

PowerSource

A newsletter for members of  Tri-County Electric Cooperative
Providing energy for life.

New "Cars" Drive Power Costs

A new car arrives with fresh paint, a great smell, and a hefty price tag. After a few years of regular payments the scent changes, but there's value in owning an older car that's still running well.

Most of America's electric cooperatives bought a fleet of new "cars"—power plants—in the 1970s and 1980s. This ample stock of generation allowed co-ops to maintain a safe, reliable, and affordable supply of power. Current conditions may place affordability and reliability at risk.

Half of the nation's total generating capacity—530,000 megawatts—passed the 30-year mark by the end of 2010, according to the U.S. Energy Information Association (EIA). As with an older vehicle, there are costs associated with maintaining a power plant—expenses compounded by a slew of environmental regulations. In fact, these rules could result in a chunk of America's coal-fired power plant fleet shutting down by 2018.

In addition, some co-ops need to head back to the dealership to add new generation plants to meet growing demand. However, with required environmental controls coupled with rising prices for construction materials, new power plants—as well as older ones "in for maintenance"—are going to be much, much more expensive.

All of these factors will impact our electric bills for many years to come. Our collective wallets are under pressure. More folks around the world are using power; China has surpassed the United States as the top global energy user, and in just over two decades it's predicted to consume 68 percent more power than we do. Americans are using more energy too, despite efficiency measures. It's easy to see why—TVs, laptops, "iGadgets," and other electronics crowd power outlets. A Missouri home uses 958 kWh every month—a 50 kWh increase in just one year.

Generally, when there's increased demand—say, for the latest model car—manufacturers open a new assembly plant to roll more models into showrooms. But at a time when electricity needs are rising, our affordable power supply is beginning to dwindle.

Today, nearly 80 percent of the power provided by electric co-ops nationwide comes from coal, compared to about half for the rest of the electric utility industry. Why the difference? The majority of co-op coal power plants were built between 1975 and 1986, when building natural gas facilities was restricted by the federal Powerplant and Industrial Fuel Use Act due to concerns that natural gas reserves were running low. Of course, those worries proved to be unfounded, and the law was repealed in 1987. But by then co-ops had already built a generation of coal-fired power plants—the same plants that are now being saddled with heavy regulatory costs.

Don't get us wrong—we are not against clean and green energy. In fact, generation and transmission cooperatives like Associated Electric Cooperative, which supplies us with wholesale power, has invested 1.4 billion dollars to comply with current regulations and added 300 MW of wind generation to their portfolio. But we want to make sure lawmakers in Washington, D.C., keep balance, common sense, and affordability in mind when adding layer upon layer of requirements to the way we generate power.

Working with the folks at our national service arm, the National Rural Electric Cooperative Association (NRECA), we're urging the U.S. Environmental Protection Agency to consider a more balanced and common-sense approach to rules, and how increased electric power costs affect consumers like you. Stay informed on these issues and find out how you can help us keep the price of power affordable at www.ourenergy.coop.

Co-op Connections Card Coming Soon

Tri-County Electric members will soon be receiving a Co-op Connections Card. This card will allow members to receive discounts at national, regional and local retailers. While Tri-County Electric's number one priority is keeping the lights on, we're also committed to bringing additional value to our members and communities we serve. In the coming months we will print more information about the program.

Fall ACH promo winners!

Congratulations to members Sylvia Wilcox & Jamasa Steggall (Buddy's Place)! These members were randomly selected as the winners of the ACH Winter Promotion for 2011. They each received a \$25 credit on their account for being selected and agreeing to participate in the program. Thank you to all who signed up for the promotion in 2011!

**Tired of writing a check monthly?
ACH is available at TCEC
Contact the office for more information!**

RURAL
MISSOURI

Doug Rye says: 'Happy' summer comfort:

I decided to splurge and take my wife to a lodge at one of our great state parks to help ring in the New Year. It is difficult for me to stay up much past the late news, but I can do it if I am in good company and if someone will give me a green New Year's hat and a silly little horn.

There was only one place to eat, and it was the nice restaurant at the lodge. By the time you have been there for two full days and eaten six straight meals with the same people, you begin to feel like family. In this case, it was super nice.

