Safeguard your home: How we did it

By Cindy Ladage and Janna Seiz,
members of Rural Electric Convenience Cooperative Co.

Accidents happen even to careful people. The first line of defense is prevention; the second is preparation. Accidents can be prevented and consequences can be minimized.

Last summer, we decided to make our lives safer. First, we designed emergency kits and placed them in all of our vehicles. They have come in handy many times for cuts, headaches and car sickness. We included first-aid items, a fire extinguisher and jumper cables.

Because so many accidents happen in the home, we decided to focus on home safety.

Getting Started

First, we walked through our homes to assess what was right, wrong or missing. We looked for fire hazards, chemical dangers, and physical or structural hazards. Then we set up a communication plan to bring help.

We did the walk through together so that one might catch something the other would miss. For example, Cindy had smoke detectors on the first and second floor, but Janna pointed out the danger of the need for a detector in the basement stairwell.

What We Found

While both families have designated escape routes, it had been awhile since our families had reviewed them. We now make reviews part of our fall heating season routine. As furnaces, water heaters and storm windows are checked, we also review safety procedures.

We installed smoke detectors on levels where there were none before. Fire extinguisher were in place on the first floors of each home, and we added one to the other levels and in the garage. We checked the gauges and found two out of three in one home needed to be replaced. We showed family members where the new extinguishers were, reminded them of the old ones, and reviewed their use.

Emergency phone numbers were listed in both homes by the first-floor phone, and we added a list on each level. The list included, fire, police, doctors, insurance contacts, neighbors and family phone numbers.

We read about carbon monoxide build-up in homes, so we bought detectors and installed them in our basements. Installing them was as simple as plugging them into a wall outlet. According to the package, potential sources of carbon monoxide are clogged chimneys, gas or oil furnaces, gas water heaters. wood or gas fireplaces, wood stoves, automobiles, and gas and kerosene heaters. Exposure can produce headaches, dizziness, shortness of breath, and nausea, and can result in permanent brain damage.

Allison Ladage, left, and her sister Carrie, right, review the use of a fire extinguisher.

Radon gass is another indoor air hazard. Radon is a colorless, odorless gas that comes from uranium in the soil and is the second leading cause of lung cancer. Cindy tested her home and found levels above the EPA's action level of 4.0 pico curies per liter. By laying plastic in the crawl space and sealing it off from the rest of the basement, radon concentrations were reduced. Test kits are available in many hardware stores.

We put a first-aid station on first floor levels in both homes. The first aid kits include:

1. A 6-inch pressure bandage, to control heavy bleeding;
2. Two or three gauze roll bandage that are 2 inches by 5 yards;
3. Three or four sterile gauze pads;
4. An antiseptic cream;
5. Band aids, including several sizes and shapes;
6. A dozen safety pins, including some diaper pins for the heavy duty stuff, to hold bandages or slings together;
7. A roll of adhesive tape;
8. Alcohol swabs;
9. Tweezers;
10. Scissors;
11. Pain relievers, including non-aspirin ones (remember, children should not be given aspirin without a doctor's prescription because of the risk of Reye's syndrome);
12. Cotton triangular bandage to serve as a sling for an injured arm;
13. Antiseptic wash;
14. Nail clippers;
15. Latex gloves;
16. A CPR micro shield, which not only protects you from AIDS if you have to administer CPR, but also helps get a better seal over the lips so that you can be more effective. These may be hard to find. They are disposable form and cost about $6;
17. Eye wash (look for one with eye cup built into top);
18. Dust mask; and
19. Although our household cleaners are stored both in the kitchen and the bathroom, many are hazardous. Where we can, we buy multi-purpose, non-toxic biodegradable cleaning materials. Where small children are in the home, make sure cleaning supplies are placed out of reach in child-proof containers.

Keep cleaning solutions in their original containers, so you can refer to the label to determine when and if it is necessary to dial 911. Labels also help paramedics know how to treat the injured party.

Remember, if you have small children, install cabinet locks and electrical outlet covers, and learn how to handle choking hazards.

We thought our homes were safe ones, but we learned that we had gaps in our safety net. By working together, and with minimal time and expense, we vastly improved our homes' safety.

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Top photo: Even up on a farm cart, and with its wings and tailfeathers gone, Mike's MiG-17 shows the lines of a thorough-bred. At right, Mike stands by his 1947 Cessna 195, a machine that came off the drawing board a classic.

Mike's 'golden oldies'

For many of us, newer is better. The urge to buy a new car before the "old" one loses its factory smell is a strong one, and we tend to equate new with "improved."

Mike Bauman is different, at least when it comes to airplanes. He's the proud owner of a couple of flying machines that are, to put it mildly, old.

But there are old airplanes and there are classic ones, and both of Mike's planes are solidly in the classic category. He has a 1947 Cessna 195 and a MiG-17. The Cessna, one of but a handful of radial-engined planes built after World War II for the civilian market, came off the drawing board a classic. Even so, they didn't catch on all that well. For one thing, they were big and expensive. For another, they had a tailwheel at a time when virtually all other airplanes were being built with a tricycle landing gear.

Planes with nosewheels were easier to handle on the ground and offered better visibility during taxiing. "You can't see over the 195's nose at all on the ground," Mike says, "so you have to zizgag down the taxiway, looking out sideways. Forward visibility in flight is very good, though."

At any rate, the 195's didn't sell well, and Cessna went on to build a long line of small aircraft.

The MiG, like most postwar jets, borrowed heavily from the German efforts to build jet fighters in World War II. Since it was an enemy airplane during the cold war, it got little play in the Western press, and most of that was negative. The name, incidentally, derives from the names of its designers, Arten Mikoyan and Mikhail Gurevich.

Mike's MiG-17 is a direct descendant of the MiG-15 of Korean War fame, with refinements the Soviets added after capturing an American F-86 fighter in Korea, he says.

"The Soviets licensed production of the MiG-17 to several East Bloc countries ," Mike says, "and mine was built in Poland in the spring of 1963. It was the ninth from the last ever built."

While his Cessna is a beautiful flying machine right now, the MiG is another matter. Once a front-line fighter, it was converted to the ground-attack role as it was supplanted by better aircraft. "That consisted largely of painting the top half in greens and browns in a water-based paint," Mike says, "while they painted the bottom half light blue. It made for a dull, matte color, but it was effective."

At the moment, the MiG is still broken down, much as it was for crating and shipment to the U.S. The wings are off, the wingtip fuel tanks are off,the rocket pods are off, and so is the top two feet of the tail, which was removable for shipment.

And the fuselage is sitting on a farm trailer. In spite of all that, anyone with an appreciation for fine aircraft can detect a classic in there, and Mike plans to bring it out soon!

Weathering the storm

No one can predict an outage, but you can prepare for one today

Winter outages can be the worst if there is ice on the lines. Preparing now can make the difference between an inconvenience and a disaster. Here are a few suggestions for coping with winter power outages.

Heating

If you haven't already done so, make sure your house is well insulated and weather-stripped. This will not only help lower your heating bills, but your home will also be better able to hold in heat during a winter outage. Remember that even a gas furnace will not be able to heat if there is no electricity for the blower motor. An emergency heating source like a fireplace or kerosene heater could make the difference, just make sure there is adequate ventilation. You don't want to be warm and then die from carbon monoxide poisoning during your sleep.

Water

If you're new to rural life one thing you forget about during an outage is that your well will not operate. At the first sign of bad weather fill an emergency supply of drinking water.

Unplug appliances

Outages, especially when they involve lightning, can damage appliances. Unplug expensive and sensitive appliances such as refrigerators, microwaves, computers, TVs and VCRs.

Appliances like the stove or oven that were turned on before the outage may come back on during the middle of the night. If you've laid something on the stove this could obviously cause a fire.

Frozen pipes

Always open faucets when thawing pipes. A torch is a very dangerous way to thaw pipes. Electric heat lamps, hair dryers or heat tape are safer choices.

Freezers

A lot of our members have freezers full of garden produce and/or meat. And that's the thing we hear about when there is an outage. Don't worry, if you don't open the door the meat should stay frozen for 48 hours, even longer during the winter.

If your freezer isn't full, you could fill it up with milk cartons of ice. That will not only help it stay cooler during an outage, it will also help it run more efficiently.

Emergency supplies

Have an emergency kit prepared for winter outages. Include the following items:

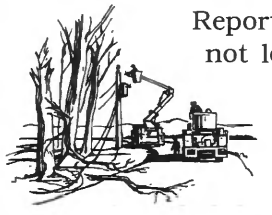
- Food that needs no cooking or refrigeration.
- Emergency water supply.
- Battery operated radio and flashlight, with plenty of fresh batteries.
- Candles, lantern, camp stove and matches.
- Extra blankets and sleeping bags.
- First aid kit and fire extinguisher.
- Emergency phone numbers.

Write down your account number and the cooperative's telephone number in the back of your phone book. Your account number will help us locate your outage faster.

We realize the most frustrating thing during an outage is trying to get a phone call into the cooperative. Please be patient, we haven't taken the phone off the hook, it's glued to our ear as we try to answer the thousands of phone calls that come in.

This is important in reporting outages

Office Hours: 8 a.m. to 4:30 p.m. Monday through Friday. Closed Saturdays, Sundays and holidays. Phone (618) 783-8765.



Report all outages at once. Check your own breakers or fuses first. If you cannot locate the trouble in your own wiring, call our office first—(618) 783-8765. If no answer, dial 783-3221.

Please remember—when reporting an outage, have your line and account number ready. You will find it in the lower left-hand corner of your electric bill.

Winter outage ready

Illinois electric cooperatives are prepared for the worst. Are you?

Ice on power lines is so heavy it's like hanging a small car between each set of poles. Lines sag to the ground and poles can snap like tooth picks. Winter storms can cause long power outages at the worst possible time. Be sure you have the supplies you need like flashlights, blankets, food and water to ride out a winter power outage.

Above all else remember to stay clear of any downed power lines. A power line on the ground can still be energized.

The electric cooperatives of Illinois have an emergency plan and can send crews from across the state during large outages. But even with extra help winter outages can take a long time to repair. We appreciate your patience when thousands of customers are trying to call at the same time. Cooperation is the key to meeting nature's challenge.

Electric Cooperatives of Illinois

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Plan now for exterior lighting

A fairly typical low-voltage lighting installation is pictured here. While not all the lamps are visible, the transformer unit and exterior wall outlet are. This installation is simplified because the wire is concealed under the decorative gravel rather than being in a trench. Note the mix of spotlights and floodlights.

Wintertime can be dangerous around the house if you have to get outside at all. If nothing else, the darkness can cause you to trip over something carelessly left on your walkway. Or the long dark nights might conceal an icy patch that a little light might help you avoid. Or less likely, an intruder might lurk in those dark shadows.

Whatever your concerns, a low-voltage outdoor lighting system can be a big help. In addition to providing added security and peace of mind, they can make your home more attractive and add value to your property.

Low-voltage lighting is relatively easy to install. And while it's a trifle chilly right now to be out puttering in your yard, we may have a few days of fair weather. Besides, spring can't be far off!

