

Warren Electric Cooperative

A Touchstone Energy® Cooperative 



One of 14 electric cooperatives serving Pennsylvania and New Jersey

Warren Electric Cooperative

320 East Main Street
Youngsville, PA 16371
814-563-7548
OR
1-800-364-8640
FAX
814-563-7012

Email: wec@westpa.net
Website: www.warrenec.coop

Staff

Gary W. Franklin,
General Manager/CEO
gwf.wec@westpa.net

Todd M. McClain,
Data Processing/Finance/Administration

Steve C. Sampson,

Line Superintendent

Christopher N. Evans,
Engineering & Operations Manager/
Right-of-Way

Alan D. Fuller,

Load Management/Special Projects/
Software Engineer

BOARD OF DIRECTORS

Dave Turner

Chairman

James Marshall

Vice Chairman

Robert August

Secretary

Jeffrey Sedon

Treasurer

Edgar Burris Jr.

James Goodrich

John Hagberg

Richard Harrington

Dean Johnson

Emergency Outage Number

814-723-9460

Office Hours

7:30 a.m. - 4 p.m.

From the General Manager/CEO

High school juniors: read about free trip to Washington, D.C.

By Gary W. Franklin



THE ANNUAL Rural Electric Youth Tour is scheduled for June 2017. The trip to Washington, D.C., is open to 16- to 19-year-old, high school juniors. To be considered,

students must live in a household that receives electricity from Warren Electric Cooperative. All expenses are paid.

Students will learn about their government's legislative process and about electric cooperatives. The best part is that students will meet with other students from all over the U.S.

Interested students will be required to attend two meetings at the Warren Electric Cooperative office. Tentative meeting dates are March 7 and March 14. Please fill out and return the Youth Tour form in this issue of *Penn Lines*. For more information, contact Todd or Alan at the cooperative.

Office happenings

The cooperative welcomed 35 new members in November. That brings our membership up to 7,621 and our connected accounts to 8,721.

The cooperative office will be closed Feb. 20 for Presidents Day.

Monthly brain teaser

Fill in the blanks to make three common, English words (no plurals).

The answers are a person, a place and a thing, in that order.

1. ___ LFBA ___

2. ___ CKYA ___

3. ___ ODPE ___

(The answer is on this page somewhere.)

Your meter reading

Reminder — meter readings are due in the office no later than the 20th of each month. There are several ways to get your reading to us.

You can write the reading on your stub before mailing your payment, you can call the office 24 hours a day and leave your reading on our answering machine, you can email your reading to wec@westpa.net or go to our website listed on this page and follow the instructions. *halfback, brickyard, woodpecker* It is important, especially this time of year, to have an accurate meter reading so your bill reflects your current use.

A little bit of humor?

I don't understand why Cupid was chosen to represent Valentine's Day. When I think about romance, the last thing on my mind is a short, chubby toddler coming at me with a weapon.

Do you have a question for the annual meeting?

Again, we are giving the members an opportunity to submit a question prior to the annual meeting. We will then address as many of the questions as we have time for during the meeting. PLEASE SEND OR EMAIL YOUR QUESTION IN BY APRIL 30. 

Question for the annual meeting

Send to the co-op, attention Gary Franklin or email to gwf.wec@westpa.net

Wind at work

By Tom Tate

THE ENERGY industry is changing. As technology advances, the use of electricity delivered by renewable energy sources is growing. Many Americans are interested in harnessing energy from the sun through the use of solar panels, but you might be surprised to learn that wind, as a renewable energy source, is a much larger contributor to America's diverse energy mix. Wind accounts for 4.7 percent of our nation's fuel mix.

So how is wind harvested? In simplest terms, the wind turns a propeller connected to a generator via a gear box; these parts are contained in a housing called a nacelle. This mechanical connection increases the revolutions of the blades from a leisurely 15 to 20 revolutions per minute (rpm) to 1,800 rpm at the generator, where

wind becomes electricity.

