New Enterprise Rural Electric Cooperative, Inc.

A Touchstone Energy® Cooperative

One of 14 electric cooperatives serving Pennsylvania and New Jersey

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OFFICE HOURS

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EMERGENCY OUTAGE NUMBER

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FROM THE MANAGER/CEO

Replacing worn-out equipment – it's part of our job!

Rick L. Eichelberger
General Manager & CEO

IT WAS about 20 years ago when we had a couple of snow storms that brought down trees and power lines all over central Pennsylvania. New Enterprise Rural Electric was not spared the damages as thousands of consumer-members were without electricity for as many as four or five days. Call it a wake-up call or a learning experience; it changed the pace of our efforts to strengthen service reliability and address an aging infrastructure of nearly 400 miles of power lines owned and maintained by the cooperative.

Every entity serving our communities must constantly look at the amount of maintenance dollars that can be spent before replacement must be done. Our municipalities, our school districts and our local water companies all deal with this issue. Your electric cooperative is no different. A plan must be put together and implemented that balances the benefits with the costs of upgrades. Otherwise, the word "service" should be removed from what we say we do.

Last year, many of the investor-owned electric utilities in Pennsylvania, along with a few electric cooperatives, saw several storms that were primarily wind and rain events. Toppled trees and broken poles led to many miles of power lines out of service with sections lying on the ground. Repairs of this nature are very labor intensive and must be done in a coordinated, deliberate manner to keep the lineworkers and public out of danger.

A broken pole and wires on the ground will take a few hours to repair regardless of available manpower. So the thing that must be done to strengthen reliability is to replace worn-out poles, wires and transformers to minimize damage prior to the arrival of the storm.

Often, it takes an event to move things along. In recent years, government and regulatory officials have demanded the for-profit, investor-owned electric utilities spend money to strengthen the reliability of their aging infrastructure. This will help in upcoming years.

The snow events 20 years ago initiated an effort at New Enterprise Rural Electric that continues to this day as the power lines are rebuilt and maintained for the next generation. Money that had been spent on patching and repairing worn-out equipment has been redirected to replacements that should last for 50 years or more.

New Enterprise Rural Electric's success can be easily measured by looking at a few statistics. For example — more than 800 hours of overtime each year were recorded during the 1990s; this dropped to fewer than 700 a year from 2001-2008. The last three years (2009-2011) have seen a drop to an average of 475 hours per year. Replacing 20 miles of wire and 60 worn-out transformers each year has been a huge contributor to the reliability success story we can talk about.

The bottom line for your cooperative is that a lot of dollars and effort have been put into service reliability. This effort has been the major contributor to our outage hours dropping to one-third of what they were 25 years ago. We are proud of the results of our efforts in service reliability and keeping your lights on. There is no doubt that replacing worn-out equipment improves service reliability. It's also something that will always be part of our job.

The truth about tankless water heaters

MANY of us have seen advertisements for tankless water heaters. The ads promise big savings. But are they accurate?

Unlike a traditional water heater, a tankless model does not store hot water. It heats water only as it is used. Either one or a series of heating elements within the water heater is activated when a hot water faucet or valve is opened. The unit heats the water as long as this is open. When it is closed, the tankless unit stops heating the water.

Companies that make tankless water heaters generally cite four advantages of its design over a tank-type water heater:

- Unlimited (continuous) supply of hot water,
- Instantaneous hot water if installed at point of use,
- Reduced water-heating costs, and
- Small amount of space required for installation (usually wall-hung).

It is true that tankless water heaters do not require a lot of space. A large unit requires an area no larger than 24 inches square and extends from the wall by about 8 to 10 inches. But what about the other three claims?

Is it realistic to expect "unlimited" hot water?

An unlimited supply of hot water may sound appealing, but it is not compatible with responsible water use, particularly in those areas of the country suffering from drought or chronic water shortages. Moreover, even the largest whole-house unit may not supply enough hot water for simultaneous multiple uses. Such a unit may be able to supply only two showers simultaneously, or perhaps one shower, a dishwasher, and a sink. If the users demand too much water, the temperature will drop. So a tankless system probably won't meet the needs of a large family.