If you have an outdoor electrical outlet near the area where you want to install your lights, you're a long way toward having the job done. Many of the units on the market have a cord from the centered box that you simply plug into the outlet, (see photo above) and a built-in sensor turns the light on and off automatically. Many kits available have some floodlights and a few spots, while some come with lights that are convertible. Look carefully to see what you're getting.

Kits are available in many department stores, while lumberyards and home-supply stores offer them too. Usually, the home-supply places offer a better selection of kits. This advantage may by offset by higher prices.

All the kits you're likely to find will come with fairly clear instructions, and most are designed simply so that very few tools are needed. If you buy a kit, be sure it has instructions with it, and that they're understandable. If you're a little concerned, ask for clarification from a person in the store.

While most of our discussion here centers on kits, keep in mind that if you buy a kit, you're not stuck with just the lights, or just the wiring in it. You can buy additional lamps and wire at home-supply stores, so if you buy an eight-lamp kit and decide later that you need nine, you can buy the additional material you need to add that last lamp. In fact, you don't have to buy a kit at all. Home supply places have the materials to build a unit from scratch if you feel qualified to do that.

Simply put, installing such a system is just a matter of attaching a transformer/sensor unit to the exterior wall of your house, and running a wire along your yard to where you want your lights to be. Of course, the unit needs to be close to your exterior outlet. You often can use decorative gravel or mulch to conceal the wire. Most light fixtures have pointed stakes, so you can easily push them into the ground. If you don't have mulch or gravel, you'll need to dig a narrow, shallow trench for the wires.

Before you couple the wires, which is a fairly simple task, be sure your unit isn't plugged in.

But before you even start, give some thought to where you want your lights. In fact, you'll need to have a feel for how many lights you want and how far apart you'll want them before you even go to the store. For example, if you want four floodlights set four feet apart, and two spots six feet apart, with the first spot eight feet from the last flood, you'll need a six-light kit with enough wire to span the entire distance to all the lamps, plus enough to run from the transformer/sensor to the first lamp.

After you get everything wired, but before you do any backfilling, you'll need to plug your unit into the wall outlet and check to see that everything's up and running. When you're satisfied, cover the trench, if any, and do what repairs you need to do to your yard.

You'll find that you have an attractive, functional addition to your home that will give years of service and add value for years to come.

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Mushroom business pops up in mom's garage

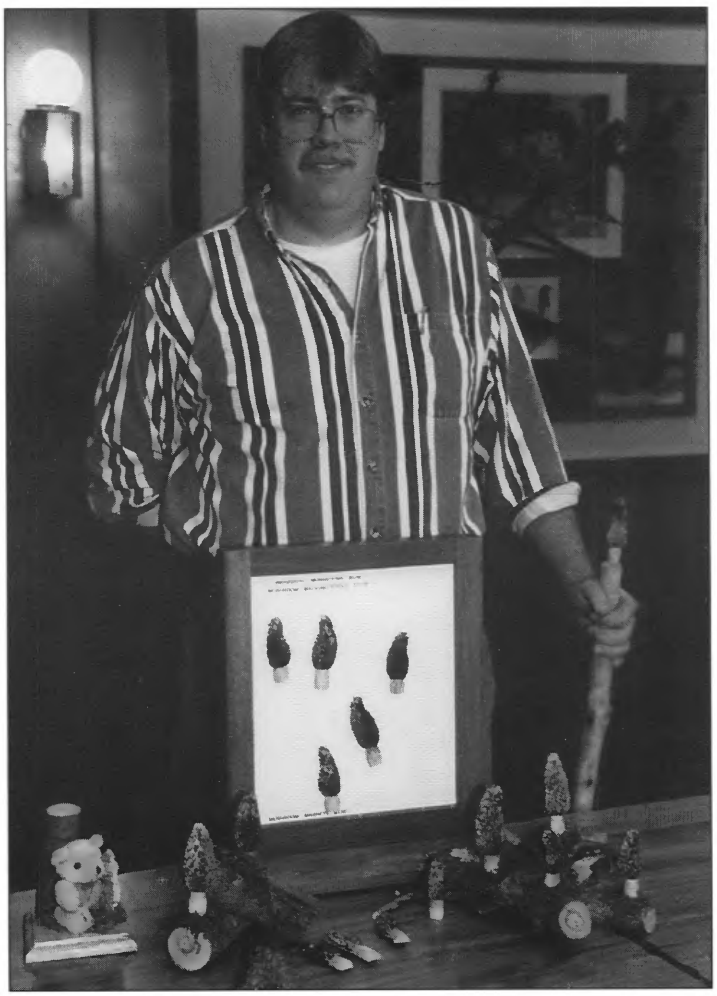
A truck driver stopping in at the Iron Skillet restaurant in Effingham takes a look at a display of mushrooms and logs and snorts. "What a waste of good eatin' mushrooms," he observes. "They're awful fragile. That piece won't last very long."

His comment underscores two things. First, he's a definite mushroom enthusiast. Second, Jim Starner's workmanship is up to snuff. Truth is, the mushrooms are made from scrap white pine lumber, and will last a long time. But nobody would want to eat them.

Jim, who's kitchen manager at the restaurant, notes that he's a lifelong mushroom enthusiast. "My dad had one of the first lots at Lake Sara," he says, "and he took me mushroom hunting out there a lot of times. I got to where I could find mushrooms with the best of them. And I agree that eating real mushrooms would sure be better than mounting them in displays.

"I got into mushroom carving kind of by accident," Jim says, "because a fellow employee at the restaurant showed me a set he'd bought from an area man who'd carved it, and I liked it."

Jim learned that the man had put together a substantial business, had hurt himself, and was unable to continue.



Jim Starner is pictured with some of his creations.

"I talked to him and asked if he'd teach me," Jim says, "and he refused. It turned out that he was trying to teach his father, and either didn't want the competition or just didn't want to bother."

At any rate, Jim decided to teach himself, and got his hands on a Dremel tool and a bunch of scrap wood.

"I don't mind telling you that some of my early efforts weren't very pretty," he says with a booming laugh, "but you live and learn. Things got better pretty quick. It's been about a year since I started, and I turn out walking sticks, log-and-mushroom displays, individual mushrooms and refrigerator magnets."

Not long after he'd gotten his technique perfected, Jim decided to go to a mushroom-hunting event and sell some wooden mushrooms.

"The first American Mushroom Championship was held last year at Magnolia, Illinois, and it drew some 750 hunters and probably 1,000 onlookers," he says. "We camped there, and it was cold, hungry and awful. I had a crude display set up, but I still managed to sell about $300 worth of mushrooms."

With that launch, he was in business. He rough-cuts mushrooms with a bandsaw, being careful either to cut away knots or to incorporate them into the piece. "Then I use the Dremel, which is a hand-held high-speed drill, to get a rough shape, and I

put in another, smaller, bit, and do the detail work. I'll put about half an hour of work into a 4-inch mushroom now, although it used to take a lot longer."

Jim's in the process of setting up a workshop in his mother's garage. "I'm going to cut back on my hours at the restaurant," he says, so I can spend more time working on my mushrooms. I'm going to call the business 'Grandma's Garage,' because it's in my kids' grandmother's garage. I've worked hard to get my mushrooms in craft shops all over central Illinois, and I've done pretty well at that. I've talked to the Cracker Barrel restaurant people about selling there, and I'm still working on that. I'd like to get into the Bass Pro Shops, too. And I'm working hard to put together a "web" page so Internet surfers can learn about my mushrooms."

Jim says his wife, Cheryl, helps when she can, and that he has a couple of other family members who can pitch in to help if necessary. "I think it'll turn into a nice little business."

The danger of generators

Many members now have standby generators at their homes or farms to supply power to essential equipment during prolonged outages. Care must be given to protect the generator, and, more importantly, the life of a lineman who will be repairing the damage to our lines perhaps within sound of the generator or maybe a few miles away.

The protection for both is easily accomplished with a double-pole, double-throw switch installed so as to ensure that the generator is supplying electricity only to the farmstead or home and not pushing it back into our distribution system.

Here's why operating a generator without a double-throw switch can be a very dangerous practice. We distribute electricity through underground or overhead wires throughout our territory at 7,200 volts. This is voltage that can severely burn or instantly kill. The transformer, whether it is hanging on a pole or mounted at ground level, changes the high voltage to 240 volts that can be used in the home or on the farmstead.

When an operating generator, even a small one, is carelessly connected directly to the circuits of a fuse box or breaker panel, the 120 volts or 240 volts the generator puts out is instantly pushed back out of the house, through the meter, into and through the transformer and down the dead line. The transformer does its job quite well by changing the 120 or 240 volts to a primary voltage of 7,200 volts.

A lineman, hurrying to restore service, will have to touch, hold, and handle the supposedly dead line to make a repair. Under these circumstances, when he does, an injury or death will be his fate.

A manually operated, double-pole, double-throw switch, that is properly installed between the meter and the main fuse or breaker panel will ensure that power from the generator can go only into the chosen circuits within the home or farmstead and never back into our lines to endanger lives.

Another plus is the assurance that when we restore the power to your meter, the current won't go directly through your fuses or breakers into the generator and burn it and your investment to a crisp. Your insurer may cover the damage; ours will have a good chuckle if a claim is filed.

This is important in reporting outages

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Please remember, when reporting an outage, have your line and account number ready. You will find it in the lower left-hand side of your electric bill.

Put the shine on crime

Security lights are one of the best crime deterents

Security systems are great, but you can stop most criminals from even considering your home with simple security lighting.

Lighting is one of the biggest deterents to crime according to Citizens Against Crime, a national non-profit organization. They suggest lighting all around your house, but particularly exterior doorways.

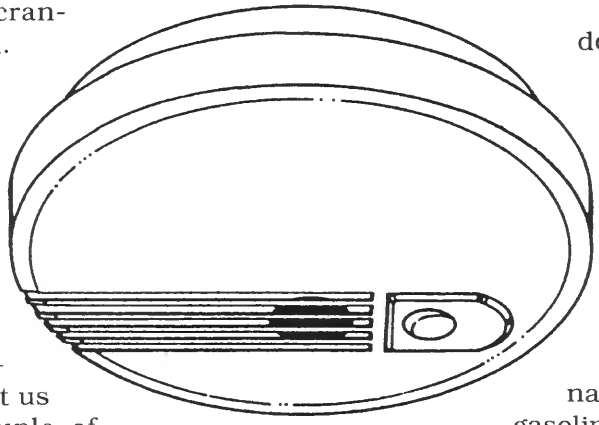
For just pennies a day you can protect your property with a security light from your electric cooperative. Call us today.

". . . men loved darkness rather than light because their deeds were evil."
John 3:16

Simple detectors can save lives

The increase in energy costs in the last couple of decades has put many people in a difficult situation. As we've "snugged up" our homes to prevent the loss or gain of heat, we've wound up with unexpected problems.

Harmful by-products of the combustion process used to just slip out through all the little nooks and crannies that all houses had. With energy as inexpensive as it was, we resorted to a simple solution: We turned the thermostat up or down, depending on whether we needed more heating or cooling. If we thought about it at all, we understood that our thermostat adjustment would cost us a few dollars more a couple of months down the road.



