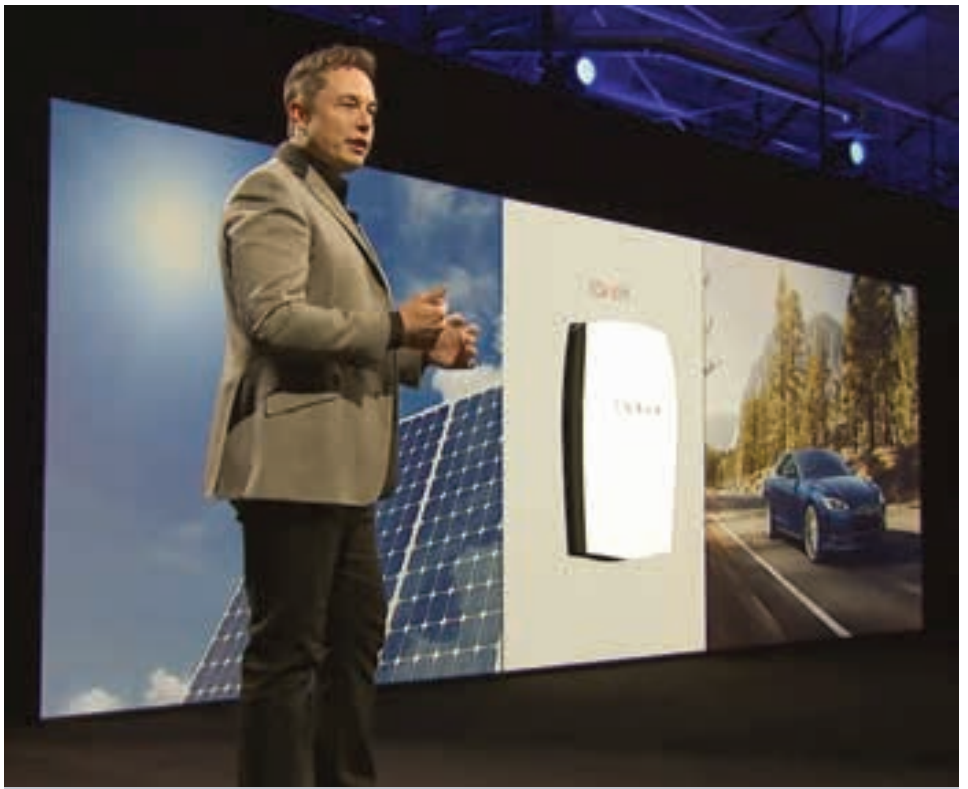
Those costs for the Powerwall, Cotter says, would move home batteries from "outrageously expensive to just really expensive."

Another reason it will take a while for the Powerwall to catch on, says Cotter, is its limited capacity. The new battery can power small but important electric loads like a computer, refrigerator or medical equipment, but not high-users like central heat or air conditioning.

As more options develop for large uses of electricity that aren't needed immediately, like charging electric cars or home batteries, utilities could begin making those kind of rates more available. Those different rate structures could also help utilities by spreading demand more evenly through the day.

As the NRECA technical report said, the Powerwall could "accelerate the move towards residential time-of-use and demand-based rates." ■

Source: Paul Wesslund, the National Rural Electric Cooperative Association.



In April, Tesla Motors CEO Elon Musk announced the formation of Tesla Energy, which he called a group of batteries based on those used in its electric cars. The new batteries would be designed for homes and businesses to use as backup in a power outage, or to use photovoltaic cells to charge the battery during the day so that electricity could be supplied by solar power at night. Photo Credits: Tesla Motors

Will this winter's electric bills be a trick or a treat?

To prepare for winter's wrath, contact your local Touchstone Energy cooperative to discuss ways to reduce your electric bills, or visit www.togetherwesave.com. Once you're treated to lower bills, seeing them won't have to be scary anymore.

Touchstone Energy® Cooperatives

TOGETHER WE SAVE

A fiber runs through it

Co-ops building a fiber network

By John Lowrey

One hundred years ago the telephone and the light bulb were state-of-the-art. They were also virtually non-existent in rural America. Seventy-five years ago cooperatives finally provided a solution to that problem.

Today, state-of-the-art means having a high-speed broadband connection. Smart is everywhere. Smart phones, smart cars, smart tractors, smart factories, smart office buildings, smart homes, smart appliances and of course the smart grid. But all of this smart stuff and the new interconnected world called the "internet of things" require a communication backbone.

Unfortunately, the same problem that existed decades ago for rural electric and telephone cooperatives remains today. It's called consumer density. In rural Illinois there is only an average of four homes per mile. In town there's ten times that number of homes per mile, sometimes more. Low consumer density makes it really tough to make a business case for broadband service in rural areas.

Despite the challenges, rural electric and telephone cooperatives are forging ahead and building a broadband communications backbone. They are maximizing the use of their current copper networks, expanding wireless broadband services and even building out fiber optic networks. Whenever possible, both telephone and electric cooperatives are working together — an example of the cooperative principle of cooperation among cooperatives.

Egyptian Telephone Cooperative's CEO Kevin Jacobsen has been working for several years with the area's electric cooperatives trying to find a cooperative solution. "Partnering makes a lot of sense," says Jacobsen. "We provide 100 percent broadband coverage in our seven exchanges in four southern Illinois counties. We want to partner to gain operational efficiencies – not overbuild each other."

As an example of partnering, many cooperatives have shared services, as well as employees. Jacobsen, for example, also is the CEO for Flat Rock Telephone Cooperative.

But even with partnering between cooperatives and others, there is a rural reality beyond low customer density. For the Steeleville-based co-op, there are a lot more trees and rolling terrain in southern Illinois that make the wireless broadband system envisioned by the co-ops very tough to provide economically to all co-op members. Wireless broadband service is only available outside Egyptian Telephone's exchanges.

In the meantime Egyptian Telephone Cooperative is helping electric cooperatives, like Southern Illinois Electric Cooperative, with its website, email and other internet needs.

Because of low customer density, long distances to cover, and the wooded and rolling rural terrain, it takes a hybrid communication technology approach. Egyptian Telephone has provided satellite, wireless, DSL over copper, and is currently moving to a fiber optic system.

The telephone co-op has slowly but surely enhanced the broadband business in a way that maintains economic viability. Despite a lot of talk about support for rural broadband, Jacobsen says there is downward pressure on all of the support systems.

"We need predictable support," says Jacobsen. "We would have fiber to the home now if we knew the support was going to be there for it. We can't do that right now. We can only do it slowly because we can't count on any support."

Today, the telephone cooperative has planted a lot of fiber optic cable, just like many of the state's telephone co-ops. But, that "last" mile all the way to homes is very expensive.

"We are within a mile of a lot of our customers with fiber," says Matt Bollinger, Network Operations Manager for Egyptian Telephone. "But we still continue to feed them over our DSL through copper. It is kind of a two-step approach. One is to get the main fiber closer, and the next step is to take it on to their homes."

Jacobsen says although fiber costs have come down, it still costs a minimum of $10,000 a mile for fiber, and then $30,000 to set a cabinet to feed customers. Bollinger adds there are signal limitations from the cabinet. For plain old telephone service over copper they could have loop links between cabinets and homes of 50,000 feet. "Now with fiber the cabinet needs to be within 9,000 feet or less," says Bollinger.

He says at 9,000 feet the signal strength at the home will provide 15 megabits per second (Mbps), and the Federal Communication Commission (FCC) just recently raised the definition of broadband from 3 Mbps to 25 Mbps. Adding to the cost of fiber to the home is the actual fiber equipment at each home, which runs $400 compared to just $25 for simple copper line telephone service.

While the cost per customer is high, especially in low customer density rural areas, the demand for increasing broadband speeds and access is also very high and growing.

