

A Service of **Alger Delta Cooperative Electric Association**

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Michigan

COUNTRY LINES



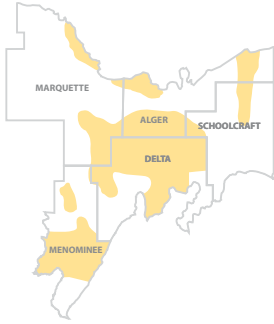
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MANAGER'S MESSAGE

Happy Birthday to...Your Co-op!

Sept. 2, 1937, was a fateful day—that is the day Alger Delta Cooperative Electric Association was formed. That birth date means your co-op is now 74 years old, which is a long time to be in business. Not many companies that last that long, so we are among the fortunate few in the U.P. with that kind of staying power and history.



Tom Harrell
General Manager

Many other electric cooperatives were formed that year. They took advantage of low-cost loans made available by the federal government to build electric lines to farms, villages and rural places where other electric companies would not serve. Alger Delta started by serving farms in the Trenary, Rock and Perkins area, and we still serve there today.

In the beginning (see story, p. 28), poles and reels of wire were taken out on horse-drawn wagons. And, while that mode of transportation has changed, the poles and

wires remain the same.

One of the big differences between then and now is the technology we use to deliver energy—it is vastly improved. Today, we can read the meter over the power line. Ten years ago, this was cutting edge technology. Today, the engineers and technicians yawn and say “what else can it do?” No one in 1937 could envision cell phones,

computers, the internet, or other things that are powered by electricity in most of our homes, even in rural communities.

We're happy about celebrating 74 years of service in the central Upper Peninsula. Sept. 2, 2012, will mark our 75th anniversary and the beginning of several exciting events to celebrate that important milestone with you, our members. Be sure to watch *Country Lines* magazine for all the news and announcements.

Why Does the Power ‘Blink’?

Most of us have experienced returning home or awakening late for work to see a blinking “12:00” on the digital alarm clock. Then, you have to reset every digital clock in the house that doesn't have a battery backup. Usually, this event is caused by a “blink” in the electrical system.

While blinks are annoying, they actually show that the system is working properly. And, while Alger Delta Cooperative has taken steps to reduce the number of blinks across its system, there are steps you can take, too.

These short power interruptions can occur anywhere along a system—from the time electrons are generated at a power plant to when they travel across transmission lines to substations and then to your home.

Blinks are created when a breaker, or switch, opens along any part of the system. The breaker usually opens because of a large, quick rise of electrical current, which can occur when a tree branch touches a line, lightning strikes, or a wire breaks.

As this happens, a relay senses the “fault” and tells the breaker to open, which prevents power flow to the problem site. The breaker quickly closes again, but the brief delay allows the fault to clear and usually

lasts under 2 seconds. If the fault clears, every home or business receiving electricity off that line experiences a blink. This could include thousands of accounts if the breaker protects a transmission line or substation.

Alger Delta operates an active vegetation maintenance program and works hard to identify and fix service interruption sources. Even though blinks will never disappear, by working together we can minimize their effect and frequency.

You can reduce the frustration of blinks by buying an alarm clock with a battery backup. These models offer “ride through” ability for momentary outages. With a charged battery in place, it will also keep the correct time and sound an alarm in case of a long outage. These devices only use the battery during a power interruption.

Blinks affect all electrical equipment. If one occurs as you are using a computer, it may crash and need to re-boot, with possible corruption or loss of files. An uninterruptible power supply (UPS) on your computer can help prevent such loss. The UPS uses surge suppression technology with a battery backup to give you some time to save what you were working on and exit the computer properly.

Surviving an Outage

The cold temperatures, ice and snow associated with winter weather make staying warm and safe a challenge—especially if the power goes out. Create a winter survival kit for your home to help you and your family survive the cold winter.

The Essentials:

Keep three to seven days worth of emergency supplies. These typically include:

Food – pick items that require no cooking or refrigeration such as bread, crackers, cereal, canned foods and dried fruits. Remember baby food and formula if needed.

Water – In case water pipes freeze or rupture, keep a supply of tap water or purchase bottled water. The recommended amount of water to keep on hand is 5 gallons per person.

Medicines – Roads may be inaccessible for several days due to a winter storm. Make sure you have an appropriate amount of

over-the-counter and prescription medicine that family members may need or regularly use. If you or someone in your family uses oxygen, make sure you have extra available.