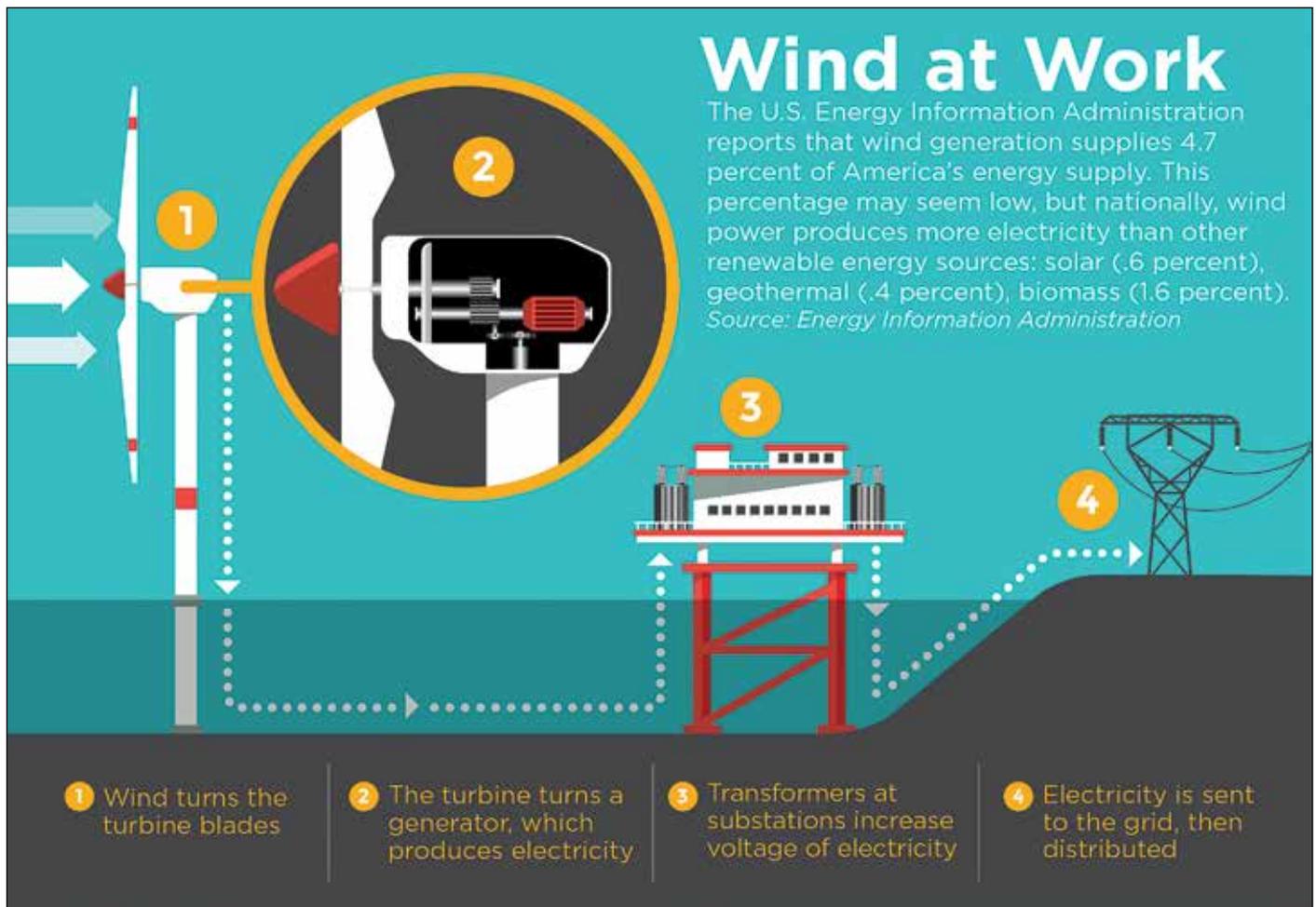
As the wind changes direction, the nacelle turns the blades to continue generating. When wind farms are laid out, the placement of the turbines is strategically planned so the turbulence from one turbine does not interfere with the operation of others behind it. The turbines also have protective mechanisms built in that will furl the blades once a certain wind speed is reached to prevent the turbine from spinning itself to pieces.

Like everything else, technology is driving the development of larger capacity wind turbines. Earlier models of turbines had the capacity to produce 660 kW (kilowatts) to 1 MW (megawatts) of power. Current models have the capacity to produce 1.2 to 2 MW. And turbines able to produce 12 to 21 MW are currently being tested and developed. Larger capacity is critical to production because of Metz's Law.

This theory was developed in 1919 by Albert Metz and stated that a wind generator would be able to convert a maximum of 59.3 percent of wind energy into electricity. Larger capacity equates to more output.