Karen Jackson-Furman, Director of Finance for Egyptian Telephone says although there are businesses that need more bandwidth and more people are working from home, the real demand driver is video streaming. "As we push that fiber optic out deeper into the network we can offer higher bandwidth speeds to those customers, and that is our goal."

Bollinger says that demand for bandwidth wasn't very high at first. "Before you got on the web in the evening and checked your email and maybe visited a few websites. Dial up was fine. Now there is never a down time. In your home you might have five smart phones, five iPads, and four Roku boxes streaming video. That's not even counting the desktop computers and laptops."

For electric cooperatives it is not video and Netflix, but that same need for bandwidth speed has evolved with the increased data demands of the smart grid. It started with smart meters and a once-a-month meter reading. Today, 95 percent of Illinois electric cooperative members have a smart meter. The communication link is actually the powerline conductor

(Above left) The orange and white pipe next to the tractor, marks a fiber optic cable route running by Illinois Electric Cooperative's solar farm to the Winchester substation.

(Left) This substation intelligent electronic device has fiber optic communications—a key ingredient for the smart grid.

providing powerline carrier communications (PLC) from the meter back to the substation. It's from the substation to the office where increasing bandwidth is needed.

While automated meter reading systems have been the starting point for the smart grid, the next step is real time data from the meter instead of just a once a month meter reading. It will also include two-way communications that will allow dynamic real time pricing of electricity, demand management programs and new ways for the consumer to lower demand, monitor and control electric bills, incorporate distributed renewable generation, identify outages and restore power automatically, and essentially connect the smart home to the smart grid.

One option several co-ops have already added is prepaid billing. Essentially this uses the automated meter reading system infrastructure to allow the co-op member to control the amount and timing of their bill payment. No deposit is required from the member and no truck rolls are needed to disconnect or connect an account. Southern Illinois Electric had a similar system before, but it required credit card like swipe cards and a visit to the office to "recharge" the card. It worked but it was inconvenient. Now it can all be handled via text, email and the Internet.

Another big data communication user is substation supervisory control and data acquisition (SCADA). In many cases it requires a hybrid communications system to provide the data link from the substation SCADA system back to the co-op headquarters. It could be cellular, microwave, phone lines, or 900 mhz radio. Chris Bennett, Executive Vice President/General Manager for Southern Illinois Electric Cooperative, Dongola, says, "We're using wireless and some cellular where we can get a signal. Our generation and transmission cooperative, Southern Illinois Power Cooperative, is also using a mix of communications links, but as they build or rebuild transmission lines they are adding fiber optic cable to the neutral. The extra cost is negligible to add the fiber optic cable."

Bennett says the AMR and SCADA systems have become critical tools. "When the AMR or SCADA system is down, it is like a crisis now until we get it back up. It is like if you've misplaced your smart phone, or your computer isn't working, or you can't get your email — all of a sudden it feels like you can't get your work done."

Josh Shallenberger, President/CEO of Shelby Electric Cooperative, Shelbyville, says they are using a 900 Mhz radio system for their substation SCADA connection and to forward AMR data back to the office. The co-op is also using its wireless data network to provide broadband service to members. Three other Illinois electric cooperatives are also providing broadband wireless service to members, and other consumers, over their utility-based wireless data network.

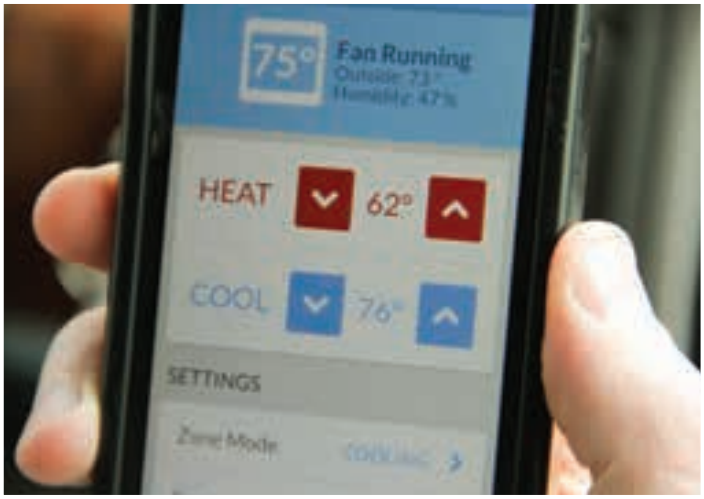
"There truly are applications for wireless, especially in rural areas," says Shallenberger. "It's been robust and reliable for our data backhaul. There are pros and cons to each choice, and it is going to take a hybrid communication system right now.

For Shelby Electric's generation and transmission cooperative (G&T), Prairie Power, Inc., the choices came down to microwave or fiber. Microwave would have worked for less cost if SCADA communication was all they wanted to do. Fiber offered a "future proof" solution for both smart grid applications and economic development in the areas the G&T cooperative served.

To solve the cost difference of a fiber backbone versus microwave, Prairie Power, Inc. (PPI) developed a fiber consortium with Adams Telephone Cooperative, McDonough Telephone Cooperative, Mid Century Telephone Cooperative and Cass Communications to share the expense of the cooperatively-built fiber network to all of the distribution cooperative headquarters, and eventually all of the substations served by PPI.

Jay Bartlett, as PPI's CEO, helped spearhead this cooperative-built fiber network for PPI. Bartlett saw firsthand what a fiber network could do,

Prairie Power, Inc. Substation Foreman and Primary Fiber Splicer Ryan Ruppel enjoys his new job, but says it requires precision and patience. The fiber is hair thin, incredibly strong and very brittle if you bend it.



Joseph Smith, Chief Technology Officer for Prairie Power, Inc., demonstrates his new smart phone app that can control the temperature of his home via the Internet. Soon smart home apps like this will cooperate with the smart grid to help balance power supply and demand.

for both a utility and the economic development of a community, when he worked for Springfield, Illinois' City, Water, Light and Power, a municipal system that installed a fiber network. He says the project received no government support or stimulus money, and was only possible because of the cooperation among the telephone and electric cooperatives.

Bartlett says, "We're investing for the long term and to improve rural life. This is one way the cooperative is going to become even more of a partner in the quality of life for our members in the future. There is no where to go but up in terms of growth."

Bartlett, who is starting a new job as CEO of Wabash Valley Power Association, an Indiana based G&T, is leaving the project in good hands and well on its way to a successful completion.

"We are at about the halfway point now," says Joseph Smith, PPI's Chief Technology Officer. "The project is scheduled to go until 2017. We won't be at all locations by then. Some of the points we will pick up over time through line rebuilds. There is going to be some microwave until we get fiber to the places we need to be. Every time we rebuild a transmission line we include fiber optics in the transmission. It will be a long-term project."

Microwave wireless communication will also provide a redundant backup path until the fiber network has an alternate route.

Electrical transmission redundancy is something cooperatives have been working on for their substation networks for many years. Now, communications redundancy is required for a truly smart grid SCADA system that can help pinpoint and reduce outages.

A demonstration substation is already up and running that takes advantage of the fiber network and smart grid devices that can automate power restoration and will facilitate new demand response systems.

Jim Thompson, President of the Board of Directors for PPI, and General Manager for Adams Electric Cooperative in Camp Point, says new technology and a communication link will reduce outage times, improve grid efficiency and lower the cost of power with new demand control options.

Thompson says, "We are employing new smart grid devices in our substations called IEDs, or intelligent electronic devices. They allow us to reroute power and re-establish power in a very short amount of time. It also helps us locate, sometimes right to the pole, where a problem has occurred on the network so we can repair it much more rapidly. This will also facilitate, faster, and less bothersome, demand response and new demand response systems that many people have never conceived of in the past. This will be a great tool for lowering costs in the future."

