



A Touchstone Energy® Cooperative 

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www.twinvalleyelectric.coop

TWIN VALLEY ELECTRIC COOPERATIVE

NEWS

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Co-op Connections Card Savings Update

In June, Twin Valley members filled 16 prescriptions using the Co-op Connections Card and saved **\$87.29!** That makes an annual savings of **\$1,208.78.**

Rankins Attends Washington, D.C., Youth Tour

COLTON RANKINS participated in the 2013 Cooperative "Government in Action" Youth Tour, June 13-20, in Washington, D.C. His trip was sponsored by Twin Valley Electric Cooperative.

Rankins joined 34 other students from across Kansas for a week-long stay in our Nation's Capital. The group learned about the U.S. government through visits with Senators Moran and Roberts, as well as Representatives Huelskamp, Jenkins and Pompeo. They also met with youth from other states while touring area landmarks and memorials.

He was selected from a group of high school students by Twin Valley Electric Cooperative. To win this trip, students were asked to take a test covering information on electric cooperative history, as well as information on the generation and



Colton Rankins (second from the left) and a small group of Youth Tour delegates, pose for a picture after visiting with Congresswoman Lynn Jenkins.

distribution of electricity.

Since 1960, Kansas' electric cooperatives have sponsored the trips of thousands of high school juniors and seniors to visit U.S. congressional members, energy and grassroots government education sessions, and sightseeing in Washington, D.C.

Roger Lavender Wins Guess the Seal Contest

Can you guess how many seals are in the meter at the right? If you guessed 102 you are correct! **ROGER LAVENDER** was the closest with his guess of 96 seals in the meter. He won a \$25 electric credit.

If you would like a chance to win, simply stop by the Twin Valley office **between now and August 15** to submit your guess or send your guess in with your payment.

- ▶ You must be a Twin Valley member to win.
- ▶ One guess per person per month.
- ▶ In the event of a tie, the final winner will be chosen by drawing. So, all members with the correct guess will have their names thrown in for the luck of the draw.



NOTES FROM OPERATIONS

Twin Valley Linemen Work Hard to Respond Quickly to Downed Pole

On July 9, 2013, shortly after lunch, the lights at Twin Valley's office flickered three times and the phone started ringing. Knowing the signs of our system, the time of year and what is going on in the fields throughout our system, we knew something had happened...and that something was not good.

Calls were coming in from the Oswego area and toward Chetopa. As we were en route to the area, calls continued to come in. Scary words that you never want to hear in the same sentence were transmitted over our two-way radio system: accident, tractor, broken pole, sparks...FIRE! This sends a chill up a lineman's spine as the outage turns into a major public safety concern.

As I sped to the location, the Twin Valley staff answered calls to the office about exact location and what was going on at the scene, as well as outage calls from our members. As

I rounded the corner of Victory and 9,000 RD, I could see smoke rising from the far east side of the section.

I also saw an ambulance and multiple fire trucks. Saying a prayer for everyone's safety, I jumped out of the truck. Fire personnel and a brush truck from Oswego were inside the fence protecting the wheat stubble from the burning pole. A truck from Chetopa was there to assist, as well.

I told the fire personnel that the line was dead, but not grounded and—being trained the correct way—they said they would just keep it from spreading until we had it grounded. A few minutes later, the first of the cavalry arrived and installed the necessary grounds so the fire could be extinguished. A short time later, the fire was out.

Twin Valley crews working construction and maintenance jobs quickly broke down their jobsites and headed that way. I give our linemen

a big pat on the back for when they are put into a situation like this or any type of disaster.

They worked like a well oil machine and gave it 100 percent until the lights come back on. While the linemen are dealing with the damage outside, our office staff is busy with phone calls from our members.

For the most part, people

understood when we explained to them what was going on, but a few people were not so nice or continued to call multiple times. We understand the frustration, and believe me, we were working diligently to get the pole back up and the lights back on. We never want an outage or accident to happen, but it does.

There are three priorities for responding to an outage or situation like this: 1. SAFETY, 2. SAFETY, 3. SAFETY and we will NEVER cut corners to get the lights back on. When you call in and ask questions, the office staff will tell you exactly what they know. If no cause has been found and the linemen are still looking, the answer to your inquiry of "When will the lights come back on?" will probably be answered with a response of "They are still looking for the problem." And no time estimate will be given...no matter how many times you ask.

Once the problem is located and the linemen assess the situation, they let the office know an estimate for service restoral. Just remember the definition of estimate. No matter what the situation, you can relax in knowing that your Twin Valley linemen and office personnel are working hard to get the lights back on.

For more related pictures, go to www.facebook.com/TwinValleyElectricCooperativeInc and don't forget to "Like" us while you're there. In addition, if you have questions are comments for me, you can e-mail me at wworthy@twinvalleyelectric.coop.



William Worthy



Once the smoke cleared, this awaited your Twin Valley linemen. For more pictures, go to www.facebook.com/TwinValleyElectricCooperativeInc.

Hydropower: Time-Tested Renewable Energy

Energy from flowing water has been harnessed and used for more than 2,000 years, beginning with the ancient Greeks using water wheels to grind wheat. In the 1880s, converting a rush of water into electricity became a reality in the United States.

Today, hydropower provides about 80,000 MW of capacity in the United States—enough to power more than 25 million average homes—and accounts for about 75 percent of all renewable electricity used by co-ops.

But how does it work? Simply, hydropower converts the natural energy of moving water to mechanical energy, using a water wheel or its modern-day equivalent, a turbine, attached to a generator.