Next, why are there typically three blades on a turbine? Single-blade turbines have been found to be unstable in operation. Adding a second blade increases output by 10 percent. Adding a third blade increases output by 5 percent. Each additional blade increases the output, but the increase is considered small — and the increased cost of materials and construction make it uneconomical — so, three blades has become the norm.

Because of the enormous stresses the blades face — and the need for lighter weight — the blades are typically built from resin-impregnated composite materials. The most common form of construction is molding epoxy-soaked



fiberglass into the desired shape with cores of balsa wood. Anyone who has ever built a balsa wood model airplane will question this, as those assemblies are extremely fragile. However, balsa's light weight and composition make it an excellent contributor to the stability and durability of these monster blades.

The largest blade being produced today is 75 meters in length, just a bit less than the wingspan of an Airbus A380.

In the wind generation game, height is a critical consideration. Near the surface of the earth, wind conditions become unstable and erratic as the sun warms the ground. The temperature difference between the ground and the air creates effects like wind shear, which can make efficient operation difficult. At higher levels, undesirable ground effects rapidly diminish and wind speed becomes much more consistent.

The U.S. government and other agencies produce wind speed maps at a number of heights. Today's standard wind speed map uses a height of 80 meters. When a company looks to develop a commercial wind farm, they use these maps to locate areas where they can find a consistent 13 mph wind speed or higher. Readers can learn more about wind speed maps at www.nrel.gov/gis/wind.html.

A key challenge facing wind and solar energy is variability. The output of solar and wind, for example, can vary significantly over short periods, like when the wind stops blowing or the sun goes behind a cloud. One way to deal with that is energy storage, an advancing technology that will equip electric co-ops to beat peak energy prices and save members money.

For now, wind and solar are best deployed as components of a diverse energy portfolio that also includes traditional generating resources, but continued technological developments will ensure more reliable power from renewable resources in the future. ☀

Tom Tate writes on cooperative issues 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.

Utilities raising awareness about scams

By Tracy Warren

WHEN a scammer called Florida pet clinic operator Cindy Evers last year and demanded immediate payment on an overdue electric bill, it sounded real.

"They knew my account number and gave me a figure that I owed that's close to what I usually pay on my electric bill," Evers said.

She paid, even though, in the back of her mind, she knew her payment wasn't late.

"I have pets under sedation, and I'm taking care of animals," she says. "I think I just panicked, thinking they were going to shut my electricity off. I did what they told me to do."

Evers lost \$900 because the call was a scam. The scam that duped her has been plaguing utility consumers across North America for several years, robbing them of millions.

Now, utilities are fighting back.

Recently, more than 80 utilities and energy industry organizations from across the U.S. and Canada joined forces to recognize the first North American Utilities United Against Scams Day.

Electric co-ops have increased their communication efforts, sending information directly to members and encouraging local TV stations and newspapers to warn citizens about the scam, how it works, and what people should do and not do, if they are ever targeted.

Even the wariest consumers can be duped, however. The scammers are developing new tactics every day.

The "past due" scam, similar to the one Evers experienced, goes something like this: a customer gets a call from an 800-number that looks like a valid utility phone number. Widely available spoofing software allows crooks to display what appears to be an official number on caller IDs. The caller threatens to cut off power if the customer doesn't pay.

But here's the giveaway: the crook will demand payment via a prepaid debit card or money order. And he'll

ask for it within a specified time frame — often an hour or less.

The scammer may even quote an amount that sounds like your typical bill, giving him more credibility.

Scammers might direct the customer to a specific store nearby that sells the prepaid cards and instruct the customer to put money on the card and provide the card number to the scammer.

Some scammers have even been bold enough to contact potential victims in person, coming to the member's house.

Here are some tips on how to protect yourself:

- ▶ Do not assume the name and number on your caller ID are legitimate. Caller IDs can be spoofed.
- ▶ Never share your personal information, including date of birth, Social Security number or banking account information.
- ▶ Never wire money to someone you don't know.
- ▶ Do not click links or call numbers in unexpected emails or texts — especially those asking for your account information.
- ▶ Cooperatives will NOT require their customers to purchase prepaid debit cards or money orders to avoid an immediate disconnection.
- ▶ If you receive a call that sounds like it may be a scam, or if you believe the call is a scam, hang up, call the police and report the incident to your local cooperative.