On New Year's morning, I left our room and went to the room with the big fireplace and the big view to get some coffee. As I stepped into the hallway, a lady housekeeper with a vacuum cleaner looked at me and said, "Hey, I just read your article in the electric cooperative magazine last night." I said, "Then you must know about the little bitty bedroom that I had as a child." And sure enough, she did.

She told me about her childhood, sisters and brothers, and a house with only a small wood heater for the winter. Then she said, "But we were all happy." Several others have commented on the article with their stories, and all of them have mentioned that they were happy even though their house did not have all the comforts that we have today. At that time, I had not yet made a New Year's resolution, but I heard the word happy so many times and I was wishing everyone a Happy New Year, so I made my 2012 resolution. I will be happy regardless of the circumstances.

Although I am not convinced that it is necessary to have total temperature comfort for one to be happy, I am convinced that everyone would like to have comfort. In this and next month's column, I am going to teach you everything I know about temperature comfort in your house.

The first thing to know is that not everyone has the same comfort temperature. Some like it hotter and some like it colder. Based on the calls that I get at the office, I would say that a husband and wife rarely agree on which temperature is best.

One lady told me, in a kidding tone, that her husband was more worried about his cattle being comfortable than her. That was on a day when it was snowing over most of the state. Comfort is usually related to both the air temperature and the relative humidity. Generally speaking, folks are the most comfortable if the temperature is about 74 degrees with a relative humidity of about 50 percent. Remember that relative humidity is the percentage of moisture in the air compared to the most moisture that the air could hold at a certain temperature. Let's start with some summer comfort tips.

I have never had a person tell me that their house was too dry in the summer. Let's take a day in Arkansas when the temperature is 90 degrees. If the relative humidity is 70 percent, you will feel sticky hot because the moisture on the skin cannot evaporate and cool the body. So you turn on your AC unit. An AC unit cools by removing heat and humidity. As the humidity is lowered, the skin moisture evaporates and you feel cooler.

*Listen to Doug Rye
Saturday Mornings
From 9 a.m. - 10 a.m.
KMEM 100.5 FM
KOJY 106.9 FM*

That same 90-degree day in Arizona with 50 percent relative humidity would be like going to heaven because the skin moisture evaporates easily. So that 90-degree air at 50 percent is much dryer than the 90-degree air at 70 percent. If it were raining on a 90-degree day, the relative humidity would be right at 100 percent in either state. How can we relate this to your house for better comfort? Well if it is a hot 90-degree/70-percent humidity day and your house has lots of air infiltration, leakage in the return air system, unvented bath areas or anything making moisture, the air-conditioning unit will have to work harder and longer to keep you in the comfort range.

If your air-conditioning unit is oversized, it will not run long enough to remove the humidity, so you will probably lower the thermostat setting to make the unit run longer. All of this means higher utility bills. The solution is to caulk, repair ductwork, vent bathrooms, etc., and then purchase a properly sized air-conditioning unit when needed. This really isn't complicated if you take it one step at a time. So I suggest that you let this much absorb and not evaporate, and next month we will discuss winter comfort tips.

Until then, BE HAPPY.

Doug Rye, a licensed architect living in Saline County, Ark., and the popular host of the "Home Remedies" radio show, works as a consultant for the Electric Cooperatives of Arkansas to promote energy efficiency to cooperative members. To order Doug's video or ask energy efficiency-related questions, call Doug at 501-653-7931. More energy-efficiency tips, as well as Doug's columns, can also be found at www.ecark.org/energy-efficiency/doug-rye.



Energy Efficiency

Tip of the Month

Televisions, satellite dish receivers and DVD players often use electricity even when they are turned off. If you can live with the inconvenience of having to wait a little longer for these devices to come on, you can reduce your electric bill by unplugging them when not in use.