Water temperature rise is determined by the kilowatt capacity of the heating unit, the water flow and the temperature of the incoming water. As the incoming water temperature drops, or as the volume of water moving through the heater increases, the temperature of the heated water will decrease correspondingly. The water temperature depends on the volume coming out of the faucet. If you turn on the faucet only enough for a trickle of water, it will be cold. If you open the faucet further, you will trigger hot water — the hottest you'll ever get. If you open the faucet to its maximum, the temperature will drop a bit. If you open more than one faucet, the water temperature should drop even more.

Your home's electric service may need to be upgraded

Tankless electric water heaters usually require an upgrade in electrical service, something the home improvement stores often do not mention.

A tank water heater with 4,500-watt elements operates on #10 wire and a 30-amp circuit breaker. One whole-house tankless water heater has four 7,000-watt elements, for a total electrical load of 28,000 watts. This load requires wire and a circuit breaker that will handle at least 120 amps, at a cost many times that of electrical service to a conventional tank water heater. The load also will require a larger and more expensive meter loop and main panel for the house. In some cases, the customer also must pay for wiring between the neighborhood distribution transformer and the electric meter. You may need to check with a licensed electrician or your electric service provider to determine if your home's wiring needs to be upgraded.

Consumers who want to replace an existing conventional water heater with a tankless unit or add a tankless unit in a home-remodeling project will incur initial installation costs much greater than for new home installations.

When a high amperage load comes on, voltage levels can be affected significantly. If a tankless water heater is installed in an existing home without upgrading the electrical service, low voltage or sudden voltage drops are likely to result in dimming or blinking lights and other problems. Some co-op customers complain about blinking lights after reportedly connecting 28-kW tankless units in homes with 150-amp services on 10-kW transformers.

Gas tankless vs. electric tankless

Gas tankless water heaters generally do not require the same upgrades to a home's basic services as an electric tankless water heater. However, the same considerations come into play when determining how many hot water faucets will be turned on at any given time and the distance of the tankless heater from the sinks and showers using the water.

INSIDE JOB: Inside tankless water heater

It should be noted that gas tankless water heaters are Energy Star-qualified and also might qualify for a tax credit. However, this Energy Star label does not mean that traditional electric water heaters are not efficient. To determine if a product meets Energy Star guidelines, the program looks at the product's potential to be improved. High-efficiency electric storage water heaters approach 100 percent efficiency and cannot be improved substantially.

Picking the right water heater

Consumers looking for an efficient water heater should consider a heavily insulated traditional storage electric water heater. These water heaters are often the most cost-effective option over the product's life.

If you want to reduce your water heater energy costs, there are several avenues you can pursue. According to a report by Oak Ridge National Laboratory, measures such as tank insulation, temperature setback, timers, heat traps, and low-flow shower heads are more practical, much less expensive, and have a greater return on investment than installing a tankless water heater in an existing home with a conventional water heater.

The Cooperative Research Network monitors, evaluates, and applies technologies that help electric cooperatives control costs, increase productivity, and enhance service to their consumers.

Early spring weather fronts can spell trouble

BY BY RON HOUCK
Technical Services Representative

COMBINE weather fronts with sustained winds in the range of 40 to 50 miles per hour, plus ground saturated from the effects a mild, but fairly wet winter, and it is a recipe for moderate power outages.

More frustrating for cooperative employees is that the strong weather fronts that push through our area during the transition from winter to spring move quickly, causing immediate problems throughout the entire service territory. As they move west to east, the outage reports migrate in the same fashion. In many cases, whole trees uproot due to the loose

soil conditions. These trees may be well outside the maintained right-of-way.

Crews are dispatched to areas that first report trouble and suddenly, every 15 minutes, a new wave of outage reports surfaces. A juggling routine begins on how best to cover the most areas of our service territory in the shortest amount of time with the information we have.

Often times with these conditions, an outage is cleared and crews move on to other areas to begin work. Just as they begin work at a new location, another problem occurs at or near the same area that just received attention.

Phone calls are sorted on the spot to determine whether they are related to known or unknown outage reports. Cooperative employees organize outages by categories such as:

- Time reported;
- Number of members affected;
- Nature of the problem (special equipment damage etc.);
- Relationship to the crew's current location; and
- Part of the same large outage or a smaller, isolated outage.