Identification – Keep forms of identification with you such as a social security card, passport, photo ID and driver's license. In addition, make sure to have bank account and insurance policy information handy.

Alternate Heat:

Alternate methods may include:

- Dry firewood for a fireplace or wood stove
- Kerosene for a kerosene heater
- Furnace fuel (coal, propane, or oil)
- Electric space heater with automatic shut-off switch and non-glowing elements

Other Items:

Other items you should have on hand are:

- Blankets
- Multipurpose, dry-chemical fire extinguisher
- Flashlight and matches
- First Aid Kit and instruction manual
- Battery-powered radio

- Clock or watch
- Extra batteries
- Shovel
- Rock salt
- Nonelectric can opener



When creating a winter survival kit for your home, take into consideration factors that are specific to your home and family. For instance, if your home is isolated or on the outskirts of a residential area that may be difficult for emergency responders to locate, place something highly noticeable and unique at the end of your driveway or lane.

Listening to weather forecasts and keeping abreast of the latest developments can provide you with several days notice to check emergency materials and stock-up on essential supplies.

If you have a generator, keep an appropriate supply of fuel on hand. Make sure the fuel is accessible and stored safely. *Never run a generator in your basement or garage.* Unless you have a transfer switch—sometimes called a safety switch—it is best to plug individual appliances directly into the generator. *Do not try to connect the generator to your main panel.*

Check Out What's New Online michigan-energy.org

Updated Website!

- New Look
- New Features
- Improved Navigation

Simplified Online Audit

- The Energy Optimization Program is pleased to offer Energy Depot®, a set of online tools that will allow you to complete your home energy audit in a quicker, easier format. Energy Depot is a one-stop-shop for energy efficiency education and information.

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Must be cooperative member to be eligible for these programs. Other restrictions may apply. For a complete list of participating utilities, visit michigan-energy.org.

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Women Hunters Unite

Northern Michigan is chock full of hunters, and there is no problem finding all the hunting gear, accessories, tools or publications to learn about the sport...unless you're a woman," says Mary Dugas, a member of Presque Isle Electric & Gas Co-op (Onaway).

Herself a woman who likes to hunt, Dugas sent in *Woman Hunter* magazine, "the first and only hunting magazine for and by women," as her favorite Michigan-made product.

"It was started by my friend, Lisa [Snelling], who had never hunted before and just couldn't kill anything," Mary explains. "Well, she wanted her husband, an avid hunter, to take ballroom dancing lessons with her so they could have an activity they could share." What really happened, she adds, is that he convinced Lisa to go hunting with him, and she fell in love with the sport.

"Like most good women, she felt the need to accessorize for her hunting trips," Dugas adds, "but alas, there was not much available for women."

While admitting that *Field and Stream* and *American Hunter* are very good magazines, there was no publication about women and



Lisa Snelling

their hunting experiences. That's why Snelling, of Flint, decided to start one herself, with the first issue going online in September 2007, and into print two years later.

Today, Snelling says it's both a hunting magazine and a networking website that offers women a number of ways to participate and communicate with each other. Included is a free forum for veteran and novice hunters to submit written articles and chat about hunting experiences ("good, bad, ugly and glorious"), exchange wild game recipes, contribute to product reviews, and find information about outdoor events.

Snelling operates the small business with only four freelance employees, while working full-time herself as an IT consultant. But she has high hopes for expanding the magazine's current circulation of 1,500, and plans to have a toll-free number in place soon (for now, write to *Woman Hunter* Magazine, 4225 Miller Rd., #255, Bldg. 9, Flint, MI 48507 or visit thewomanhunter.com). She also sells



Woman Hunter logowear and says they haven't been able to find another women's hunting magazine like it in the world. "We'd like to see the magazine right next to *People* and *Time* magazine," she says.

Whether you're after small game, big game, waterfowl, dangerous game, or are just a curious onlooker, "Veteran women hunters can provide invaluable tips to newer women hunters," Snelling explains.

"And by the way," Dugas adds playfully, "her husband never took those [dance] lessons."

Hang 'Em High

A couple hunting seasons ago, Ron McGhan had an unfortunate surprise. Four wrist operations had robbed the Muskegon resident of the strength he needed to pull back his recurve bow. Frustrated, but not to be deterred, he bought a crossbow instead.

"I found out while sitting in my treestand the crossbow and rifle were hard to hold onto and that is when I came up with the idea of a crossbow and rifle hanger," explains McGhan, a member of Great Lakes Energy Cooperative (Boyer City). Again taking matters into his own hands, he invented a unit he calls "Hang It High." "It enables a hunter to sit hands-free with either a rifle, crossbow or compound bow," McGhan says.