December 2011 Board Report

At the December meeting of the Board of Directors' of Tri-County Electric Cooperative, the board reviewed the following items:

- The board went into executive session.
- The board reviewed and approved regular board minutes (11/21/2011).
- Kevin Wheeler, Assistant Manager, gave a safety report. The cooperative has had 1 vehicle accident, 1 recordable accident, 0 near misses or lost time accidents for the month. The cooperative worked 3,230 hours in November and 43,564 for the year of 2011.
- Wendy McElvain, Office Manager reviewed with the board the November 2011 financials, year-to-date financial ratios, memberships, connects and disconnects.
- The board heard reports from the office and operations staff.
- The board reviewed the expenditures report in detail.
- The board heard monthly office and operations reports.
- The board discussed voting delegates for the 2012 NRECA Annual Meeting.
- The board heard a presentation and approved the participation in Touchstone Energy's Co-op Connection Card program.
- The board reviewed, amended and approved the 2012 capital budget.
- The board approved, pending a resolution from the attorney, the Capital Credit Policy B-014.
- The board approved, pending a resolution from the attorney, the Legal Services Policy B-015.
- The board discussed, amended and approved Board Policy E-018 Cell Phone Policy.
- The board received director reports regarding AECI and Northeast Power.
- Next board meeting has been set for January 16, 2012.

Comparative Operating Report

October	2011	2010
Wholesale Power Costs	\$454,367	\$440,061
Revenue	\$813,017	\$742,502
Operating Costs	\$899,398	\$840,135
Margins	(\$86,381)	(\$97,633)

Doug Rye on ducts

Doug Rye, who consults with electric cooperatives on energy efficiency, says ducts are the second biggest energy problem in home construction after air infiltration. Ducts are energy wasters in four ways: location, sizing and design, tightness and type.

Location – Rye recommends placing ducts in conditioned space, such as in a slab or in a crawl space or basement, thereby saving 20 percent energy use over traditional placement in the attic. He says, “Why would you want to place ducts carrying conditioned air in the hottest part of your house in summer and the coldest in winter?”

Sizing and design – Many homes have larger heating and cooling systems than they need, leading to wasted energy use. According to Rye, oversized systems often are installed to compensate for duct problems. If you stop duct leakage, you can downsize the heating/cooling unit, resulting in a more comfortable home environment and lower energy bills.

Tightness – Rye says the average house he tests has at least 300 cubic feet per minute (CFM) of air leakage, most from the ducts. In fact, some homes have more than 1,000 CFM leakage. One hundred large kitchen garbage bags would hold about 300 CF of conditioned air leaving your house every minute, largely because of leaky ducts. Repairing those leaks should produce immediate energy savings and a more comfortable home.

Type – Rye recommends sheet metal ducts for basements, crawl spaces and attics but not for slabs, where they will rust. Metal ducts offer low resistance to air flow but have many connections, joints and seams that must be sealed. Black Max is a type of plastic ductwork he recommends solely for installation in or under concrete.

Rye doesn't recommend ductboard and flexduct because of their poor durability. Ductboard is made from stiff, high-density sheets of fiberglass with foil facing on one side. Flexduct, made with a plastic inner liner inside a tube of insulation covered with a vinyl vapor barrier, can be easily damaged and has a higher resistance to air flow. Visit www.dougrye.com for more tips on improving your energy efficiency.

Efficient use of livestock waterers

Livestock waterers are essential to productive farm operations, because almost all farm animals are healthier and more productive with a readily available fresh water supply.

By providing a fresh water supply year-round, electric livestock waterers have helped increase farm production. But like all farm equipment, waterers require attention to ensure their safe and efficient use.

A typical waterer in the central United States uses 300 to 1,200 kWhs per season (\$33 to \$132, based on 11 cents per kWh over a 5 month season). Regardless of the waterer type, there are several ways to reduce their energy consumption.

Check wiring and insulation for damage, including insulation between the unit and the concrete pad or ground it sits on. Check electrical connections to heating elements and at grounding points. Be sure all are tight. Maintain a suitable water level by keeping floats properly adjusted. Too much water increases energy consumption through surface losses; too little can lead to freezing. Set the thermostat at 38 degrees to 44 degrees Fahrenheit and check the calibration by measuring the temperature of the water. Every degree above what is needed increases energy consumption. Make certain covers operate freely and close completely to minimize heat loss in winter. Provide ventilation of the enclosed compartment in summer to help reduce deterioration of insulation, wiring, and related equipment. Protect the waterer from winter winds by using a wind barrier. Caulk or otherwise fill openings in the water enclosure and between the enclosure and the foundation to prevent drafts and energy waste. Replace old waterers with new ones that have thicker insulation and better heat retaining mechanisms.