During the winter, many turned to supplemental heat, often using fireplaces, wood stoves or kerosene heaters, all of which add to the danger of fire.

As energy costs went out the ceiling, we sought other ways to save. We added insulation, and took some other steps to avoid the loss of our heated or cooled air. We caulked and weather-stripped and covered our windows with film. New houses were built much tighter than older ones, and nearly all houses being built now are completely wrapped in plastic.

This means that smoke and poisons such as carbon monoxide, which used to flow out without any trouble, were stuck in the house, along with its occupants. The comedian of the 1960s who said "I shot an arrow into the air . . . and it stuck!" might well have been referring to air in many of today's homes.

Fortunately, there are devices on the market that will give you some warning of trouble, whether it's from fire or carbon monoxide. The first has been around for some time. Smoke detectors have been used for years to alert people of fires in their homes. They've saved countless lives. They're cheap, starting at about $5, and are easy to install. Illinois law requires that smoke detectors be installed in homes.

You should have one near each sleeping area, in any basement stairway, and near any fossil-fueled supplemental heating unit. If you have battery-powered smoke detectors, change your batteries annually on the same date. Your birthday, New Year's Day, or any other memorable time would be fine.

Most battery-powered units will start "chirping" when the battery's getting low. Smart homeowners will change batteries before that happens.

Carbon monoxide (CO) detectors have come on the market in the last few years, and are gaining in popularity as people come to realize that there's a down side to having a snug house. CO is a killer gas that results from any combustion process, including the burning of LP gas, natural gas, kerosene, wood, gasoline, charcoal, or whatever. There's a simple rule about CO: "If something's burning, it's putting out CO."

CO can kill in just minutes, and if you have a gas water heater, cookstove or furnace in your house, you're potentially at risk. You can reduce your risk by having all fuel-burning appliances checked annually by a qualified serviceman. You can eliminate the risk of CO in your home by the use of new electric technologies to heat your home, your water, and your food.

Know the symptoms of CO poisoning, which many people often mistake for the flu, since the symptoms are similar. Headaches, drowsiness, nausea and a bright red or flushed face and neck are warnings, and you also may experience a loss of vision, poor muscular coordination, an inability to concentrate, and memory loss.

You can find CO detectors in the home supply section of many department stores at about $30. Most simply plug into an outlet.

While you're thinking about CO detectors, it's a good time to give some serious thought to installing a heat pump or geothermal system when you need to replace an existing fossil-fueled furnace. They're cleaner and safer than gas or oil units, and far safer than burning wood or kerosene!

For information about replacing home appliances that use combustible fuel with electric appliances, talk to your friends at your local electric cooperative. They'll be glad to help.

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Newton man builds tiny town

Ed Richardson of rural Newton has a whole town on the mantel over his fireplace. The village, a product of his constantly busy hands and fertile mind, is patterned loosely after the Dodge City of the "Gunsmoke" TV series fame.

"Each building is a wren house," Ed says, "with a one-inch hole for the birds, and a dowel underneath for a perch. They're built so they can be cleaned easily, too. The whole bottom slides out, and the second floor slips out of the two-story places.

"I've been a woodworker and tinkerer ever since I was a little kid," he relates, "and I can remember starting a lot of projects that I couldn't complete because of a lack of tools. I'd get frustrated and take them apart to salvage the materials, and try to build something else."

One of his early projects, a steam engine he builit in high school, has the date of its construction—1943—branded into its base. A cursory look will reveal that it's made from a real collection of parts. There's part of an old grease gun, a bit of a tire pump, and the front hub of a bicycle. The rest of the parts, while less recognizable, show a lot of ingenuity. "I just cobbled it together from stuff I found in a junk pile," Ed says, "and it works, too."

Ed, who worked for a Robinson firm for 34 years, remarks that he'd spent many years as a frustrated tinkerer because he just didn't have the free time to do all the woodworking he wanted to do. "I retired 10 years ago," he says, "and I started really enjoying my shop."

While he sells his wren houses, which are made from exterior plywood, he doesn't make a great deal of money from them. "It's just something I do for a creative outlet and to keep my hands busy," he says, "and the sales just cover the cost of materials, if that."

At any rate, one of the many ideas Ed had kicked around was to come up with a frontier town, complete wiith saloon, church, school, general store, livery stable, hotel, bank and jail.

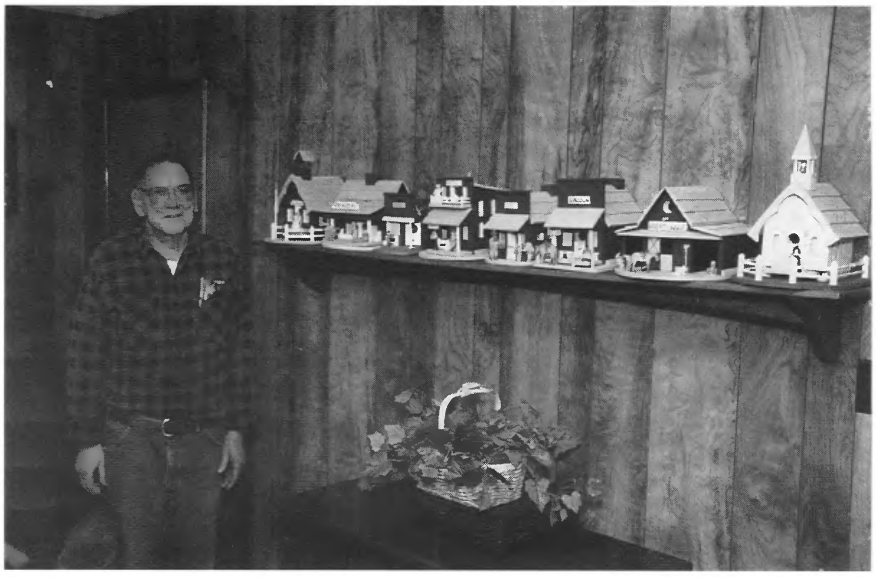
And there are details. The pastor of the church stands in front, his arms outstretched, while the blacksmith next door shoes a horse. A careful observer will notice a dog in front of the livery stable, and a cat sitting on a nearby keg. A horse waits patiently in front of the saloon, while a deputy at the jail next door talks to the marshal. His horse stands nearby with the body of a fallen desperado slung behind the saddle.

At the general store, an aproned storekeeper waves to a passerby from his porch. There is an axe and firewood close at hand. Next door, the schoolmarm waves from her building, which sports a flag and a working bell.

"I call it Dodge City," Ed says, "and I tried to build it partly from memory of the old 'Gunsmoke' TV series, partly from old photos, and partly from my imagination. I think it's kind of cute, but it's not really historically accurate."

He also makes jewelry boxes and the like for his wife, Lena. "I've built several that are really nice," he says, "and I enjoy the challenge of the fine joinery. They're fun to build, but time-consuming. I wouldn't want to try to make them for the market."

Even so, he does build wren houses and bird feeders for the market, and if you're interested, you can reach him at (618) 783-3750.



Ed is pictured with his row of wren houses built to resemble the town of Dodge City, as portrayed in the "Gunsmoke" TV series, which was popular in the 1950's and 60's.

Humidity and comfort

The humidity level in your home can affect your comfort and your heating bill.

Humidity is simply the amount of moisture or water vapor in the air. The term relative humidity is used when referring to moisture levels in the air and is expressed as a percentage. When air reaches its moisture-carrying capacity, it is saturated and the relative humidity is said to be 100 percent (a steam bath or dense fog is saturated air).

Warm air will hold more moisture than cold air. In most homes as the outside temperature drops, the inside relative humidity also will drop. That is because of the infiltration of cold outside air.

Low relative humidity can cause dry skin, static electricity and dry nose and throat passages. It can also dry out wood furniture, floors, trim and veneers. The human body is fairly comfortable with a minimum relative humidity of 20 percent to a maximum of 50 percent. The level of humidity in your home will vary with your life-style, type of heating system, type of home, thermostat setting and the size of your family.

A typical family of four will introduce about 18 gallons of water per week into their home in the form of water vapor through plant watering, cooking, washing dishes, bathing, and washing and drying laundry.

The relative humidity inside a house will increase if the infiltration of cold outside air is reduced. Less water vapor will need to be inserted into a home if it is fitted with effective storm windows and doors, caulking, weatherstripping and vapor barriers. If you keep the relative humidity in your home to between 35 and 40 percent, the comfort level will increase, the thermostat setting can be lower, and you can save substantially on your heating bills.

Properly used dishwasher saves energy

Studies show the dishwasher can actually be an energy saver.

Dishwashers, like clothes washers, use energy for water-heating and to actually run the dishwasher. So it was assumed by many people that washing dishes by hand was more economical. It might surprise you to know that an efficient automatic dishwasher, when used properly, can consume less hot water than washing dishes by hand. The savings on water heating can more than make up for the power consumed by the running of the dishwasher.

The amount of energy used in washing dishes is largely determined by the dishwashing style. For instance, it's easy to see that a dishwasher would be more efficient than the running water rinse technique, which wastefully allows water to run during washing and rinsing.

On the other hand, the dishpan-wash/dishpan-rinse technique is very efficient in terms of energy and water.

To run your dishwasher most efficiently you should:

- Run it only with full loads.
- Do not use the prewash or scrub cycles unless absolutely necessary.
- Do not waste hot water rinsing dishes before loading them into the dishwasher. A properly operating dishwasher should clean even very dirty dishes.
- Use the energy miser or air-dry feature.

You can see that wise use of your dishwasher can yield benefits beyond convenience.

Faucet aerators economical and simple to install

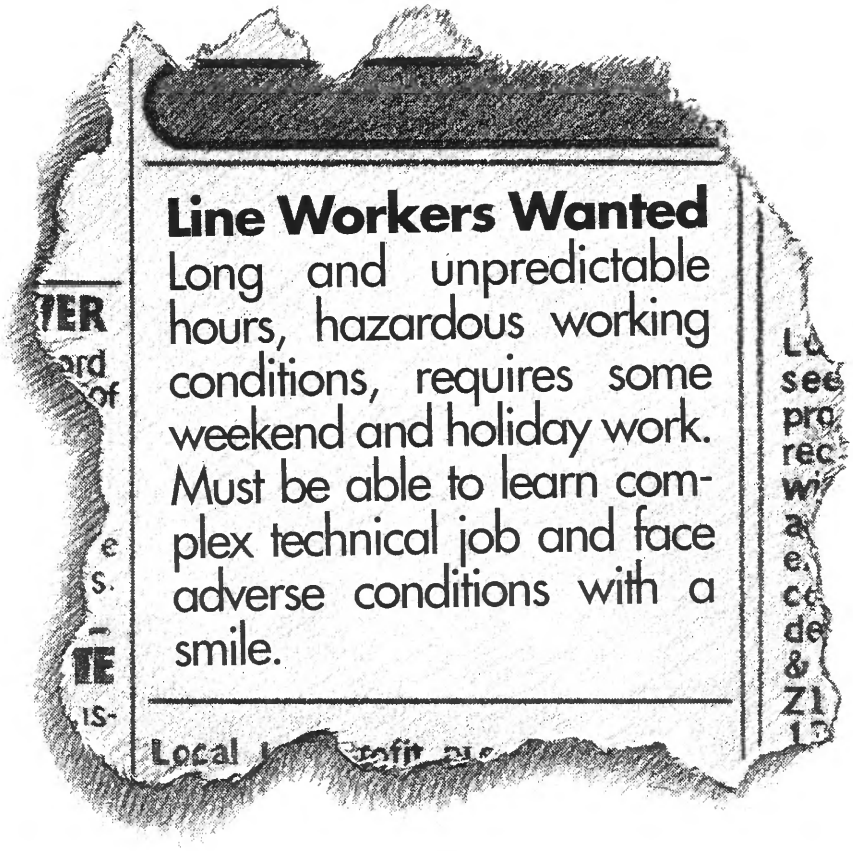
A simple, low-cost gadget that can cut power costs is the faucet aerator.