The hanger is designed to extend up to 32 inches straight out from a tree, can be adjusted to the forward or backward lean of the trunk, and is secured with two ratchet straps. McGhan's product has been on the



Ron McGhan

market since 2009 and he's added options such as an adapter for an umbrella and video camera.

Found in a number of local sporting goods stores in Hesperia, Montague, Muskegon, Cadillac and Allendale, it's also available now at Jay's Sporting Goods and Schupbachs Sporting Goods in Jackson. Visit crossbowhanger.com or call 231-557-7185 for more information.

McGhan is proud that his product is "made entirely in the USA."

Right: The crossbow and compound utility hanger invented by Ron McGhan holds different types of guns or a crossbow, and has interchangeable hangers. See a video demonstration at crossbowhanger.com



Photos courtesy Ron McGhan

The Proof is in the Pudding

Refrigerator standards have saved consumers billions.

What's your favorite late night snack—that go-to treat that melts away the day's troubles as you curl up in front of the TV? Maybe it's a creamy bowl of Rocky Road or delicious, spicy Szechuan chicken left from a take-out feast. Refrigerator finds like these may make you feel guilty, but at least you don't have to feel bad about how high your energy bill will be to cure your cravings. That's because of new technologies and meaningful energy conservation standards put in place by the Building Technologies Program of the U.S. Department of Energy (DOE).

In recent decades, the DOE has led technological innovation that vastly improved the energy efficiency of refrigerators, freezers and thousands of other household appliances. As a result, it's a lot easier on your pocket and the environment to keep ice cream at frosty perfection. In fact, today's refrigerators use only about 25 percent of the energy required to power models built in 1975. Even while continually improving to meet efficiency standards, refrigerator size has increased by about 20 percent, added energy-using features such as through-the-door ice, and

provide more benefits than ever.

The dramatic rise in efficiency began in response to the 1970s oil and energy crises, when refrigerators cost about \$1,300—a hefty price for an energy waster. Refrigeration labels and standards have improved efficiency by 2 percent every year since 1975. Due to research, useful tools, partnerships with utilities and other organizations, and market initiatives that helped enable appliance standards, the DOE helped avoid construction of up to 31 power plants (1 gigawatt size) with the energy saved since the first federal standards in 1987. That's the same amount of electricity used annually in Spain.

Manufacturers have responded with new innovations and products to meet, and often exceed, the new requirements. Refrigerators performing above and beyond the minimum standards qualified for the Energy Star® label, motivated consumers to save energy, and primed the market for continued efficiency improvements.

These progressive energy-efficiency standards translate into big savings for consumers. Today's refrigerators save the nation about \$20 billion per year in energy costs, or \$150



Photo - iStockphoto.com

per year for the average American family.

The next proposed increase in refrigerator and freezer efficiency (2014) will save almost 4.5 quadrillion Btus over 30 years. That's three times more than the total energy currently used by all refrigeration products in U.S. homes annually. It also equals energy savings that could be used to power one-third of Africa for an entire year.

The DOE continues to invest in future innovations for energy efficient products. So, go ahead and indulge with those late night treats. Your fridge has you covered.

Roland Risser directs the DOE Building Technologies Program. For more on how appliance standards save you money, see eere.energy.gov/buildings.

Leave the Pole Alone

Placing a sign on a utility pole could endanger a life.

What do yard sale signs, basketball hoops, deer stands, satellite dishes and birdhouses have in common? They're often found illegally attached to utility poles. But this isn't only a crime of inconvenience. Safety issues caused by unapproved pole attachments place the lives of lineworkers and the public in peril.

It may seem innocent, but a small nail partially driven into a pole can have deadly results around high-voltage electricity.

Your local electric co-op line crews climb utility poles at all hours of the day and night, in the worst of conditions. Anything attached to utility poles can create serious hazards for our line personnel. Sharp objects like nails, tacks, staples or barbed wire can puncture rubber gloves and other safety equipment,

making lineworkers vulnerable to electrocution.

Lineworkers with electric co-ops have reported poles used as community bulletin boards, satellite mounts, and even support legs for deer stands, lights and carports. Not only do these attachments put line crews at risk, anyone illegally placing these items on poles comes dangerously close to energized power lines with thousands of volts of energy pulsing overhead. It's always wise to keep any structure at least 10 feet away from utility poles.