Net Metering and Easy Connection Act

This act requires retail electric suppliers to make net metering available to customers who have their own electric generation units that meet certain criteria, one of which is that the unit is powered by renewable energy resources. Net metering is where the customer gets credit for the electricity he or she generates in lieu of electricity supplied by the electric utility.

Net metering provides the best of both worlds for consumers who choose to invest in renewable energy technology: they have the security of grid connection, but are also compensated fully for excess power they produce that's fed into the grid. As such, it provides an incentive for investing in small-scale renewables. Furthermore, it prevents utility companies from discouraging installation of renewable systems.

Tri-County Electric Cooperative has a net metering agreement for interconnection of a distributed generation source. Our policy, agreement and application now reflect the new standards set by the Net Metering and Easy Connection Act as of January 1, 2008.

Net metering will be made available to customers on a first-come first-served basis until the total rated generating capacity of the net metering systems equals 5 percent of the utility's single-hour peak load during the previous year.

Some of the provisions include the following:

- Is intended to primarily offset part of all of the customer-generator's own electrical energy requirements.
- Is interconnected and operates in parallel phase and synchronization with the retail electric supplier.
- Meets all safety, performance, interconnection, and reliability standards.
- The installation must be certified by a qualified professional electrician or engineer.
- Change in ownership requires a new application.
- The retail electric supplier shall have no liability absent of clear and convincing evidence of their fault.
- Any seller, installer, and or manufacturer who misrepresent any electric generation unit's safety or performance standards may be investigated by the state attorney general upon report. They are also liable for damages to property or person if they knowingly misrepresent any performance and/or safety aspects of an electric generation.
- Any consumer, who connects in parallel phase and synchronization with any retail electric supplier without written approval, can be immediately and without notice disconnected from electric service.
- The manufacturer of any electric generation unit may be held liable for any damage to property or person caused by a defect in the generation unit of a customer-generator.
- Full retail is paid (credited) for all energy put on the grid up to the amount purchased that month from the utility.
- Avoided cost (at a minimum) is paid for all energy put on the grid in excess of that month's use. This amount can remain as a credit on the customer's bill for up to a maximum of one year or at time of service disconnect.
- Customer and manufacturer assume liability.
- Customers pay for special metering costs necessary to accommodate the customer-generator's facility.
- All charges to the customer must be based on the standard rate base with no additional charges for capacity, standby, and/or fees or charges.
- Signed agreement Application/Agreement for Net Metering.
- All hardware must meet (but not limited to) specifications of: UL 1741, IEEE 929-2000, IEEE 1547.
- Utility may require a visible lockable safety disconnect.
- Supply site specific power flow diagram.
- Must meet all applicable codes including local codes and NEC.
- Annual recorded tests by member-generator to confirm safety operation (as per agreement with utility.)

Simple interconnection procedures that standardize interconnection for all Missourians are necessary to promote the use of renewable energy in Missouri. The ECA makes it easier and more cost-effective for Missourians to connect small renewable energy systems to the grid.

Tri-County Electric Cooperative supports sound renewable energy. We just ask that our members do their homework before spending thousands of dollars to add solar, wind, or any type of renewable energy source to their home. For more information please contact member services at 660-457-3733.

Important dates:

OFFICE CLOSINGS

February 7th

All Employee Meeting

February 20th

Presidents' Day

May 28th

Memorial Day

July 12, 2012

Annual Meeting

Schuyler County

High School

TO REPORT AN OUTAGE

Call Toll-Free

888-457-3734

Local

660-457-3733

Before Calling:

- Check your breakers or fuses
- Check to see if your neighbors have power

When calling be sure to have the following:

- Your name
- Member number
- Location
- Which account (if you have multiple accounts)

Tri-County Electric Cooperative
PO Box 159
Lancaster, MO 63548
660-457-3733 or
888-457-3734
www.tricountyelectric.org

Board of Directors
 President-Michael Small
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 Joe Sebolt
 Rex Winn

Editor
 Kevin Wheeler
 kwheeler@nemr.net

**Internet view bill and payment are available
 at www.tricountyelectric.org
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