Smith says, "IEDs, these new smart devices at our substation, don't just tell us when things are on or off anymore. They give us extraordinary amounts of detail, all facets of the power that is flowing. Now we can see more information about voltage, current, and all aspects of power quality more than we could in the past. And more data will lead to better decisions."

The private fiber communication network also improves cyber security. Smith says, "It is a private network, is not connected to the Internet, and that helps improve security. By centralizing some of our communications, we are also able to provide additional security services to our cooperatives."

The fiber network is not only future proof, according to Bartlett, more importantly it is opening up the opportunity for unexpected innovative ideas.

"Our member cooperatives are now coming up with great ideas for this network we are building," says Bartlett. "For example, Eric Hobbie, a new manager at Menard Electric Cooperative in Petersburg, said together we could do a better job of disaster recovery with offsite backups of our cooperatives' computer systems. They wouldn't just have offsite data backup, but redundant servers and could immediately resume service in a real disaster."

Bartlett says, even though this rural smart grid broadband project didn't get any government grants or loan support, he is glad that government agencies are paying attention to the need for rural broadband.

"We are self-help organizations and we'd love to partner or get assistance because I truly believe that the lack of rural broadband is truly a form of discrimination that we need to address. The Internet is now the library, school, office, store, medical facility, bank and more. Not having equal access to information makes for an uneven playing field for rural communities."

Helping others means safety first

Good Samaritans are characterized as people who have the desire to help those in need. In addition to the desire to help, knowing how best to help in an emergency situation can make the difference between life and death. When electricity is involved in an accident, knowing the right steps to take could save the victim's life as well as the Good Samaritan's life.

In most situations, there are safeguards to keep us isolated from the dangers of electricity — such as high-voltage power lines elevated on poles or buried underground, insulated wires on tools and appliances, and ground fault circuit interrupters (GFCIs) on outlets in locations where water and electricity might come together. However, through accidents, equipment failure, or poor decision making, our bodies can come in contact with electricity with tragic results.

In 2012, two women separately came upon the scene of an accident in the Los Angeles area where a driver had crashed into a fire hydrant and a power pole. Both women thought they could help the driver of the car. However, power lines were down which had energized the water from the fire hydrant that had pooled around the car. When the women approached the car, they unfortunately could not even save themselves.

"Your first instinct may be to render help as quickly as you can, but when electricity is involved, the wrong action could hurt or even kill you and others at the scene," explains Matt Eisenmenger, a member of the Safe Electricity Advisory Board.

Electricity can be an unforeseen hazard, particularly when overhead power lines have fallen and made contact with vehicles, the ground, or anything that conducts electricity. The wire does not have to be sparking or arcing to be live. Therefore, always assume the power line is energized and never touch or approach it.

If you come upon an accident scene involving a vehicle and downed lines, stay back and warn others to stay away. Make sure the occupants of the car stay inside the vehicle until the utility has arrived to de-energize the lines.

In rare circumstances, the vehicle may catch fire. The only way the occupants can safely exit is to jump free and clear without touching the vehicle and ground at the same time. Advise them to jump and land with feet together, and then hop away to safety.

If you encounter any other accident situation in which you believe someone is in contact with electricity or has just suffered an electrical shock, here are some additional tips:

- Look first. Do NOT touch. The person may still be in contact with the electrical source and be energized. Touching the person may pass the current through you. If there are others nearby, make sure they do not touch the person either.
- Call, or have someone nearby call, 911 and the electric utility.
- Turn off the source of electricity — if known and if safely possible (i.e., circuit breaker or box). If you are not sure, wait for help from the emergency responders.
- Only once the source of electricity is OFF, check for signs of circulation (breathing, coughing, or movement). Provide any necessary first aid.
- Prevent shock. Lay the person down and, if possible, position the head slightly lower than the trunk of the body with the legs elevated.
- Do not move a person with an electrical injury unless the person is in immediate danger.

Anyone who has come into contact with electricity should see a doctor to check for internal injuries, even if he or she has no obvious signs or symptoms.

Remember, safety first. To learn more about electrical safety, visit SafeElectricity.org. ■

Molly Hall is Director of Safe Electricity. E-mail molly-hall@SafeElectricity.org. Safe Electricity is a public awareness program of the Energy Education Council. www.EnergyEdCouncil.org

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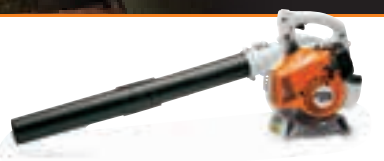

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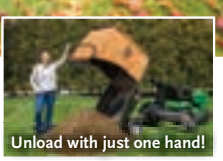

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Don't mourn – fertilize!

Some folks see the death of any plant as a funereal experience, lamenting the loss of a plant and the potential end of the world. Some of us say "Ah, such is life." and then "Wow! I have room to put something else in."

That being said, tree death for the most part is something to mourn. Big old shade trees have seen many moons, many rainbows, and many snow storms. They can mark the birth of a child or the death of a great grandparent. But for many homeowners, they are just there, leafing out in the spring as the days get longer and shedding their leaves as the days get shorter.

To that end, now is the time to help those trees, though it seems backwards since the tree is going dormant for the year.

Fertilizing is key! While Mother Nature provides some in the form of decaying leaves and squirrels who didn't quite make it jumping from tree to tree in the forests, it's often not enough in the home landscape.

Most homeowners don't recycle the leaves under the trees. Sometimes there are too many leaves to mulch with the mower and let filter between the grass blades, which instead build up on top and smother the grass. So we rake and/or blow the leaves where they are disposed of in some method.

And if we have turfgrass around the trees, the grass roots will grab most of the nutrients before the trees.

That's where fertilizer comes in.

If you fertilize the tree at the dripline, not at the trunk where it provides little benefit, the tree's roots will absorb the nitrogen, phosphorus and potassium over the remainder of the year and next spring, and provide a boost to the tree. As long as the ground isn't frozen, the roots will continue to absorb some of the nutrients.

It's important the fertilizer is around the tree's roots and not the grasses. Just scattering some extra fertilizer around the tree's dripline, or outer branches, will probably result in a thick green lawn in that area. The fertilizer has to get to the tree's roots.

Root feeders and root probes are one method, though probably not the most efficient. You stick a fertilizer tablet into a probe that's pushed into the ground 12 to 18 inches with a hose attached. The water slowly dissolves the nutrients which move into the soil.

Tree spikes are also available, but dollar for dollar, are much more expensive than what you can do with a three-quarter inch piece of rebar, three feet long, and a bag of fertilizer.

Take the metal rod and tap it into the ground 12 to 18 inches. Pull it out, and go around the dripline of the tree another three feet. Tap the bar into the ground, pull it out and move another three feet. Once you've made a circle around the tree, step roughly three feet out, and make another circle of holes, and then three feet toward the tree from the dripline and make a third circle of holes three feet apart.

Next, fill each hole with regular garden fertilizer such as a 10-10-10, 12-12-12 or something similar. Pour no more than six ounces of fertilizer in the holes. Then turn on the sprinkler to wet the soil, the holes and fertilizer.

You don't need to fertilize every year, but plan on it once every three to four years, especially if you have a manicured yard. ■.