Unauthorized pole attachments violate the *National Electrical Safety Code*, the accepted manual containing guidelines for safe electrical engineering standards. Utilities strictly



Photo - iStockphoto.com

follow this code, which includes a section that reads, "Signs, posters, notices, and other attachments shall not

be placed on supporting structures without concurrence of the owner (the utility is the owner of the pole). Supporting structures should be kept free from other climbing hazards such as tacks, nails, vines, and through bolts not properly trimmed."

Please help us keep our lineworkers—and our community—safe. Don't attach any of these unauthorized and dangerous items to utility poles. Fixtures not belonging to the co-op or another utility will be removed by co-op line personnel, and the co-op is not responsible for any losses if an item is damaged or destroyed during removal.

Silent Sentinels



Electric co-op poles remain the key to safe, reliable, affordable power.

The path of power to your home is guarded by silent sentinels—utility poles—that are under constant attack by Mother Nature and, sometimes, by people.

“About 38,832 miles of line, supported by utility poles, keeps power flowing across Michigan,” explains Joe McElroy, loss control specialist and safety consultant for the Michigan Electric Cooperative Association.

Nationwide, electric co-ops own and maintain 2.5 million miles of line stretching across three-quarters of the U.S. landmass. Some lines are buried, but over 2 million miles of line are above ground. Since there are generally 18 wood poles for every mile of distribution line, electric co-ops rely on more than 37 million poles to safely and reliably deliver affordable power to your home.

Pole Patterns

Utility poles take several forms: concrete, steel, ductile iron, composite fiberglass, and—overwhelmingly—wood. Why do utilities prefer treated timber?

Tried-and-true wood poles are more affordable—steel and composite fiberglass poles often cost at least twice as much, although these alternatives claim a longer lifespan (most have not been in service long enough to verify the claims). Combined with a proven service life that can span several decades, treated wood poles provide the most affordable choice for most electric co-ops.

“Generally, utilities turn to alternative poles when nothing else will work,” explains McElroy. “If you’ve got a woodpecker problem, wood simply won’t cut it. Utilities in storm-saturated parts of the country may

turn to underground lines, but more often than not these utilities opt to ‘harden’ their lines by installing larger wood poles and shortening the span between poles to help the system weather storms more successfully.”

For utilities battling copper crime, ductile iron poles offer an interesting option—they eliminate the need for copper grounding wires running up the side of a pole. But these poles aren’t as easy to climb in a pinch, and could pose a problem if not easily accessible by bucket truck.

“Co-ops expect poles are going to last at least 40 years in the field, barring unpreventable storm damage and other accidents,” stresses Jim Carter, executive vice president of Wood Quality Control, Inc. (WQC), a subsidiary of the National Rural Electric Cooperative Association. Carter estimates

that co-ops are responsible for between one-quarter and one-third of the nation’s annual wood pole production.

Each year, electric co-ops spend roughly \$300 million to purchase close to 1 million wood poles and 2 million crossarms—amounting to a whopping 20 percent to 33 percent of a co-op’s annual materials budget. Created in 1982, WQC works closely with manufacturers and co-ops to monitor pole construction conditions and make sure co-ops invest in high-quality poles that meet strict federal Rural Utilities Service (RUS) standards.

Double Duty

Not only do poles support the nation’s power system; telecommunication companies often rent space on poles to attach



Photo Courtesy - National Archives



Photo - Wendy Malaska

Left: Raising utility poles before 1935 was a primitive task, but soon the Rural Electrification Administration developed assembly line methods and standardized electrical hardware that lowered costs and made rural electrification more feasible. **Right:** A co-op line crew shows how power equipment is used today to help set utility poles.

telephone and cable wires.

Each pole, averaging a height of 40 feet, breaks down into three zones. The supply space, which shuttles electricity from generation plants and substations to homes and businesses, can be found at the top of every pole. In most cases, a crossarm—a beam fixed horizontally across the top—divides the supply space from the middle ‘neutral’ space, called a safe zone. The safe zone forms a barrier between lines carrying high-voltage electricity and the area rented to other utilities, known as the communications space.

Hazardous Mission

Affordable wood poles stand the test of time—each pole’s lifespan ranges from 30 to 50 years, and in the right conditions can last much longer. To lengthen a pole’s life, wood is pressure-treated with preservatives. But no matter how strong a pole may be, both nature and people threaten a pole’s ability to serve.