It is as easy to install on a kitchen or bathroom faucet as a replacement showerhead. The principle is a simple one. By mixing the water flow with air (aerating), this little device can conserve surprising amounts of the energy used to heat water.

At a cost between $3 to $8, these devices can pay for themselves in as little as 30 to 60 days.

To install an aerator, you need only a few minutes and a wrench.

How about the water flow? Aerators produce a fine, even spray. It may be a little less forceful, but as the gadgets themselves improve, the flow of water they produce now over earlier models is much more pleasing.



Fortunately, there are people who actually love a job like this.

You'd think a job description like this would scare people off, wouldn't you? But it doesn't. In fact, these very demanding jobs attract some very dedicated people. People who understand the importance of keeping electricity in your home or business. People who know that they'll be out in the middle of the night in a driving snowstorm. People who just seem to be born with a desire to do more than just have a job. We'd like to thank our line workers for their hard work and dedication. And if you agree, give them a thumbs up when you see them at work. Your appreciation is a big reason they take such pride in a very tough job.

Electric Cooperatives of Illinois

Rooted in Our Communities

Don't fight that old gas mower – get a new cordless electric one!

While it seems as though this winter has lasted for 14 months, and while it often gives the impression that it'll go on forever, it won't. History tells us that most years in the last millenium or so have had a spring and a summer, and it's reasonable to expect that this one will, too.

With that in mind, it may be time to turn your thoughts to dragging out the lawn mower and getting it ready for the cutting season. And consider this: If you had trouble starting that old mower last year, you'll probably have even more trouble this time around! And if you want to get it into the shop before everyone else takes theirs in, now's a good time to do that.

If your mower's old enough that you dread having to try starting it again, it just might be the time to junk that old dog and buy a shiny new cordless electric mower. They're relatively inexpensive, require little maintenance, are easy to use and don't cost a lot to operate.

Cordless electric mowers, while fairly unusual, have a lot going for them. They're easy to start, quieter and cost less to operate than their fossil-fueled counterparts, and they pollute far less.

The U.S. Environmental Protection Agency (EPA) conducted a nationwide study recently to check out the tailpipe emissions of gas mowers. The results were amazing. The agency determined that the typical gas mower emits eight times more nitrous oxides than the electrics, and 3,300 times more hydrocarbons. They also emit 5,000 times as much carbon monoxide and more than twice the carbon dioxide per hour than electrics. Of course, these figures take into account the emissions of the power plants generating the electricity to run the cordless mowers.

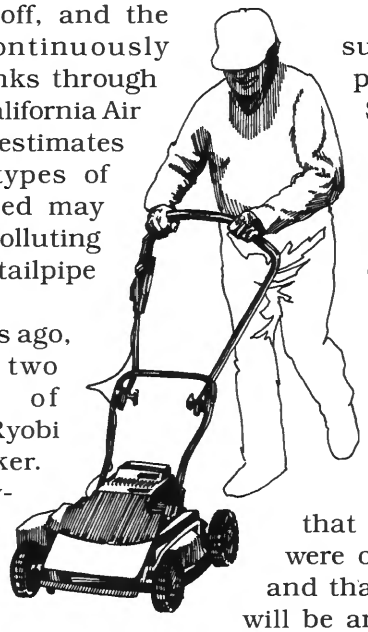
But there's more. The study did not even consider emissions resulting from gasoline spills during refueling, which the EPA estimates may amount to 17 million gallons a year. That's more than the Exxon Valdez spilled when it ran aground.

And it didn't consider emissions from leaky gaskets and other engine parts, emissions that are released after a hot engine is turned off, and the hydrocarbons continuously emitted by gas tanks through evaporation. The California Air Resources Board estimates that these four types of emissions combined may actually be more polluting than the mowers' tailpipe emissions.

Just a few years ago, there were only two manufacturers of cordless mowers, Ryobi and Black & Decker. Now there are several, and it looks as though there will be more. MTD Corporation and Husqvarna have weighed in with their entries, and so has Briggs & Stratton—the world's largest producer of air-cooled gasoline engines! Most cordless electric mowers come with one lead-acid battery, which can easily be recharged by plugging into a 120-volt outlet. The Briggs & Stratton model, however, has two. One can be used while the other's recharging. They are portable and easily lifted out for exchange.

As is its custom, Briggs & Stratton plans to supply "custom" versions to mower manufacturers who will market them under their own labels. So while you'll be able to find plenty of mowers with Briggs & Stratton powertrains, don't bother to look for a mower under that company's brand.

A recent survey of cordless mower users indicated that most were quite satisfied with their cordless mowers, citing light weight, ease of use and quietness as important factors in their satisfaction.



But they offered suggestions for improvement, too. Some recommended bigger batteries, because their mower wouldn't cut their entire lawn at one go. Others wanted more power because corldess mowers have trouble in tall, tough grass. Even so, most felt that the manufacturers were on the right track, and that cordless mowers will be an even bigger part of the lawn mowing scene of the future. And they're almost certain to be. Some smog-bound municipalities are urging residents to go back to the old reel-type mowers, and many are considering passing laws to prohibit gas mowers.

While it's difficult and often counterproductive to try to predict the future, it's pretty safe to bet that there's a cordless electric lawn mower in your future!

Norris Electric News

Newton, Illinois 62448 • 783-8765

Ernest C. Weber, left, manager of Norris Electric Cooperative, congratulates Larry Buser on his election to the board of directors at the cooperative's 59th annual meeting held Saturday, Feb. 8, at the Newton High School in Newton. Directors who were reelected look on. From left are Weber, Buser, Norbert Nix of West Liberty, Russell Scherer of Sumner, Dean Dieterich of Dundas and Delbert Mundt of Dieterich.

News from annual meeting: Co-op growing well

Norris Electric Cooperative members attending the co-op's 59th annual meeting learned that their business is growing well and thriving, but that they may see a slight rate increase soon. If they do, it will be the first in 14 years, cooperative officials noted.

Some 950 members and guests turned out to hear officers' reports and to elect directors. Those reelected were Delbert D. Mundt of Dieterich, Russell C. Scherer of Sumner, Dean Dietrich of Dundas, and Norbert Nix of West Liberty. Larry Buser of Palestine was elected to replace Charles Liston of Flat Rock, who died last November.

Mundt, president, noted in a videotaped presentation that Norris Electric has more than 3,800 miles of line in all or parts of eight counties, and serves nearly 17,000 members. "This grid of poles and wire is not only a testament to the leadership of our founders, but is a structure on which we can build a successful future for our area," he said.

Mundt outlined a brief history of how area activists had set up a cooperative after investor–owned utilities refused to serve rural areas, because of lack of population density, how the cooperative grew over the years, and how it plans to provide services to rural areas in the future.

"The members of your board of directors and your employees are all your neighbors, and that's an important reason why they're willing to go that extra step to provide the best, most reliable service possible," he said. "During the past year Norris took a new step to become even more efficient, by replacing its computer system. The benefits include eliminating the postage costs of meter reading cards, a savings of more than $40,000 a year. The new system has also improved the processing of job orders for our employees, and makes your account record readily accessible when you call us with a question.

"The arrival of electricity to the area nearly 60 years ago gave rural areas a very real economic boost, and the economy is still benefiting from rural electrification," Mundt said.

All in all, some 950 members and guests turned out for the meeting, and most of them are pictured here. It was one of the most well-attended meetings in recent years.

"Each year we add new homes and businesses to our membership rolls, and additional miles of line reach out into the countryside. But we're doing more than just providing electricity. Our mission has always been to improve our members' quality of life. Recognizing the importance of safe, abundant drinking water both for residents and for local economic development, Norris Electric has been a strong supporter of E. J. Water and other rural water systems.

"By being more than an electric company, Norris Electric is a true member of its community. Like the members it serves, your cooperative is a neighbor who will always be there, ready to meet your needs as those needs change and grow," he concluded.

Ernest C. Weber, manager, called 1996 a good year, but an expensive one. "Our wholesale power cost us $14,584,000, an increase of more than $1 million over the previous year's cost. While our revenue was also higher, it was up only $865,000. That's not enough to make up for the higher bulk power costs," he said.

Weber added that there were three other areas of increasing expense, too. One involved the higher cost of contract labor to increase the capacity of a line near the Flat Rock substation, a project that cost some $280,000.

"Another added expense was the construction of underground service to 110 lots in four subdivisions in the Effingham area and one near Olney. Only 15 of those lots have been energized so far. Underground construction is more expensive, due to added installation time and special materials required such as insulated underground conductor and pad-mounted transformers," he added.

While the ever–increasing number of underground services is posing an added short–term expense to the cooperative, Weber said, such construction will result in reduced maintenance costs in the future, since underground services are virtually immune to damage caused by ice and wind storms.

"Another major expense," he added, "involved increasing transformer, regulator and breaker sizes at the Robinson, FlatRock and Lawrenceville substations. We paid some $521,960 for nine new substation transformers last year."

Noting that nearly everything has risen in price in the last decade and a half, Weber stressed that Norris Electric had not had a rate increase in 14 years, but that it may soon become necessary to increase revenue.

"We're going to have the engineering department at the Association of Illinois Electric Cooperatives conduct a study of our rates," he said, "and that rate study will look at our revenues and expenses and project where we will be over the next few years. If the study shows we can continue to hold the line on our rates, that's what we will do. But if it concludes we must increase rates, we will strive to keep any necessary rate hike to the minimum necessary to maintain our fiscal integrity and to continue to provide you with the reliable service you need and deserve."

Dean Dieterich of Dundas, treasurer, said 1996 was a good year for Norris Electric, in spite of the fact that costs had risen faster than revenues. "Our total operating revenues for 1996 came to $19,421,665, and our power cost was $14,584,176, which amounted to just over 75 percent of our total operating costs. In other words, just over 75 cents of every dollar we spent went for purchased power. We spent just less than 25 cents of each dollar to operate the cooperative and set aside monies for margins," he said.

After the meeting the board met in reorganizational session and reelected Mundt president, Earl Minderman of Lawrenceville vice president, Russell Scherer secretary and Dietrich treasurer. After the meeting more than 950 members and guests enjoyed a meal served by Niemerg's Steakhouse.