David Robson is Extension Specialist, Pesticide Safety for the University of Illinois.
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FINEST Cooking

ROAD KILL FEASTS

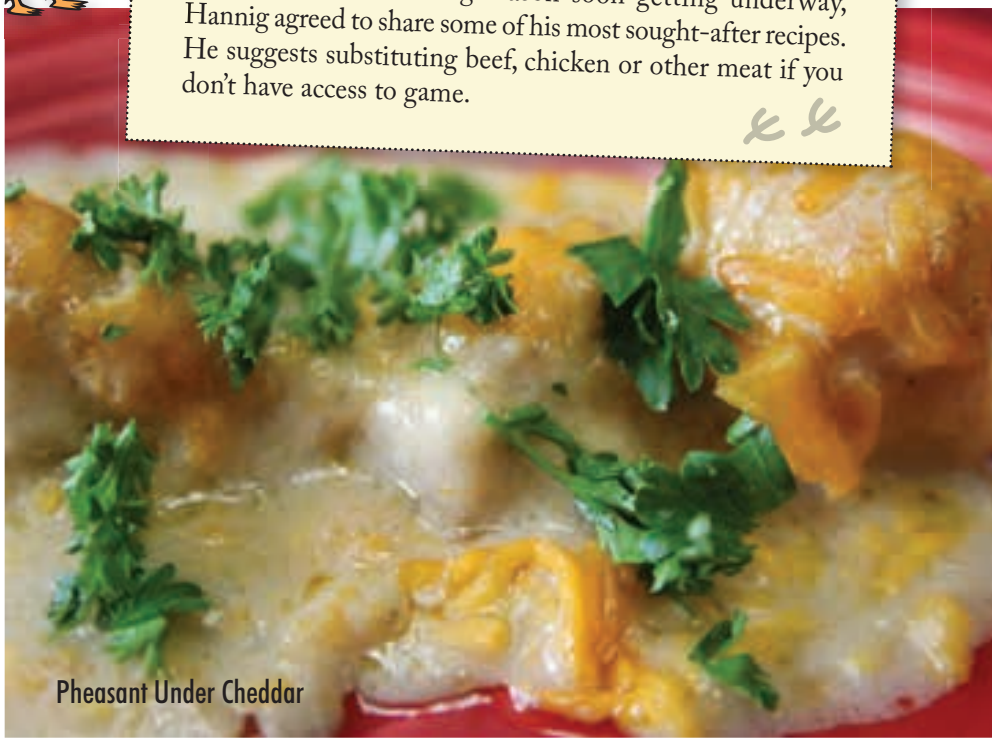
For 16 years, avid hunter, cook, and Egyptan Electric Cooperative member Virgil Hannig, hosted Road Kill Feasts each February in Carbondale. Hannig, and his "Road Kill Chefs", served 85-90 men fare such as Amos' Famous Barbequed Coon, Venison Stroganoff, Sharptail Grouse and Pheasant Pot Pie, and Turtle Mulligan.

With the fall hunting season soon getting underway, Hannig agreed to share some of his most sought-after recipes. He suggests substituting beef, chicken or other meat if you don't have access to game.

Pheasant Under Cheddar (right)

- 2-3 pheasant breasts, cut into serving pieces (quail or grouse may be substituted)
- Flour
- Salt
- Pepper
- 1 tsp. paprika
- 2 cans mushroom soup
- 2 c. chicken broth (or bouillon)
- 1-1/2 c. shredded cheddar cheese (gruyere may be substituted)
- Cooking oil

Mix flour, salt, pepper and paprika. Dip pieces of pheasant in seasoned flour, coating well. Brown in cooking oil in frying pan. Place meat in baking dish. Combine mushroom soup and broth; pour over browned pheasant. Sprinkle cheese evenly over meat. Cover and bake at 325 degrees for 2 hours.



Pheasant Under Cheddar

Three Cheese and Cream Casserole (right)

- 8 oz. medium egg noodles
- 1 lb. ground meat (deer, moose, elk, caribou, antelope or buffalo)
- 1 – 15 oz. can tomato sauce
- 1/2 tsp. sugar
- 1 tsp. salt
- 1/4 tsp. garlic salt
- 1/4 tsp. pepper
- 1 c. cottage cheese
- 1 – 8 oz. cream cheese, softened
- 1/2 c. sour cream
- 1 bunch green onions with tops, chopped
- 1/2 med. green pepper, chopped
- 1/4 c. shredded Parmesan cheese

Cook noodles according to package and drain. For meat mixture: Cook meat until brown. Stir in tomato sauce, sugar, salt, garlic salt and pepper. Remove from heat. For cheese mixture: In a bowl, combine cottage cheese, cream cheese, sour cream, green onions and green pepper. Spread half of noodles in a greased 13x9x2" baking dish. Moisten noodles with some of the meat mixture. Cover with the cheese mixture. Top with remaining noodles. Then add the rest of the meat mixture. Sprinkle with Parmesan cheese. Bake covered at 375 degrees for 45 minutes.

Three Cheese and Cream Casserole

Mexican Delight (below)

Vidalia onions
Tomatoes
Green peppers
Selected meats (deer, moose, elk, caribou, antelope, buffalo or upland birds)
Monterey Jack cheese, shredded

Note: The amount of sautéed vegetables used should approximate the amount of meat used. Saute' an even amount of thinly sliced Vidalia onions, tomatoes and green peppers. Cut selected meats into finger-sized strips (remove the white skin from the red meat and tenderize before cutting into strips). Fry meat in olive oil until almost done. Finish frying meat in sautéed vegetables. Melt Monterey Jack cheese over the entire contents. Serve over cooked rice which has been enhanced with butter after rice is cooked. Dollops of sour cream and guacamole may be added to the top of the dish when served.


Mexican Delight


Big Game in Heavy Cream Sauce

Pecan Salsa for Upland Birds

1-1/2 c. distilled or bottled water
1 c. light brown sugar
1 c. white sugar
1 T. lime juice
2 c. whipping cream
1 – 4 oz. can diced green chilies
2 c. pecans, chopped

Heat water, add both sugars and stir until dissolved. Increase heat and boil gently 5 minutes. Remove from heat. Slowly stir in cream. Add remaining ingredients, stirring well. Serve as gravy over golden brown upland birds.

Road Kill Feast Chili

2 lbs. ground meat (deer, moose, elk, caribou or buffalo)
2 sm. pkgs. Jimmy Dean hot sausage
2 lg. onions, diced
2 med. green peppers, diced
2 sm. cans Brooks chili hot beans
1 – 6 oz. tomato paste
2 – 8 oz. tomato sauce
1 – 24 oz. can stewed tomatoes
1 can Rotels tomatoes
12 oz. tomato juice
Hot sauce to taste
4 t. minced garlic
1 garlic clove

Combine all ingredients and cook over low heat for approximately 8 hours, stirring frequently to keep chili from scorching on the bottom of the pot.

Big Game in Heavy Cream Sauce (left)

1 – 2 lbs. backstrap (deer, moose, elk, caribou or buffalo)
6 med. mushrooms, sliced
1 small onion, finely sliced
12 oz. heavy whipping cream
2 tomatoes; blanched, peeled and diced
Dollop of mustard
Pat of butter

Remove white skin from meat and cut into 1/2" thick medallions and tenderize. Salt and pepper to taste. Heat oil in large skillet over high heat. Add prepared meat and saute' for 5 minutes. Remove from pan and keep on a warmed plate. Place mushrooms and onion into the skillet and cook about 3-4 minutes. Add cream and let cook for 5-7 minutes. Add tomatoes, mustard and butter. Salt and pepper to taste. Serve over rice pilaf.

Recipes prepared, tasted and photographed by Valerie Cheatham. For more recipes and photos go to www.icl.coop. Questions? Email finestcooking@aiec.coop.

What size furnace do you really need for your home?

Sometime in your life you will need to buy a new furnace. Either you are building a new home, the old furnace finally gave up, or you are being proactive and would like to invest in something more energy efficient. Whatever your reason, it is very important to install a properly sized furnace to match the btu/hr heat loss of your home at the outdoor winter design temperature for your location. Here in Peoria it's about -2° below zero.