Wood poles battle a wide array of adversaries: acidic soil in the Midwest, heavy moisture in the South, and woodpeckers in the Mid-Atlantic. Utilities generally inspect poles on a 10- to 12-year cycle to identify potential problems.

Poles age differently depending on region, so RUS divided the nation into five decay zones. Poles in Zone 1—Idaho, Montana, Wyoming, Utah, Nevada, Colorado, Arizona, New Mexico, and portions of Alaska, Nebraska, South Dakota, Kansas, Oklahoma, and Texas—face the lowest risk of decay, while Zone 5 poles in Louisiana, Florida, Hawaii, and the coastal regions of Alabama, Mississippi, Georgia, South Carolina and Virginia sustain the highest risk. Utilities generally replace 2 to 3 percent of aging and decaying poles every year.

Natural decay, storm damage, and bird and bug attacks aren’t the only concerns. People shorten a pole’s lifespan, too.

The National American Wood Council estimates 5 percent of poles replaced annually were broken by car accidents. Attaching signs, basketball hoops, clothes lines, birdhouses, satellite dishes, or other items to wood poles with staples or nails can also shorten a pole’s lifespan. Not only do these items create safety hazards when lineworkers need to climb a pole; even small holes speed a pole’s decay.

Strong poles deliver reliable power.

Sources: NRECA, Wood Quality Control, Inc., American Wood Protection Association, Western Wood Preservers Institute

Why Keep Power Lines In Harm’s Way?

High winds and ice can cause tree limbs to fall on power lines and trigger outages. And while your electric co-op’s lineworkers are on-call 24/7 and respond quickly to problems, some folks ask the question: “Why keep power lines in harm’s way?”

There are two ways electricity can be delivered to a home: through overhead or underground power lines. Underground lines may seem preferable since the lines are not exposed to extreme weather, but the technology doesn’t always make sense for electric co-ops focused on affordability.

In Michigan, the cost of installing power lines underground is 50 to 60 percent higher than overhead lines, says Terry Rubenthaler, vice-president of engineering for Midwest Energy Cooperative in Cassopolis. Overhead installation costs can range from \$40,000-\$90,000 per mile of line, and from \$70,000 to \$150,000 per mile for underground lines, he says.

By comparison, in Iowa, underground lines average \$85,000 to \$100,000 per mile, while overhead line construction runs about \$60,000 per mile. In Georgia, in mountainous or rocky areas, where lineworkers sometimes use dynamite to install utility poles, the price tag may be even higher.



Photos - iStockphoto.com

Most underground lines nationally are found in subdivisions where developers pay for the option for aesthetic reasons or to comply with local statutes. A high concentration of homes in these areas helps spread out the expense. According to Hi-Line Engineering, a Georgia-based utility consulting firm, nine out of 10 new subdivisions are served by underground cable.

But the bulk of co-op energy (including that provided to subdivisions) continues to be delivered through overhead lines—only 16 percent of the 2.5 million miles of distribution lines owned by electric co-ops nationwide are found underground (although the amount grows by about 1 percent annually). Co-ops are nonprofit, selecting methods that keep electricity affordable and reliable for consumers.

There are pros and cons to both forms of power distribution. Underground facilities are more reliable during storms and generally require less right-of-way maintenance because there are no trees, brush and other vegetation to clear away.

However, faults in underground power lines are not easy to track and fix. A North Carolina study found that outage restoration times averaged 92 minutes for overhead versus 145 minutes for underground lines. In 2005, Hi-Line Engineering compared the larger cost of underground lines against their benefits in Virginia, and found that underground savings did not outweigh the heavy installation cost. In Michigan, Rubenthaler says underground outage restoration can take significantly longer—four to five times, but there are not as many outages, either.

“If a tree falls on a line, you can normally drive down the line, see the problem, and get to work restoring power,” adds Rubenthaler. The same holds for fixing broken insulators and crossarms—if you see it, you can fix it, but experts agree that underground lines are tough to troubleshoot. If you can’t find the problem with your eyes, you have to search harder—tracking it down based on where the power flow stops. Then, a line crew has to dig a hole to reach the spot before repairs can be made.

For most co-op consumers, affordable overhead lines will remain the norm, at least for now.

POSITIVE | *energy*



There are certain things in life you can count on. Reliable power from Alger Delta Electric Cooperative is one of them. From system upgrades to highly trained line crews, we are committed to providing the best in reliability and service, day after day.

That's positive energy.