Plant trees the right way

Your electric cooperative encourages you to plant trees, but not near power lines.

Help us serve you better. Plant tall varieties (like maple, oak, spruce or pine) away from power lines. Or plant a shorter variety (redbud, dogwood, crabapple). Then, with proper pruning, you'll enjoy beautiful trees that won't endanger lines— or lives.

Join the National Arbor Day Foundation and get ten flowering trees free. Send $10 to the foundation at 211 N. 12th Street, Lincoln, NE 68508. You'll also get *The Tree Book* and the bimonthly *Arbor Day*.

Electric Cooperatives of Illinois

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Twenty dollars for a light bulb! Are you crazy?

Why would you pay $20 for a light bulb? To save $50 to $100 on your electric bill.

This is how much you can save when you replace an incandescent bulb with a compact florescent one. Fluorescents use far less electricity that incandescents do. You can replace a 100-watt incandescent with a 20-watt fluorescent—and still have the same amount and quality of light.

In the last few years, compact screw-in fluorescent bulbs—just the right size for lamps, ceiling fixtures and recessed lighting—have been introduced for use throughout the home. They are much more technologically advanced than the flickering, humming fluorescent tubes you may be familiar with.

One of the best features of these new fluorescents is that they last about 10,000 hours (10 to 13 times longer than an incandescent). This works out to over a year of continuous use. Under normal circumstances, a typical fluorescent bulb will last several years. During this time, you won't need to buy new bulbs and you'll spend less time changing bulbs in hard-to-reach places.

Since the up-front expense is high, replace bulbs that get the most use first—kitchen, hallways, stairwells, porch—to realize your savings quicker.

Incandescents turn as little as 6 percent of the energy they use into light; the rest goes to heat. If you are concerned about high cooling bills, this is an added incentive to switch.

Tips on buying

- Before you buy any fluorescent bulb for the first time, request a sales person to light it for you. Some brands may appear too yellow or too dim.
- The least expensive bulb may not be your best choice in the long run. Compare life ratings with the cost. If the manufacturer does not offer a warranty, ask your retailer for one.
- A regular light fixture needs a ballast before it will hold the compact fluorescent bulb. A ballast converts the house power to the form needed for the fluorescent. It also regulates the voltage and current. Some bulbs come with a built-in ballast. Consider buying a ballast that allows you to replace just the bulb, since it should last as long as four to five bulbs.
- Electronic ballasts are better than core and coil, or magnetic ballasts. They weigh less, start the light instantly, run silently, operate cooler and are flicker-free.
- Some compact fluorescents are longer than regular bulbs. To ensure a proper fit, measure your light fixture and seek brands that match incandescents in size.
- Some fluorescents are not designed for enclosed fixtures.

Other considerations

- Full light output may be delayed one to two minutes for some bulbs as they warm up. This is an intentional design feature that helps extend the life of the bulb.
- Compact fluorescent bulbs do not work with dimmer switches but many work with timers.
- Outdoor lights may not last as long as those used indoors. Check the label to determine outdoor life and/or cold weather usage.
- Consider using the full-spectrum fluorescents in rooms where you spend a lot of time. This type bulb is considered healthier, since the light it produces contains all the colors of sunlight. Manufacturers say this type of light reduces eyestrain and fatigue.

Since purchasing a number of these bulbs at one time is expensive, you might consider buying one each time an incandescent bulb burns out. This way you can spread the initial cost out over time.

There is another important reason to switch to fluorescents. Over 700 pounds of coal are burned to light an incandescent bulb over its lifetime; a fluorescent only requires 180 pounds over its much longer life. Reducing energy usage has a positive impact on our environment.

See, it really *is* a bright idea to spend $20 on a light bulb.

Richard L. Hepburn is the author of "Understanding and Reducing Your Home Electric Bill" (Emerald Ink Publishing, $19.95). His book provides energy saving tips and information about the latest technology and inventions designed to help you cut your electric bill. Call (800) 324-5663 to order your copy.

Savings calculation

Compact fluorescent vs. incandescent

	20 Watt Fluorescent	100 Watt Incandescent
Expected Life	10,000 hours	750 hours
Watts used per hour	20	100
Cost per watt hour*	$0.00009	$0.00009
Total cost of electricity over 10,000 hours	$18.00	$90.00
Cost of one bulb	$20.00	$0.50
Number of bulbs	1	13
Total bulb expense	$20.00	$6.50
Total expense	$38.00	$96.50
Lifetime savings**	$58.50	

* Your electric bill will show cost per kwh (kilowatt hour). A $.00009 cost per watt hour equals $.09 per kwh. Your cost per kwh may be higher or lower.

** Because lower wattage bulbs are cooler, you may realize another 25%-50% in lifetime savings due to lower cooling costs.

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Richland County man publishes historical novel

Willard is pictured at the dining room table with some of his research papers and a copy of his novel, *End of a Silence*.

Willard Gray, a long-time Richland County resident, has come up with a stem-winder of a novel about an event that many people say never even took place.

Gray, who was born and raised in the area, was much like many other young men who grew up in the early part of the century. His book is entitled, *End of a Silence*, and is subtitled, "Full Moon over Fox Prairie."

"I was just another big, dumb farm boy," Gray says, "and I lived here and went to the local schools, until Uncle Sam called. Then I went off to serve in World War II. I stayed in the army and retired as a sergeant major after 21 years."

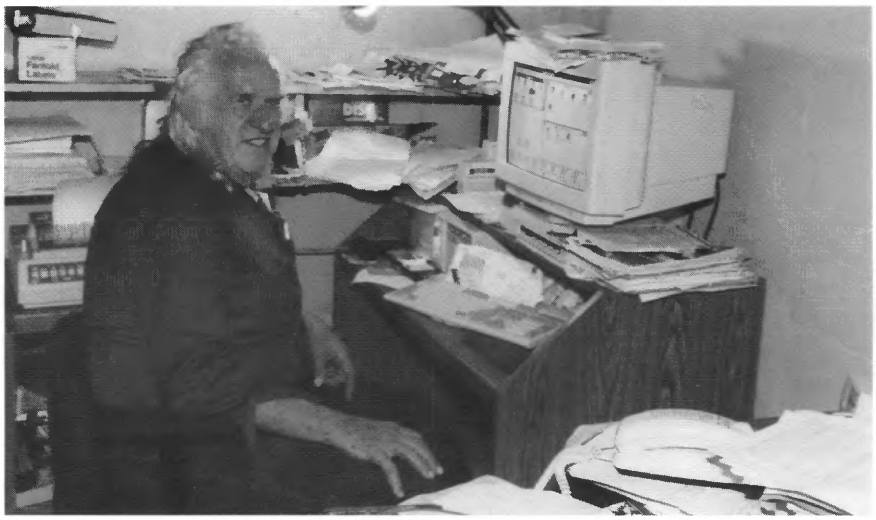
Returning to his roots after that long absence, he says he was stunned to find out about a murder and retaliatory lynching that is said to have taken place almost exactly 125 years ago. He set out to learn more.

"It was really hard to find anything," he says, "and many people I grew up with and went to school with told me I was crazy: that the Fox Creek community I was writing about had never existed. But I went through some 20,000 pages of documents to research my novel, and found reference to the community.

"My novel," he continues, "deals with the earliest settlers in Richland County and their interactions with each other as they struggled to settle a really harsh and unforgiving land."

Gray notes that the characters in his novel are, for the most part, real. He adds that if his family tree were given a good shake, a herd of the people in the book might well fall out.

At any rate, whether you read *End of a Silence* with a grain of salt as fictionalized history or as pure fiction, it's a real page-turner. Willard Gray has outdone himself.



Willard working in his "lived-in" basement office.

Spring is time to think of geothermal

With the heating season on the way out and the cooling season a month or so away, now might be a good time to give some thought to having a geothermal heating and cooling system installed in your home. If you're getting ready to build, you certainly ought to look into geothermal.

A geothermal system uses earth-stored energy in partnership with safe, clean electricity, to offer a hard-to-beat way to heat and cool your home the year around.

The heart of the geothermal system is essentially a heat pump with a difference: but what a difference!

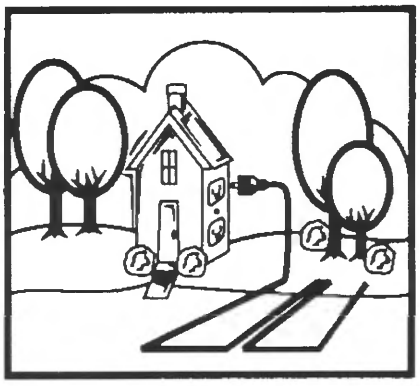
The average air-to-air heat pump works as a reversible system that removes heat from your home in the summer and expels it to the outside air. It does the opposite in the winter, warming outside air and moving it into your home. You decide what it does simply by flicking a switch on your indoor thermostat.

If the air-to-air heat pump has a disadvantage, it's that it starts losing its efficiency at about 10 degrees F., so you have to rely on another heat source to make up the difference.

A geothermal system doesn't have that problem. It draws its heat or coolness from a liquid-filled grid of plastic piping buried 5-6' underground. Once you get about 5 feet below the surface of the earth, the temperature in Illinois is a fairly consistent 55 degrees F., the year around.

Instead of having to cool 90-degree air in the summer, the unit is dealing with 55-degree air, and it does that very efficiently.

When you need heat, the geothermal system is, again, working with a 55-degree medium. That's much better than



the subzero weather air-to-air units have to cope with. All in all, about 70 percent of the "fuel" your unit needs comes from the solar energy absorbed by the earth and stored there.

Not surprisingly, the technology for the geothermal system, also known as a "closed-loop earth-coupled groundwater heat pump system," came from northern Europe. It is only natural that the system would develop in that area, with its harsh climate and high fuel costs.

The idea dates back to the 1940s, but offered no advantage to Americans in a time when the cost of heating and cooling a home was almost insignificant. The energy crunch of the early 1970s changed all that, and Americans started getting serious about economical comfort conditioning.

There was another factor, too. The piping and technology hadn't developed to the point that Americans would feel comfortable with them, and it wasn't until the 1980s that they came together.

Early experiments with polyvinyl chloride (PVC) piping proved unsatisfactory, and until better piping could be developed, the system had no real future.

Today's piping is expected to last 25-75 years in virtually any soil type. Present-day piping has better heat conducting properties than earlier materials had.

Most closed-loop systems are trenched horizontally in the yard around the home, but the stored solar energy can also come from well water or a pond, if it's large enough. If you don't have room for a horizontal loop, you can have a well drilled or use an existing one. If you need to have your yard trenched, it's usually not a big problem. The trenches are usually about 6-inches wide, and a simple reseeding will take care of the disturbed lawn. The pipes have no adverse affect on plants above them.

A big plus is that the heart of the unit is installed inside the house, in a garage, storage closet or crawl space, where it's protected from the elements. That prolongs the life of the unit, which is quiet enough that it won't be a bother.

Geothermal systems can save you even more money by providing hot water for your home. Some types of systems can save you up to 50 percent on your annual water heating bill by preheating tank water. These units are standard equipment on some systems and optional on others.