In past articles I have mentioned that your first energy efficiency priority is to have a good building shell, because the heating and cooling systems are sized to the house. This is where having a good building shell pays off big time. Your HVAC contractor should do a "Manual J" heat loss calculation to determine the Btu heat loss of your home. Once they know the heat loss, they can properly size the furnace. It makes sense. To do this they will need to get the square footage and R-value of the insulation in the attic, exterior walls, and basement walls, measure the windows, etc. They then enter the data into a software program that can calculate heat loss. I can tell you this is not just a 10-15 minute walk-thru of the house.

Most people think that bigger is better and that couldn't be further from the truth. Let's think about this. If you had an oversized furnace it would fire up and run for a few minutes and turn off. Fire up again and run for a few minutes and turn off. All of the homes I go to with oversized furnaces have hot or cold rooms or floors, humidity problems and significant comfort issues.

What happens when a furnace fires up? First the flame heats up the heat exchanger in the furnace to a predetermined temperature. Then the main blower turns on and pulls air from the house to circulate it through the furnace and flows throughout the house through the ducts.

Let's look at the combustion efficiency of your furnace. I have measured the combustion efficiency of hundreds of furnaces. The flame in your furnace has to operate for a minimum of 5 minutes to reach its rated efficiency. The 95% efficient furnaces and higher need to run even longer to reach their maximum combustion efficiency. This is no different than your car. Imagine the gas mileage you would get if you were to run your car until it almost reached the operating temperature and then shut it off, let it cool down and did it all over again all day long. That would drastically reduce your fuel mileage, right? This is exactly what happens with an oversized furnace. While the combustion efficiency is low during warm-up, the furnace is putting out less Btu's for the amount of gas used compared to when it is up to operating temperatures.

Now let's look at how an oversized furnace can affect the comfort level of your home. Ducts carry the warm or cool air to and from the house. On a cold winter day do you think the ducts are somehow staying nice and warm while your furnace is off? Nope. They have cooled to room temperature during the off cycle. When the furnace turns on, the cool ducts have to heat up to about 120° or so before any heat will come out of them.

If you have a large ranch or a two story home with long duct runs to remote rooms, it takes more time to heat up those long runs than shorter runs. I have seen times where the short-cycling furnace turns off before any heat comes out of the duct in the room. This may be a reason why some of the rooms in your home may be cooler than others. If the furnace was sized correctly, so you had nice long run times of about 20 minutes, all of the ducts could warm up and actually put heat into all the rooms. The home would feel more comfortable, heat more evenly, and the furnace would operate at peak efficiency. The 2012 Energy Code requires that a furnace cannot be oversized more than 15 percent and 10 percent for air conditioning.

Oversized furnaces are very common. I have never come across a furnace that was too small for the home, ever! ■

Have questions? Brian Kumer can be contacted at brian_kumer@yahoo.com.

SIU students learn techniques for sky-high farming

by Andrea Hahn

Beginning this fall, agriculture students at Southern Illinois University Carbondale have the opportunity to learn about the next game-changing agricultural tool before it takes off – literally. Unmanned aerial vehicles (UAVs) — or drones as they are popularly known — are in hover mode and poised to change farming. Christopher Clemons and Dennis Watson, faculty members in the College of Agricultural Sciences, have prepared a course of study to help SIU students become leaders in the newest agricultural technology.

Students will be introduced to unmanned aerial vehicles and applications, including learning about UAV types for agricultural use; maintenance and repair; remote sensing attachments and use of lens filters for UAV scouting; and operating and application of the data gathered for agricultural use.

"The most obvious application is for precision agriculture," Clemons said. "But UAV technology has applications for all our majors."

Dennis Watson, left, and Chris Clemons, faculty members in the Department of Agricultural Systems and Education at Southern Illinois University Carbondale, test fly a 3D Robotics Solo unmanned aerial vehicle, popularly known as a drone. The university is adding a component on agricultural drones to its curriculum. (Photo by Russell Bailey)

Precision agriculture uses global positioning system (GPS) and other data to allow farmers to manage smaller units within their fields, enabling them to customize fertilizer, water and disease-control for the areas of the field that need it. Right now, most unmanned aerial vehicles intended for agricultural use are data-gatherers. Equipped with a high definition camera and the specific lenses and filters, UAVs gather information on stress-level in plants, calculate areas of weather or disease damage and help farmers predict yield.

Other applications for agriculture include assisting livestock producers by assessing forage health for grazing rotation, or measuring canopy health or tree density for foresters.

Some farmers might invest in UAVs of their own, while others might hire out to precision agriculture consulting companies, several of which are already taking off. The Association for Unmanned Vehicle Systems International, the trade group representing UAV manufacturers and users, predict that 80 percent of the commercial UAV market will eventually be agriculture. Similar predictions forecast more than 100,000 jobs in the UAV market by 2025 and an economic impact in the hundreds of millions of dollars.

"We are at the brink of the next technological revolution for agriculture," Clemons said. "This is similar to the time when farmers first began using GPS technologies to improve farming techniques and efficiency. We want our students to be ready for this. It's going to be the fastest-growing area for agricultural professionals."

At present, unmanned aerial vehicles and unmanned aerial systems (the drone and its controls) occupy an uncertain position within Federal Aviation Administration rules. Section 333 of the FAA Modernization and Reform Act of 2012 permits the Secretary of Transportation to authorize, on a case-by-case basis, operations for unmanned aerial systems for commercial use. So far, the FAA has granted 822 petitions.

"We're developing students and future agricultural professionals who make decisions based on data," Clemons said. "We're still teaching what we call 'ground truthing' because there isn't a substitute for that. But these UAVs will change the scope of agriculture for all of our students. The aerial data is going to be an extension of the GPS data that is already available in planters and combines and tractors."

Watson said industry partners are crucial to keeping the hottest, newest agricultural technology in students' hands. In turn, he said, the university will turn out students who are immediately ready to step into leadership positions.

"We're not going to wait, we're going to begin preparing our students now," he said. "The technology is here and it is advancing, and we want our students in the front of it."

Where are your energy $$$ going?