How you can help

You can alert your family members and friends. Share the scammers' tactics described in this article or those you have heard about. You can also help raise awareness and warn others by reposting scam awareness information on social media; use the hashtag #stopscams. ☀

Tracy Warren 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.

Don't just sit there – get moving!

By Allison Goldberg

Health advice can vary widely, but one thing health and fitness experts seem to agree on is that sitting for much of the day is bad for overall health, especially cardiovascular and back health. Luckily, most of the research says an hour of brisk exercise can counteract the harmful cardiovascular effects of sitting. And what about improving the health of your back, spine and adjacent muscle groups? Here are some exercises suggested to help remedy muscle strain and weakness caused by sitting, and all are appropriate for most work environments.

► **Stand up:** If you're taking a call or in a long meeting, or if you can read that document while on your feet, try standing instead of sitting – even if it's just for five to 10 minutes.

► **Walk:** If you can take that call while walking the halls, try it.

► **Leg swings:** To loosen your hips, glutes, hamstrings and inner and outer thighs, swing your right leg backward and forward as far as you can while holding something for balance. Do 15 to 20 swings, and then switch legs. Also

do side-to-side swings: swing your right leg in front of you from side to side as far as possible. Do 15 to 20 swings, and then switch legs.

► **Squat:** Livestrong.com's instructions for a proper squat are to start with your feet hip-width apart. Keeping your core engaged and back straight, push your hips back and down as if you were going to sit in a chair. Drive your heels into the ground to return to the standing position. Focus on squeezing the glutes at the top before descending back into the next repetition. Throughout the entire movement, keep the knees from caving in or diving forward excessively. Go for 10 to 12 repetitions.

► **Backbend with wall support:** To improve posture and strengthen stabilizing core muscles, Prevention.com recommends a supported backbend. Stand facing away from a wall, your heels about 1 inch away from the baseboard. With your arms over your head and elbows bent backward so that your palms are facing the wall, slowly lean back and catch your bodyweight with your hands. Walk your hands down the wall until you begin to feel a stretch. (You may also

need to step farther away from the wall as your back bends.) Be sure to start slowly; as your back gets stronger, you'll be able to go deeper into the backbend. Place the tip of your tongue on the roof of your mouth, drop your jaw, and breathe in and out through your nostrils as you hold the backbend.

► **Starfish reach:** Prevention.com also recommends this stretch, which some may find reminiscent of elementary school PE class: Stand with your legs slightly wider than hip width. Reach your arms high in the sky with palms facing forward. Spread your fingers. Rise high on your tippy-toes. It's highly adjustable to all ability levels, so don't be afraid to try it to stretch and extend your ankles, knees, hips, chest, and shoulders.

It might feel peculiar or awkward to exercise at work, but that's OK. Close your office door or grab a friend and a conference room. You can do this, and your body will thank you. 🌟

Allison Goldberg writes and edits employee benefits-related materials for the Insurance and Financial Services Department of 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.

High school juniors may apply for Rural Electric Youth Tour

CALLING all high school juniors! Warren Electric Cooperative invites you to compete for a spot on the 2017 Rural Electric Youth Tour. Students who are chosen will represent Warren Electric Cooperative this June on an all-expenses-paid trip to Washington, D.C.

Don't miss this exciting opportunity to mix education and fun by touring historical sites, meeting with federal legislators, and making new friends with other high school students from 42 states.

A special Youth Tour study program will be held on March 7 and March 14

at 7 p.m. at the Warren Electric Cooperative office building in Youngsville.

Selected students will be among 1,700 students from across the nation who will visit a number of interesting sites in our nation's capital the week of June 11-16, 2017. 🌟

Apply now

Pennsylvania Youth Tour dates are June 11-16, 2017. Special Youth Tour study programs will be held at 7 p.m. on March 7 and March 14 at the Warren Electric Cooperative office in Youngsville.

Rural Electric Youth Tour 2017

Parents must be Warren Electric Cooperative members

YES! I am interested in the 2017 Rural Electric Youth Tour to Washington, D.C., from June 11-16, 2017.

Your Name: _____

Your High School: _____

Parent's Name: _____

Your Address: _____

Email Address: _____

Account Number: _____

Phone Number: _____

Send this completed coupon (or a facsimile) to
Alan D. Fuller, Warren Electric Cooperative, Inc., P.O. Box 208, Youngsville, PA 16371

Coupons must be received by February 28, 2017