Be sure to look into the possibility of having hot water, too.

While geothermal units seem to be too good to be true, they do have one disadvantage: They're expensive to install because of the trenching or well-drilling needed for the loop.

Don't let that deter you. They will save you so much money on your heating, cooling and water-heating costs that they'll pay for themselves much sooner than any other kind of system that's likely to be available to rural electric consumers.

Ask the people at your electric cooperative for more information on geothermal systems. You'll be glad you did!

Taking the Big Step?

When you take that big step and remodel or build your new home, spend as much time thinking about your home's energy source as you did your China and crystal, the floor plans, and the carpet pattern.

When you choose electricity, you choose the safe, dependable, low-cost alternative. No flames. No fumes. No fuel tanks to fill.

Good for *all* Illinois.

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Handy gadgets offer convenience, savings

Once in a while gadgets come along that look like they might make life easier, more convenient or less expensive, and Intermatic, Inc., a Spring Grove, Illinois firm, has three that look like winners.

One is a small night light with a difference. Called the PR3 Power Failure Safety Light, it comes on full blast the instant the power goes out, and stays on for an hour or so. It's frustrating and potentially hazardous to grope around in the dark for a flashlight, and this little gem helps you avoid that. Billed as three lights in one, it serves as an emergency power failure light, can be used as a flashlight, and the indicator light that tells you it's charging gives off enough light to serve as a night light.

It plugs into a standard household electrical outlet, so it's always charged and ready for use. It has a twist-off cover that enables you to change the crypton bulb without a lot of fuss.

The Easytrac Power Outlet Kit lets you add electrical outlets virtually anywhere they're needed, without any wiring. Designed for quick and easy installation, the kit also eliminates those jumbled masses of tangled wires, extension cords and overloaded outlets that seem to proliferate in homes and offices.

The system features a pre-wired track that you can install in minutes on virtually any interior surface. You simply plug the grounded starter into a standard electrical outlet and connect the pre-wired track components, then place the receptacles where you want them. Then you snap the cover over the track to finish the job. You can move the outlets around easily as your electrical needs change.

The Intermatic Heavy-Duty Grounded Timer automatically controls air conditioners and other heavy-duty loads, providing an excellent way to shrink electric bills.

The Easytrac Surface Power Outlet Kit from Intermatic permits electrical outlets to be added in workshops and other locations without any wiring.

Available in white and almond, the units can be painted, papered or decorated to match any decor. They are childproof, and won't operate unless all components are properly installed.

The firm's new heavy duty timer is bigger and sturdier than those little timers people have used for years to turn lights on and off to discourage burglars. It enables you to maintain your home's comfort level while saving money by saving electricity.

Instead of agonizing over leaving your air conditioner running all day, or spending your first hour back home in stifling heat, the timer allows you to set a room air conditioner to come on about half an hour before you're due home. It will do the same thing for you in the winter, by activating a space heater.

The timer, the TN311C model, has a 15-amp, 1 horsepower rating, making it ideal for use with all air conditioners that have a standard plug.

These products are all UL listed and CSA certified, and are available at hardware stores, home centers, discount outlets and mass merchants.

Norris Electric News

Newton, Illinois 62448 • 783-8765

Standby power: Insurance against Mother Nature

Buying a standby generator is like buying fire insurance—you may never need it, but it is invaluable when trouble hits.

Although our electrical system is highly dependable and reliable, it is subject to the whims of Mother Nature.

How well are you prepared to handle a prolonged outage? Now is the time to take inventory of your home and farm. Determine how you would pump water, move grain, keep pipes from freezing, and provide heat and ventilation for livestock. How will you heat your home and keep foods from spoiling?

Now is the time to inventory your electrical needs. Assume you will experience long outages that could cause you inconvenience and financial loss. The cooperative does not sell standby generators, but we do have personnel to help you analyze your load and make recommendations. And remember, standby generators are not normally stocked in any quantity, so don't plan on buying one after an outage occurs.

Remember, too, the installation of standby equipment requires a positive double-throw switch. Operating a standby generator without one is extremely dangerous and could result in financial liability.

Let us help you guard against any of those acts of God no one can foresee.

What stays on when you go out

"There must be something wrong with our meter. We were on vacation most of the month. We couldn't have used this much."

We hear variations of this comment many times every month of the year. Is there something mysterious going on here?

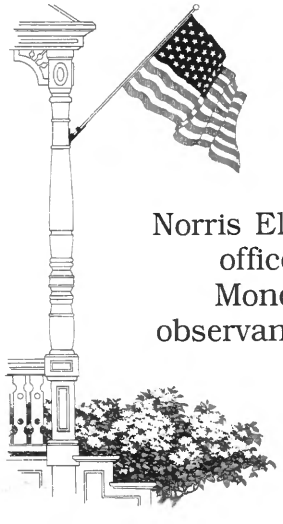
Not really. The homes of today are increasingly equipped with appliances that consume energy without any active intervention by the occupants. Until we go on vacation, these appliances are considered the benefits of our economy. When we get back from vacation we find they have turned into liabilities simply because they have continued operating automatically while we were gone.

Old refrigerators and freezers are the main culprits in this mystery. And, old doesn't mean ancient. The older any refrigeration unit is the less efficient it is and can account for as much as 25 percent of the monthly electric bill. And an old freezer or two and the percentage is even higher. A hotter house (assuming the homeowner remembered to shut off the air conditioning) will cause these appliances to run longer to do their job.

Add to the list dehumidifiers, instant-on TVs, cable TV boxes, clocks, waterbed heaters, water heaters, anything battery powered with charger, sump pump, water pump, swimming pool pump—they all add to the usage and the bill.

Plus, when we return from vacation, we turn everything back on to bring the house into equilibrium and then begin washing, drying, ironing, bathing, cooling, etc., etc. So the electricity we saved by being away is now used after we get back—and maybe more.

So, enjoy your vacation. But remember, we use electricity whether anyone is at home or not.



Office closing

Norris Electric Cooperative's office will be closed Monday, May 26, in observance of Memorial Day.

The cooperative office will resume normal business hours on Tuesday, May 27.

Postdated checks

Norris Electric Cooperative cannot accept postdated checks to be held and deposited at some later date.

The large number of payments handled on a daily basis makes it impractical to give special handling to certain payments. Also, following special handling instructions for certain payments involves additional expenses.

Moreover, our auditors recommend that all payments be deposited promptly.

Please do not send postdated checks to your cooperative. All checks are deposited immediately on the same day received, and if a check is returned by a bank due to being postdated or due to insufficient funds, there normally is a $15 additional charge passed on to the member.

Farm electrical safety checklist

Service pole and service entrance

YES NO

___ ___ Do farm family members and all hired farmhands know where and how to disconnect power in the case of an electrical emergency?

___ ___ Are disconnects, especially main breakers, regularly turned off and turned back on to ensure free action and good contact? (Manufacturers of circuit breakers claim that they should be opened and reclosed once per month.)

___ ___ In case of fire, can the electricity be shut off to that particular building on fire without shutting off electricity to the water pump?

Animal housing

YES NO

___ ___ Do animals enter a building or drink at the stock tanks without hesitation?

___ ___ Is the water piping (metallic) and service entrances of buildings properly grounded? (NOTE: Check for corrosion of grounding system by animal waste.)

___ ___ Is the farmer using an industry-made electric fencer which bears the UL label?

___ ___ Are heat lamps in farrowing houses hanging by the cord only? In case of drop, are there guards on the fixture?

___ ___ Are the lights enclosed in globes and guards (where required)?

___ ___ Is the wiring suitable for wet conditions (because of the humidity created by the animals' respiration)?

___ ___ Does all wiring appear to be in good condition and free from damage by rodents?

Grain-handling equipment

YES NO

___ ___ Are overhead lines out of the way of augers and winged-type farm equipment?

___ ___ Do all motors have correctly sized overcurrent protection?

___ ___ If magnetic starters are used, are heater coils of the proper size?

Machine shed

YES NO

___ ___ Is the grounding bayonet on drop cords, power tools, etc., intact?

___ ___ Is the service entrance properly grounded?

___ ___ Are all receptacles in use properly grounded?

___ ___ Are drop cords of adequate size for the appliance or machine it is serving?

___ ___ Are drop cords put away after use so machinery can't run over them?

___ ___ Are power tools such as circular saws, table saws, drills, jig saws, etc., left unplugged when not in use so that a child couldn't accidentally turn them on?

___ ___ Is it adequately lighted?

___ ___ Are drop cords in good condition with no sign of insulation damage?

General

YES NO

___ ___ Do children know whom to call in case of an electrical emergency?

___ ___ Do family members know first aid for electrical shock and/or burns?

___ ___ Are GFI's installed where required?

___ ___ Do appliances function satisfactorily without giving a tingle to user when turned on?

___ ___ If lightning protection is installed, are all wires leading to ground?

___ ___ Are all electrical fittings on the gas pump of explosion-proof type?

___ ___ Before trees are planted, has proper siting been provided to avoid nearby overhead and underground power lines?

___ ___ Are trees free and clear of overhead electrical lines?

___ ___ Before new buildings are constructed, have the buildings been cleared of nearby overhead and underground power lines?

___ ___ Can tractors equipped with end loaders be raised to the most upper position and clear all overhead electrical lines?

Items checked NO indicate a potential electrical safety hazard. Proper action should be taken immediately to ensure safety.

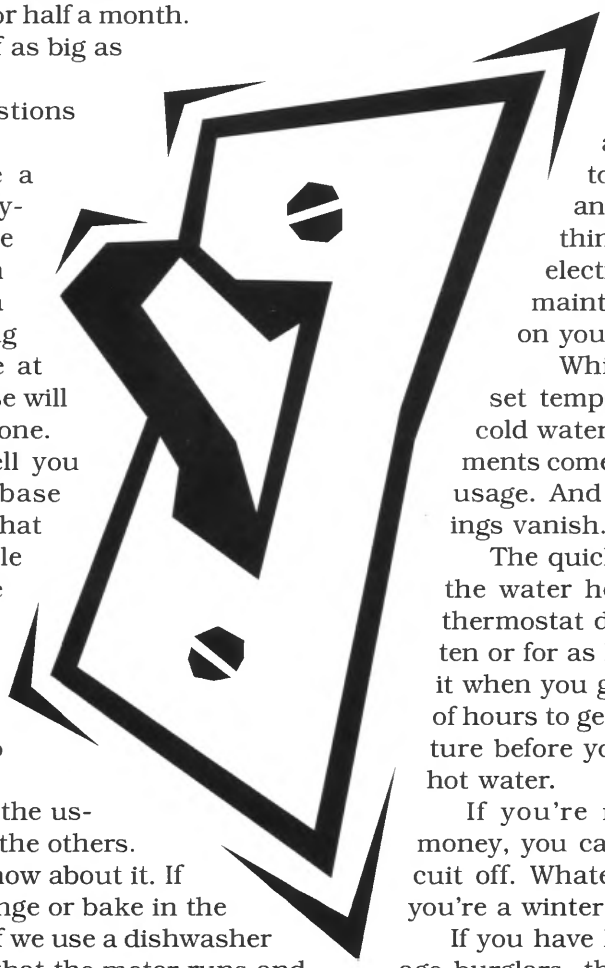
Saving electricity while on vacation

As we get into the vacation season, we are fast approaching another season, too. It's the "missing vacation electricity savings" season, and it happens to many of us. Most electric co-ops note that people coming into their offices to pay their electricity bills are puzzled.