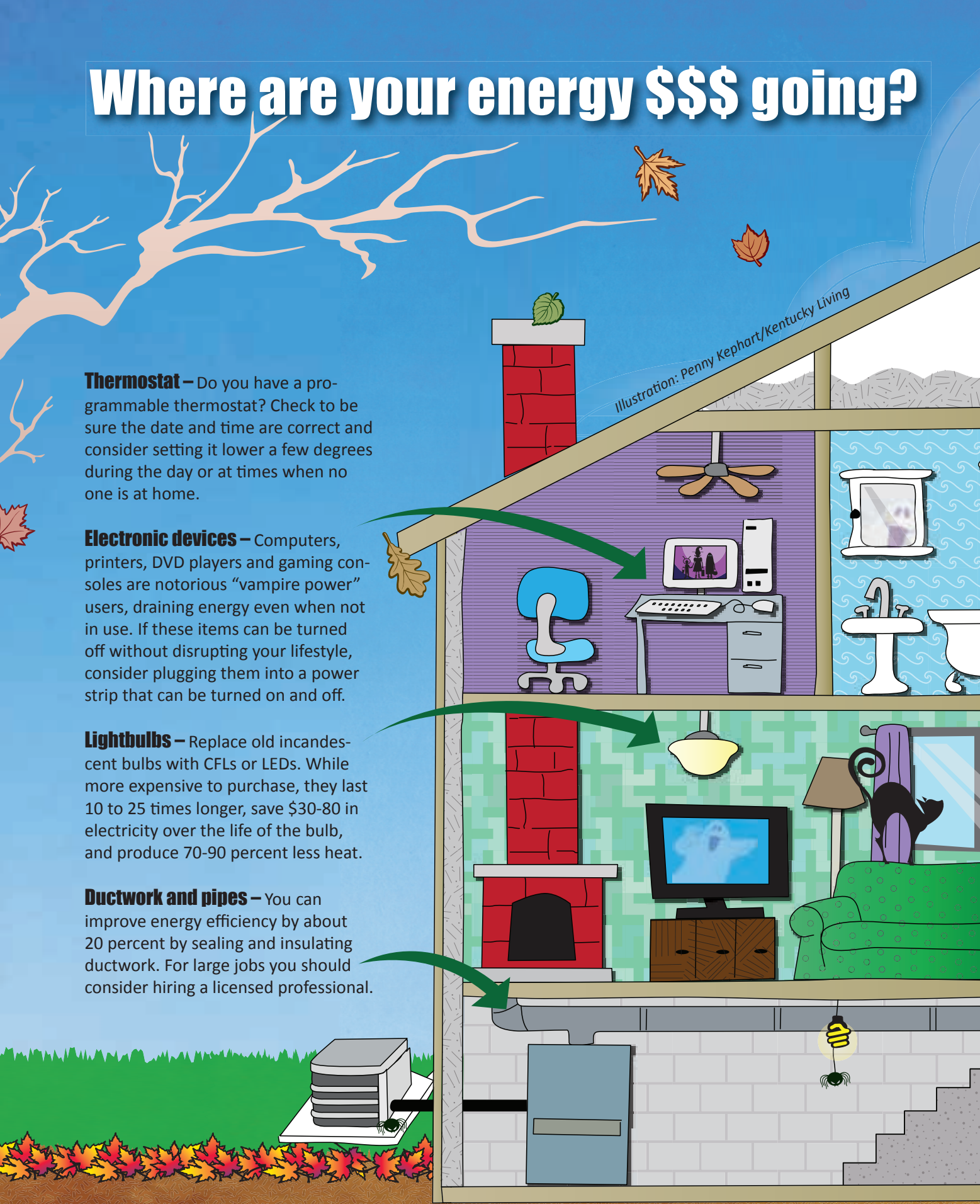


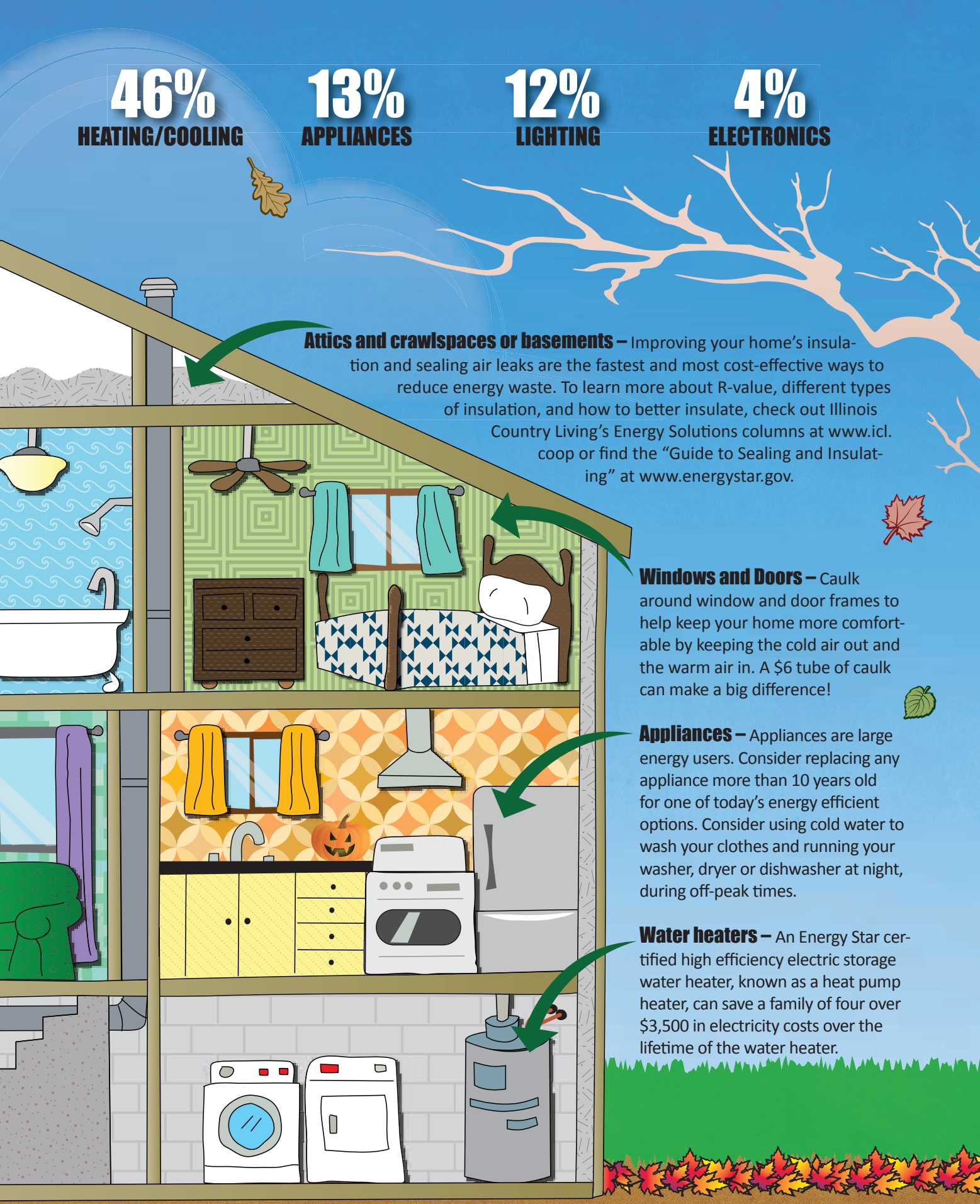
Illustration: Penny Kephart/Kentucky Living

Thermostat – Do you have a programmable thermostat? Check to be sure the date and time are correct and consider setting it lower a few degrees during the day or at times when no one is at home.

Electronic devices – Computers, printers, DVD players and gaming consoles are notorious "vampire power" users, draining energy even when not in use. If these items can be turned off without disrupting your lifestyle, consider plugging them into a power strip that can be turned on and off.

Lightbulbs – Replace old incandescent bulbs with CFLs or LEDs. While more expensive to purchase, they last 10 to 25 times longer, save $30-80 in electricity over the life of the bulb, and produce 70-90 percent less heat.

Ductwork and pipes – You can improve energy efficiency by about 20 percent by sealing and insulating ductwork. For large jobs you should consider hiring a licensed professional.



Attics and crawlspaces or basements – Improving your home's insulation and sealing air leaks are the fastest and most cost-effective ways to reduce energy waste. To learn more about R-value, different types of insulation, and how to better insulate, check out Illinois Country Living's Energy Solutions columns at www.icl.coop or find the "Guide to Sealing and Insulating" at www.energystar.gov.

Windows and Doors – Caulk around window and door frames to help keep your home more comfortable by keeping the cold air out and the warm air in. A $6 tube of caulk can make a big difference!

Appliances – Appliances are large energy users. Consider replacing any appliance more than 10 years old for one of today's energy efficient options. Consider using cold water to wash your clothes and running your washer, dryer or dishwasher at night, during off-peak times.

Water heaters – An Energy Star certified high efficiency electric storage water heater, known as a heat pump heater, can save a family of four over $3,500 in electricity costs over the lifetime of the water heater.

A Pineapple by any other name

Let me tell you a story about a pineapple.

This story isn't about fruit though, it's a cautionary tale of just how easy it is to lose your personal data when using public wifi networks. You see, the "pineapple" in question is actually a device built specifically to perform man-in-the-middle attacks on wifi networks.

A man-in-the-middle attack is one in which attackers secretly insert themselves between you and your intended destination.