Member information is one of our best tools in helping us restore power as quickly and safely as possible. When a member gives us an idea of what may be the problem — such as a downed tree at a particular landmark or property — this accelerates the restoration process. Other tools used at the cooperative are computers and monitoring devices that can tell us information about the current status of the cooperative's distribution system.

If you live in an area where you think you might be the only one out of power, please call. Your neighbors may not be home, or they may think you already have called. During large outage events, as many people as possible are available to take your calls and take down your information.

We receive many offers of assistance from members letting us know their willingness to help if our equipment is having trouble getting into or out of an area when responding to an outage. We appreciate these offers, along with your kind comments, as we strive to restore your power. They do not go unnoticed.

April co-op calendar

APRIL 4 - Disconnect past-due accounts; last day to make payment arrangement with Brawna is April 2 (call Brawna at extension 224)

APRIL 6 - Co-op office will be closed in observance of Easter

APRIL 28 - Regular payment-due date

Celebrate cooperatives by knowing the facts –

2012 IS THE INTERNATIONAL YEAR OF COOPERATIVES

From eggs and milk to the electricity that powers your home, cooperatives play a big role in your everyday life. And this year, everyone in the United States will get to know co-ops a little better.

The U.S. Senate unanimously passed a resolution designating 2012 as the International Year of Cooperatives. The measure – building off similar action by the United Nations General Assembly – recognizes the vital role cooperatives play in the economic and social well-being of the United States.

FOLLOWING ARE SOME FUN FACTS ABOUT CO-OPS:

In the United States, the nation's 900-plus electric co-ops:

- Serve about 42 million people in 47 states – that's 18 million businesses, homes, schools, churches, farms, irrigation systems and other establishments in 2,500 of 3,141 counties.
- Employ 70,000 people.
- Retire more than $500 million in capital credits annually.
- Own assets worth $130 billion.
- Own and maintain 2.5 million miles (42 percent) of the nation's electric distribution lines, covering three-quarters of the nation's land mass.

AROUND THE WORLD, CO-OPS:

- Boast nearly 1 billion members in more than 90 countries.
- Account for 80 to 99 percent of milk production in New Zealand, Norway and the United States.
- Generate 100 million jobs.
- Are represented by close to half of all residents of Finland and Singapore; 33 percent in Canada, Honduras, New Zealand, and Norway; and 25 percent in Germany, Malaysia, and the United States.
- Under the umbrella of the World Council of Credit Unions, serve 177 million members in 96 countries through 49,000 credit unions.

To learn more about cooperatives, visit www.go.coop.

KIDZcorner

What the well-dressed lineman is wearing

New Enterprise Rural Electric Co-op Lineman John Simington Jr. knows better than to go to work half-dressed. He has special clothing and tools that allow him to work on live power lines and do his job safely.

But you don't have the same outfit or expertise as John. That's why you should never touch any electric line, even if you think it's off. Electricity helps us in many ways but it can be very dangerous, even deadly. Call New Enterprise REC if you see a downed power line.

1. FIBERGLASS SHOTGUN STICK
Allows lineman to perform some tasks from the ground.

2. HARD HAT
Protects head from falling objects and bumps; also insulates head in case of electrical contact.

3. FIRE-RETARDANT SHIRT
Protects against flames, flash fire and electric arc.

4. CLIMBING BELT
Securely supports lineman's weight when climbing poles; also holds tools and supplies to free hands as necessary.

5. FIRE-RETARDANT JEANS
Are 100 percent natural fibers; they must be fire retardant to protect the lineman in case of fire or sparks.

6. HOOKS
Are used for climbing poles when a bucket truck can't be used or more assistance is required.

7. SAFETY GLASSES
Protect eyes from debris, flying objects and other hazards.

8. RUBBER GLOVES
Insulate hands and fingers from live electrical circuit; allow lineman to repair lines without disconnecting your power.

9. LEATHER PROTECTORS
Protect rubber gloves from punctures.

10. SAFETY STRAP
Wraps around a pole for support and protection while lineman are climbing.