Generally, their puzzlement is expressed like this: "I've been away on vacation for two weeks, and my house sat empty for half a month. Why isn't my bill only half as big as normal?"

We hear similar questions from winter vacationers.

But whether you're a summer vacationer enjoying the rush of interstate driving and standing in line at theme parks, or a winter vacationer seeking the thrills of the lift line at Mt. Breakneck, your house will use energy while you're gone.



The experts would tell you that your house has a base load. What that means is that there are things that cycle on and off in your house that you don't think much about. They're there for your convenience, but they work so quietly that you tend to forget they're there.

We tend to remember the usage we initiate and forget the others. If we turn on lights, we know about it. If we cook on the electric range or bake in the oven, we remember that. If we use a dishwasher to wash a load, we know that the motor runs and the machine uses hot water and we're going to pay.

But all those other gadgets keep "doing their thing" whether you're home or not. And those rascals are the ones that steal your vacation savings.

Here are a few ideas that will help you save at least some money while you're on vacation.

First, if you're a summer vacationer, you will save the most by shutting your air conditioner completely off. Winter or summer, comfort conditioning is the biggest user in most homes. Be ready for a couple of uncomfortable hours when you get home, though.

The next biggest user when you're gone is likely to be either your refrigerator and/or freezer, or your water heater.

If you have separate refrigerators and freezers, you have an opportunity to save some money, possibly by emptying the stuff from your fridge and putting it into your freezer. Of course, you'll need to be careful of things that can be damaged by freezing. Then, all you need to do is unplug the fridge.

You can save even more if you can figure out how to empty them and shut them both off.

A rule of thumb is that it costs you about a dollar a day for hot water, and that will be reduced by time away from home, but not by too much. When you're gone and not using hot water, you'd think the thing wouldn't use any electricity at all, but it still has to maintain the temperature you set on your thermostat.

While it costs less to maintain a set temperature than it does to heat cold water, each time your heating elements come on, your meter registers that usage. And some of your vacation savings vanish.

The quickest, simplest way to reduce the water heater's usage is to turn the thermostat down. It won't cycle on as often or for as long a time. Be sure to reset it when you get home and give it a couple of hours to get back to its normal temperature before you do anything that requires hot water.

If you're really determined to save money, you can shut the water heater circuit off. Whatever you do, don't do this if you're a winter vacationer!

If you have lights and timers to discourage burglars, they will use some electricity, and you expect that. But your sump pump may well run sometimes, and many homes have miscellaneous other gadgets, such as clocks, aquarium heaters, water bed heaters and so on. But once you've taken care of the air conditioner, refrigerator, freezer and water heater, you'll have gone a long way toward saving on your vacation energy bill.

But there's still a joker: Most of us, when we get home from a two-week vacation, have almost exactly two weeks of laundry to do. The water heater, washing machine and dryer all have to play catch-up, and that goes on your bill, too.

Even so, if you follow a few simple steps, you can at least take some of the expense out of your vacation. For most of us, every little bit helps.

Norris Electric News

Newton, Illinois 62448 • 783-8765

Campground changes to suit the times

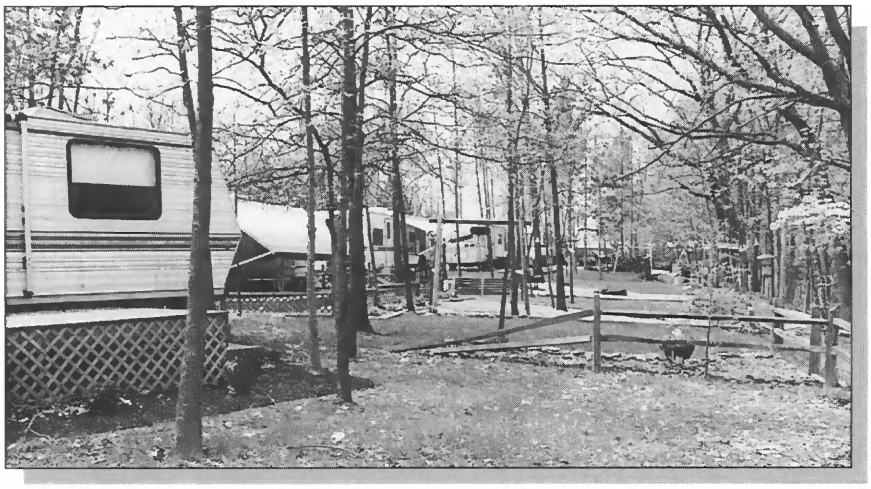
Some 30 years ago, Jerry and Betty Crumrin built the Wilderness Lake Campground halfway between Martinsville and West Union on part of the historic Medsker-Crumrin farm, which had been in the Crumrin family since 1828.

And Norris Electric Cooperative was there, setting poles and stringing lines so the modest little camp trailers of the day could have juice to power their lights and sometimes a tiny refrigerator.

For most campers, bathing, bathroom and laundry facilities were to be found down the road, at the centrally located bath house. For those who just had to keep in touch, there was a pay phone. Of course, there was an office and convenience store.

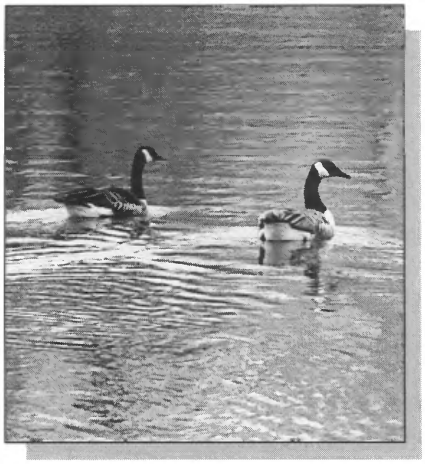
There were some 85 campsites, and most of them were clustered around an 8-acre lake that had been stocked with bass, bluegill and channel cat.

The campground prospered for several years, then started to decline. In 1992, Bob and Donna Cuthrell, who were long-time camping enthusiasts, bought the place, "with the help of Dale Murphy and the Dulaney National Bank," Donna says.



Campers look out over their well-maintained front yards to the lake.

This area, empty on weekdays, buzzes with activity on weekends and holidays.



Geese in the lake give the campground a pastoral look.

"I was from the Danville area, Bob says, "and we'd been camping for a long time. We met Jerry through the Illinois Campground Association. He showed us this place and we fell in love with it. We decided to get it when it came on the market."

The Cuthrells note that they took the plunge with the idea that since camping was so much fun, operating a campground would be fun, too.

"Boy, did we get our eyes opened," Bob says. "We enjoy it an awful lot, but we found out that a lot of work went on behind the scenes to make the place nice. Now we're the ones doing that work."

And Norris Electric is still there, heavying up the campground's electrical system to accommodate the modern campers there.

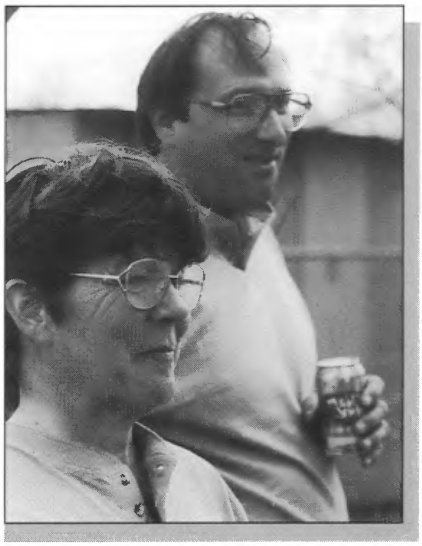
Campers have changed a lot since the days of lights and a fridge.

These are some of the campers spaced out in the 85 spots on or near the lake.

The swimming beach is popular on hot days.

This pelican might well be a transplant from a Florida campground.

Rick and Pat Askren, and their dog, Chel-C, are permanent residents.



Bob and Donna Cuthrell now own and operate the Wilderness Lake Campground.

"Years ago," Bob says, "many camp trailers were pretty plain and simple, and people who spent weekends in them were roughing it. Now, campers are like small homes, with heating, air conditioning, bathrooms, water heaters, telephones and everything else. People may come out here to escape the urban crunch or to enjoy the outdoors, but they don't come to rough it."

Many of the sites, he adds, have water, sewer and telephone connections, in addition to the electrical service that always has been there. The campground has places for "seasonals," who lease a space annually and pretty much leave their campers there, and "transients," who come to spend a few nights and move on.

Campers at Wilderness Lake have all kinds of options to choose from, Donna notes. "We have a game room," she says, "and we have fishing, a swimming beach, and jon boats and paddle boats.

"And we have all the usual facilities such as rest rooms, a gift shop, groceries, a pay phone, trash bins, a laundry, showers and vending machines," she adds. There are tennis, basketball and volleyball courts, swings, a merry-go-round and a place to pitch horseshoes. There's even a pavilion.

"We have bands, cookouts, bingo every Saturday, and similar planned activities on holiday weekends," Donna says.

Those interested in contacting Wilderness Lake Campground can call (217) 279-3396. The mailing address is R.R. 2, Box 141, Martinsville, IL 62442.

CHILL !

Put the sizzle in your steak, not your home

One of the joys of summertime is a juicy steak, grilled over a hot flame. But who could enjoy it in a hot, humid home?

With a geothermal heat pump, you'll have cool comfort in the summer and snug coziness in winter. A geothermal heat pump uses the earth's energy to provide cooled or heated air—and will pay for itself in a few years.

For more information about the advantages of geothermal heat pumps, call your local electric cooperative. We'll help you keep your cool.

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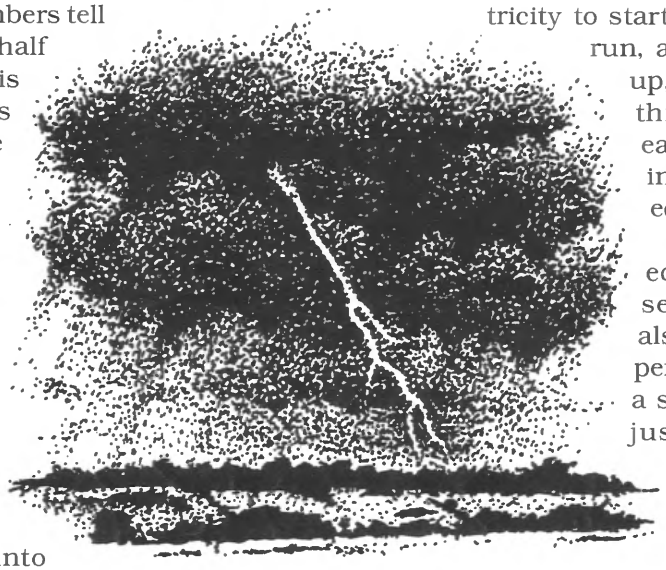
Surge protection for your electric appliances

The experts tell us that there are some 2,000 thunderstorms in progress over the earth at any given moment. Our first impulse on hearing such news might well be to ask, "Who counts these things?" But we do need to take them seriously.