With highly efficient turbine-generators doing the job formerly performed by water wheels, electricity flows in a number of ways:

- ▶ **Impoundment:** When most people think of hydropower, dams come to mind. By plugging a river and amassing water in a reservoir, its flow (and the resulting electricity) can be better controlled and generated as needed.
- ▶ **Diversion:** Water is channeled away from a river, typically near natural falls, down to generators at the falls' base. This can be done without visible impact to the natural course of a river. In fact, this kind of generation was used to bring electricity to Buffalo, New York, from Niagara Falls in the late 1800s.
- ▶ **Pumped storage:** This method essentially uses off-peak electricity to make electricity for use during times of high consumption. Two reservoirs are filled, one typically uphill from the other, with an electric pump/generator in between. At night, when demand is low and electricity is

less expensive, water from the lower reservoir gets pumped uphill. During the day, when demand for power increases, that water is released through the generator to make electricity.

More than 600 electric co-ops across the country purchase power from 134 federally owned and operated dams. Despite the incredible importance of these resources, maintenance has lagged in recent years and created room for improvement.

Electric co-ops are making efforts to address this problem, advocating that the government set aside funds to repair and maintain dams and the turbines inside them. Careful studies of aquatic environments have given dam operators a better idea of how to simulate a natural river downstream.

A 2012 report from the U.S. Department of Energy (DOE) revealed many of the nation's dams hold untapped power. Roughly 2,500 dams provide conventional and pumped-storage hydropower in the United States. But the vast majority of dams some 80,000, ranging from 4-ft. to 770-ft. high are non-powered. DOE analyzed 54,391 of them.

Locks and dams on the Ohio, Mississippi, Alabama, and Arkansas rivers facilities owned and operated by the U.S. Army Corps of Engineers offer the most untapped potential. The top 10 sites alone could provide approximately 3,000 MW.

"Many of these dams could be converted to generate electricity with minimal impact to critical species, habitats, parks, or wilderness areas," the DOE report stated.

Co-ops' efforts in pushing for increased maintenance and technology development will ensure that hydropower remains a reliable and affordable renewable resource for decades to come.

Summer Intern

DANE ROBERTS is interning at Twin Valley this summer.

Roberts is currently attending Manhattan Area Technical College and will graduate in December 2013. He is a graduate of Kansas State University and Parsons High School.

In his spare time, he enjoys hunting and fishing.



Dane Roberts

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Holiday Office Closing

Labor Day

The Twin Valley Electric Office will be closed in observance of Labor Day on Monday, September 2. **Have a Safe Holiday!**

Tip of the Month

When shopping for a new appliance, consider lifetime operation costs as well as the up-front purchase price. Refrigerators last an average of 12 years, clothes washers about 11, and dishwashers about 10. Check the Energy Guide label for the appliance's estimated yearly operating cost, and look for ENERGY STAR units, which usually exceed minimum federal standards for efficiency and quality. To learn more, visit EnergySavers.gov.

ENERGY EFFICIENCY TIPS

A Magic Energy Moment BY DOUG RYE



Doug Rye

“It was at that moment that I realized that the closing of each bloom was energy in action thanks to Mother Nature.”

My wife and I recently purchased some large Desert Rose plants to place on our west-facing front porch. This porch gets extremely hot during summer afternoons, so these beautiful plants should enjoy their new environment. Our porch doesn't look like the plant's native environments of tropical Africa or Arabia. But the direct sunlight, its reflective surface temperatures and Arkansas' humidity produce the heat, light and moisture conducive for these hardy hot-weather plants.

Each morning when we retrieve the newspaper, we notice there are no blooms or color on our new plants, but when we head outside in the afternoon, we are greeted with dozens of beautiful blooms, provided the sun is shining. We enjoy sitting in on that porch during the evenings. With coffee in hand, we enjoy watching the sunset upon our neighborhood.

One evening as we were sitting there, I saw a movement out of the corner of my eye. I looked to the left and saw nothing, except one of the Desert Rose plants. A minute later, I saw movement out of the corner of my eye again. This time I just continued to stare at that plant. I saw one of the blooms shake like it had a chill. There was no breeze, so I thought that an insect or one of our cute little lizards was on the plant stem causing the movement. Then I saw another bloom shake, and then another, and then another. The movement continued for several minutes until all of the blooms were closed. As the sun dropped below the horizon, it seemed as though every bloom had a device that retracted the petals. It was at that moment that I realized that the closing of each bloom was energy in action thanks to Mother Nature.

It really was a magic moment for me because I started thinking of the ways that

nature relates to the same energy efficiency measures and messages that we have shared for years.

One of my seminar focal points is “all energy comes from the sun.” Thus, a perfect example is the Desert Rose bloom. It remains wide-open to collect as much solar energy and carbon dioxide as possible for survival. The energy collected is essential and must not be wasted. So, the bloom closes at sunset and forms a thermal envelope. Sound familiar?

We've been teaching about thermal envelopes for years—that is the kind used for your house. Simply stated, if your house has minimal air infiltration and is properly insulated, you have a good thermal envelope.

Furthermore, when the energy you purchase is utilized efficiently, the by-products are a comfortable home, manageable utility bills and conservation of resources.

Another example is a robin's nest on top of my porch column. Being an architect, I enjoy a good construction project. I watched the bird build the nest using mud and straw. The nest is practically airtight, except at the top. Then, Mother robin places her feather-insulated body over the top of the nest, keeping the eggs or hatchlings dry and at the desired temperature. This example of nature and nests is a perfect segue.

Now is a great time for humans to inspect their nest. Does your nest need more attic insulation to improve the comfort within? If you are not sure give me a call at my office at 501-653-7931. Until next month, I hope that you will have your magic moments, too.

DOUG RYE is a licensed architect and the popular host of the “Home Remedies” radio show. You can contact Doug at 501-653-7931. Source: Arkansas Electric Cooperatives Corporation.