For example, suppose you wanted to login to your bank and send a payment. In order to do so, you would either use an app provided by the bank, or simply log into your bank's website using the credentials you set up when you opened your account, or signed up for online banking. In a typical man-in-the-middle attack, a hacker would intercept the traffic coming from your computer, and then pass it along to the bank for you, without your knowledge.

That way, he could see all of your information and use it at his convenience.

When using open, free wireless networks such things have always been possible. However, now with devices like the pineapple, these types of attacks can be performed by even the most unsophisticated attackers.

Normally, I don't like to point out how to buy such things, as it only propagates their use. But in this case, the proverbial cat is already out of the bag. So, I would encourage you to visit https://www.wifipineapple.com/ to read all the information about these devices. It's always good to know what you're up against. I understand they're sold out right now, so that just goes to show you how popular they are.

So, what can you do to avoid being the victim of such an attack?

First, don't use free wireless services

when performing critical tasks on your computing devices. I say computing devices because it's not just a computer. The type of attack mentioned above does not rely upon a specific type of device. You can be using a phone, tablet or computer and you are still vulnerable. It doesn't even matter if you have up-to-date anti-virus or malware prevention software, because the attacker isn't installing anything on your device! He is just wanting to get your information.

So, don't use public wifi for banking or credit card transactions.

Secondly, use a different password when using social media than the ones you use for other things. Even if you don't use the public wifi for banking, if you login to Facebook while on one, and have the same password for Facebook and your bank, you are leaving yourself vulnerable. Personally, I like to use a passphrase instead of a password.

A passphrase is very similar to a password, but longer. Depending upon the password rules of the particular system you're using, you may even be able to make it an entire sentence. For example, instead of using your daughter's birth month and year, "December1975," you can use "MyDaughterBornInDecember1975."

Keep in mind, if you use the same passphrase for every site, then you still have the same problem with man-in-the-middle attacks. Certainly, the phrase will be easy for you to remember, but it's also going to be easy to use against you.

If you are having trouble remembering your passphrases, try coming up with a strategy to help you keep track. Something as simple as adding the name of the website to the front of your password can help you remember. For example to login in to Facebook you could use, "FacebookIsWonderful!" as your password while your bank could be, "ThisBankIsWonderful!" It's not ideal to have a repeatable pattern like that in your password/passphrase, but it's certainly better than using the same one everywhere.

Until next month, be safe out there!

Reply Online

Have a general computer question? If so, take a moment to visit icl.coop find the Powered Up section, and share. See you next month.

Ed VanHoose is the EVP/GM at Clay Electric Cooperative, Inc. in Flora

edv@ceci.coop

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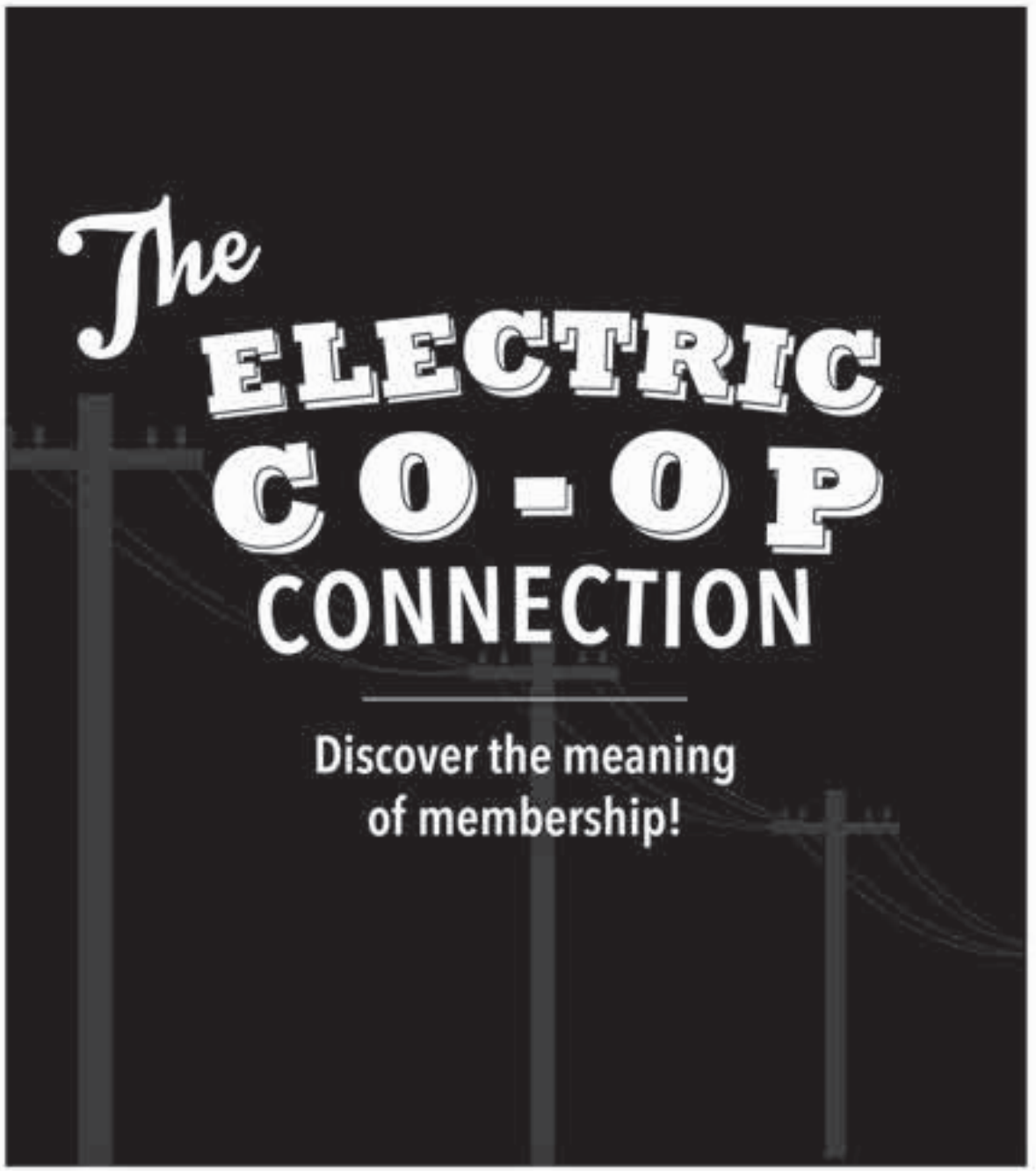

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Americans are rediscovering the Cooperative Difference

By Justin LaBerge

Your alarm goes off and you get out of bed. You go outside and grab the morning paper. You sit down at the kitchen table to read your paper while enjoying a glass of juice and some toast. After breakfast you head down to the local hardware store to pick up supplies to tackle your weekend to-do list.

For many Americans, that simple morning routine would bring them in contact with at least five different cooperatives.

That alarm could be powered by electricity from one of Illinois' electric cooperatives. The paper is likely filled with stories from the Associated Press. The juice might be Sunkist, Ocean Spray or Florida's Natural. The butter on your toast could have been processed by one of several dairy co-ops, including Dairy Farmers of America or Land-O-Lakes. If the local hardware store is a True Value, Ace or Do-It-Best, then it's part of a co-op, too.

If you've been a co-op member for long, you've probably heard these examples before. What you might not realize is that this time-tested business model has been rediscovered by a *new* generation of Americans who appreciate doing business with locally-based organizations that put people ahead of profits.

> ***Co-ops are experiencing a surge in popularity. Today, it is estimated that one in three Americans is a member of at least one cooperative.***

Co-ops are experiencing a surge in popularity. Today, it is estimated that one in three Americans is a member of at least one cooperative. America's electric cooperative network now serves 42 million Americans. In 2014, America's credit unions surpassed 100 million members.

In addition to the growth of true cooperative organizations, there has been a surge in the popularity of other funding and business models that feature many of the same traits as cooperatives.

Websites like Kickstarter and GoFundMe allow large groups of people to pool small contributions to achieve a larger goal. Though groups raising money through these sites aren't cooperatives, it's clear that an increasing number of people are seeing the value of working together and pooling resources to improve their communities.

The benefits of being a member of your electric co-op go far beyond the warm fuzzy feeling we get from supporting a local business and keeping our dollars in our communities.

As a not-for-profit cooperative, our sole mission is to ensure you have safe, reliable and affordable electricity when you need it. We aren't in business to make a profit, we aren't trying to get elected to public office and we don't have a hidden agenda. Our job is to look out for you and your fellow co-op members.

That's important to keep in mind in as we go through an unprecedented period of transition in the energy industry.

The coming years are likely to bring many changes to the way our nation generates, delivers, stores, consumes and regulates energy.

When an industry goes through a change of this magnitude, there will be many interest groups vying to influence policy and advance their agendas. As that process unfolds, there will only be one group that's truly acting as the voice of energy consumers, and that's America's electric cooperatives.

We don't know exactly what the future holds, but you can rest assured knowing that your electric cooperative – and more than 900 other not-for-profit electric cooperatives across the U.S. – will be working hard to ensure your voice is part of the conversation. And that's the cooperative difference.

Justin LaBerge writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

Remembering Katrina

Largest relief effort in co-op history

On August 29, 2005, Hurricane Katrina made landfall in electric cooperative territory, blacking out some 600,000 co-op meters in Louisiana and Mississippi. Co-ops in the two states suffered more than $360 million in damages and that doesn't count the damage to more than 100 co-op staffers who lost their homes, cars, picture albums, kid's clothes, keepsakes … everything … yet went back to work to restore power and hope. The storm brought on the most massive relief effort in the history of the co-op movement and showed how workers extended a helping hand to both their co-op families and their communities.

In Illinois, the Emergency Work Plan was activated and 20 electric cooperatives sent 139 linemen, along with trucks and diggers, to aid in the recovery effort and were among the first to arrive in Alabama and Mississippi. With the help of ECT.coop and the Electric Power Associations of Mississippi, we take a look back at the cooperation among cooperatives that helped to restore power to those storm-ravaged areas.

In the state of Mississippi, nine of the 25 electric cooperative distribution systems were completely destroyed and the other 16 suffered greatly. Ron Stewart, senior vice president of communications for the Electric Power Association of Mississippi reported that 64 percent of Mississippi cooperative members were without power – almost half a million families. Nearly 50,000 poles were destroyed, and demand for fuel and materials to rebuild was stretched to the breaking point. But in spite of all that Mother Nature had thrown at them, members were understanding and resilient.

More than 12,000 electric cooperative crew members worked dawn to dusk, and beyond, to restore power to those affected, knowing full well they could possibly need the help after a future natural disaster – be it ice, snow, tornadoes, fires or floods. These dedicated and safety-conscious individuals had to rebuild thousands of miles of power lines.

With temperatures reaching 100 degrees and humidity as thick as a blanket, crew members worked to remove broken trees, poles and lines just so they could start on the rebuild. It was estimated to take six weeks to get power restored in those areas that were capable of receiving it safely. They did it in three.

Housing and feeding the visiting crew members was another huge challenge. More than 12,000 emergency volunteers from 22 states had to eat and sleep somewhere. Coast Electric erected a "tent city" where crews ate and slept and showered in mobile trailers. Local employees' family members joined others to help prepare meals and launder clothes.

The veteran Illinois linemen who volunteered were completely shocked by the total devastation they encountered. They had experienced terrible destruction due to ice storms or tornadoes, but that paled in comparison.

Randy Smith, general manager, Dixie EPA, recalls, "Oh, the need was huge. We had contractors coming in also, but it was different in the respect that usually our help comes from within the state so we're helping each other. Well, everybody in the state had damage, you know, so we had people from Michigan, we had people from Illinois, we had people from North Carolina, Georgia, Florida, pretty much everywhere. Just those guys coming in to help us and basically just hitting the ground running, it made a huge impact."

Dan Wooten, serviceman, Dixie EPA, remembers, "Randy Smith said, 'Dan, can you handle another crew? And I said, Yes, sir. I can put them on Dew Mills Road. It's a bad line. Who are they? He said, They're Egyptian. I said, Now, you don't need to give me nobody I can't talk to. I don't talk no Egyptian. And he laughed. He said, No, crazy, it's Egyptian Electric. They're from Illinois. And when he said Illinois, well, I'm a deer hunter. Most of us linemen love to hunt and fish. I said, Boy, he's from Illinois, that's probably where the big bucks are.' And me and that foreman, we became best friends. We go on hunting trips and elk hunting trips, all kind of stuff. I met some fine men during that time."

Journeyman Lineman Brian Anderson of Adams Electric Cooperative said, "We worked to restore power to an elementary school one day. They had converted it in to a shelter and a hospital. They were running a few lights and fans off a generator. Most of the people there still had on the same clothes they had on when the hurricane hit. When we finally got the school back on, people came out and started clapping. That was going to be their home for some time and now they could run all the lights and air conditioning. It was great to drive off that evening and see all the lights on. Brad Smith and I were tired. Our feet hurt, but after we saw that we weren't tired anymore. It was a great feeling."

The cooperative spirit was as alive and well 10 years ago, in Mississippi, as it is today. Co-ops from around the country will drop everything to help out fellow cooperatives knowing that but for the grace of God, it could have been them.

OCTOBER

For a complete listing of Events, visit our website www.icl.coop

Highlights

OCTOBER 3, 2015 @ 10:00 AM – 6:00 PM

Saline County Bluegrass and BBQ Festival

Saline Creek Pioneer
Village & Museum
1600 South Feazel Street
Harrisburg, IL 62946

We do ask for a food donation for local charities and/or a monetary donation for the museum.

OCTOBER 3, 4, 10 & 11, 2015

Spoon River Valley Scenic Drive

Location: Fulton County and surrounding communities.

Join us for our 48th Annual Fall Festival during the first two full weekends in October. The Spoon River Valley Scenic Drive is a 140-mile driving route with more than 24 sites on it. Enjoy visiting the historic sites and traveling through the Spoon River Valley to see visitor attractions. Taste the foods at specific destinations that have become a tradition during the Fall Festival. For more information, visit www.spoonriverdrive.org.

TOP PICK FOR KIDS

DATES: OCTOBER 10-11, 2015

Galena County Fair

Grant Park
Park Ave.
Galena, IL 61036

Time: Saturday 10:00 a.m. – 5:00 p.m.
Sunday 10:00 a.m. – 4:00 p.m.
Admission: $2.00 donation appreciated

Galena County Fair boasts more than 150 vendors offering original, handmade arts, crafts and fine arts. Held in picturesque Grant Park overlooking historic Galena, the fair is a Columbus Day weekend tradition. Galena County Fair is a volunteer organized event, proceeds returned to the community through a grant program. Please support this worthy cause by attending the fair, participating in the silent auction and buying raffle tickets. See you at the fair!

OCTOBER 18, 2015 @ 2:00 PM – 6:00 PM

Evergreen Cemetery Comes Alive

Evergreen Cemetery
Chester, IL 62233

Come join us for a free walking tour featuring a live portrayal of people from Chester's interesting historic past. Including, but not limited to, political figures, comic book inspirations, and individuals providing glimpses into days long gone. Tours will last approximately one hour, and the last tour leaves at 5 p.m. This event is rain or shine, however in event of heavy rain or severe weather it will be cancelled. Donations are appreciated and will go towards goals set by Chester's Tourism Commission. For questions contact Lauren, 618-615-2747.

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