As some people busy themselves counting thunderstorms, others, it seems, are counting lightning strikes, and they tell us that lightning strikes the earth 100 times a second.

Still another group checks lightning's speed and temperature. Its members tell us that lightning travels half the speed of light and is very hot: some five times the temperature of the surface of the sun, in fact.



Of course, part of the reason people tell you these things is to get you to stay out of storms and away from lightning. We encourage you to avoid them when possible.

But lightning is not only dangerous, it's also destructive. Strikes on power lines can travel into homes and equipment, and has been known to destroy appliances.

Electric utilities do as much as possible to protect their systems from lightning. They install lightning arresters where needed, and have lightning rods in their substations to draw away the tremendous voltage lightning brings. While this protects utility equipment, it also helps protect yours.

But if you really want to protect the electrical equipment in your home, you should have a whole-house surge-suppression protection system installed, just to be on the safe side.

A whole-house surge suppressor is a good idea for several reasons. For example, most individual lightning strikes don't fry your motors and microchips in one fell swoop. Instead, each one does a tiny amount of damage, and that damage gradually keeps adding up until your refrigerator, washer, computer, microwave oven or TV set finally gives up the ghost.

That fact is a good argument for a whole-house surge protector, which should prolong the life of much of your electrical equipment.

When you think of adding a couple of years to the life of a refrigerator, freezer, washer, dryer, dishwasher, microwave oven, and a TV set or two, the $100-$150 investment in surge protection might well look like small potatoes.

It is also recommended that you further protect such equipment with additional surge protection, either at the outlet or with a multiple outlet strip that includes some surge protection. Much of the wear and tear on your equipment is inflicted by your other equipment. Electric motors require from three to six times as much electricity to start as they actually use to run, and each time one starts up, a surge, or spike, runs through the circuit, and each little spike is a nail in the coffin of your other equipment.

Since electronic equipment is especially sensitive, and is usually also expensive, wiring experts suggest that you have a separate circuit installed just for your expensive, delicate stuff. This is especially true of the home office, with its computer and peripherals, fax machine, laser printer and all the other necessities. While not necessarily essential, it's a good idea to have an uninterruptible power supply, or UPS, to allow for a gradual and orderly shutdown of computer equipment without loss of data. UPS units include a sensor that instantly detects when your power fails, and kicks in a battery to enable you to shut down. How much you can accomplish before your battery goes flat depends on how big a battery you have and how much electricity your equipment will need to save data and shut down without crashing. There are several different sizes on the market.

Keep in mind that whole-house electrical protection, and individual surge protectors as well, protect only from lightning surges traveling down the electric lines. You need separate protection for TV antenna leads, satellite dish and telephone lines. TV equipment is damaged by lightning surges more than anything else.

We hope you'll think about surge protection for the sake of all your equipment. Several electric co-ops in Illinois sell surge protection equipment, and all of them can help you decide what you need to help protect your home. Stop in and see them.

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The physics team who worked on the project are pictured with their machine. Front row from left are Annette Zehner, Nikki Rubsam, Meredith Blumthal and Kim Scherer. Back row from left: Justin Snyder, Lori Jennings, Kurt Ginder and Leon Schneider. Team member Michael Moshenrose is not pictured.

Physics students get hands dirty on learning project

Students in Lisa Pampe's Olney High School physics class had a rare opportunity during the school year just ended. Instead of just engaging in book learning and theory, they had an opportunity to smell the sawdust and get some grit under their fingernails. To the amazement of most of them, they found that they enjoyed the experience.

Mrs. Pampe, in an effort to introduce a bit of reality to the classroom, decided to propose a working project for the kids to enjoy. The idea was to build a hydroelectric generator and use the power of running water to actually generate electricity.

But there was a problem: her students, enrolled in academic classes, couldn't build such a gadget. She decided to enlist the aid of Mike Gray and his shop class, whose students would help build a generator.

But first the class talked the idea over. There was a little initial reluctance. It looked like too much of a job. After a month of talking and kicking ideas around, they got started.

Kim Scherer, a junior, notes that the project was an eye-opener. "We kind of had the idea that since we were in a physics class, that we were smarter than the guys in shop, but we learned differently quickly. We realized that the kind of work we asked them to do took a lot of 'smarts,' too. It was just a different kind than we were used to, but it was useful, even so."

"One girl had never handled a hammer or a screwdriver," Mrs. Pampe says, "and she found out that she really enjoyed working with her hands. She got a lot of satisfaction out of being able to actually build something. I think we all learned a lot."

Mrs. Pampe, who grew up on a dairy farm, notes that she was able to provide some guidance. "I had a couple of sisters and one brother," she says, "and Mom always complained that she never had a daughter to help with the household chores. We were all busy helping Dad."

Lori Jennings, a junior, likened the project to being involved in team sports, in her

summation of the project. "I realized that working in groups in class requires the same principles as playing on a sports team. Each person had strong points and weak points, and we were able to use each person's strengths to produce the best product," she wrote.

She noted that she learned a lot about gears and bearings, as well as getting a new perspective on resistance, such as takes place when a belt is used to try to turn a pulley.

"I liked cutting the wood and working with it," she added, "and I think it was an excellent way to use what we learn in physics in ways other than the textbooks."

Nikki Rubsam also stressed the need to work together. "Teamwork means everything in projects like this," she wrote, "and one example is the work between the landscaping and electrical groups. In order for the landscaping group to build the trough, we had to work with the electrical group to see where the trough should run to. This also implements the great work done by Mr. Gray's class. Without their wood cutting knowledge our plant would not have been built so easily.

"As much fun as this project was," she said, "I never imagined all the mechanical properties we would have to use. In fact, I was almost shocked when I saw Justin, Kurt, and Lori using the law of cosines to figure what the dimensions of wheel and cups should be. Before this project, I thought of the law of cosines as a homework problem in a calculus book." She also noted that there was a "fun" aspect to the job that you don't often see in a physics classroom. "I liked plastering the mountain," she said, "but the most enjoyable thing was breaking up the large pieces of styrofoam we used to build it."

Like his teammates, Michael Moshenrose stressed the importance of teamwork and group interaction to get the job done. "Working on this project illustrated the importance of communication and hard work," he said, "and working with a team ultimately caused me to realize that in order to accomplish challenging goals, one needs the help of others.

"Although I enjoyed many aspects of the project, working with Mr. Gray's class was what I liked most. His students were more comfortable with the hands-on aspects of the project, while our group was better at coming up with ideas. The combination resulted in a great project. Also, cutting the wood and gluing the boxes on the wheel proved to be an enjoyable task."

Annette Zehner noted, "I learned about the value of other people and their ideas. A person may think that their idea is best; but 'playing off' of others' ideas often produces the best results. When an idea standing alone has positive aspects and negative ones, two ideas together can combine the positive aspects without using the negative ones, creating the best possible idea."

While this effort was a first for Mrs. Pampe, it was successful as a teaching event, and even managed to produce a little electricity. But even more important, it got her physics students into reality and out of theory, gave them an opportunity to learn something about the satisfaction of working with their hands.

Would she do it over again? "Definitely," she says. "I'm not so sure I'd start on a hydroelectric project again, but I've decided to include more hands-on, interdisciplinary work in my classes in the future. Both groups of kids learned a new respect for each other, and I think they learned academically, too. I'm trying to think of something else, like wind generation or a similar project. I need to find a little more funding than the average physics budget provides, though."

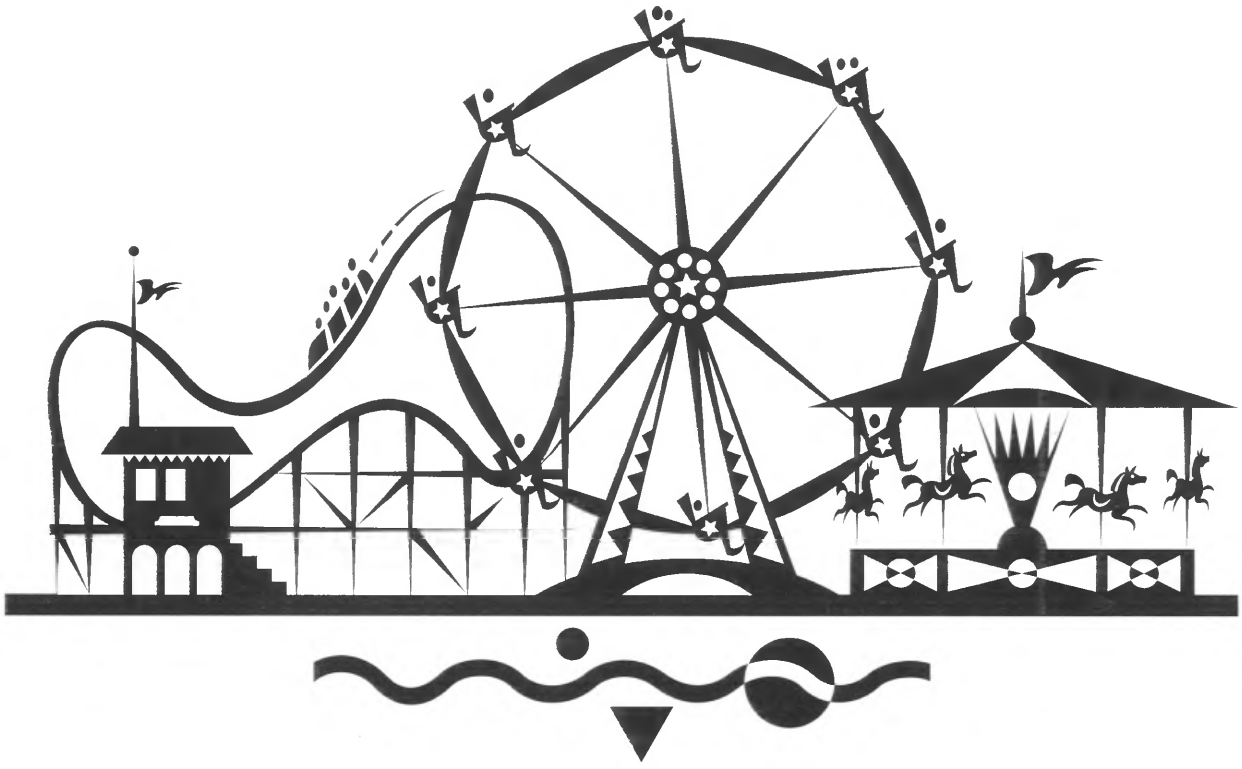
Even so, we'll bet there's a creative project of some kind cooking at Olney High School next year!

The finished product is pictured, with water flowing into the cups. The hope was to provide electricity to light the string of lights circling the mountain, but it didn't pan out. While the physics class came up with the calculations, students from Mike Gray's shop class did much of the construction. The small box in the foreground shelters the generator, which would normally be connected to the wheel by a belt, which is missing here.

Hog races and hot dogs, lemon shake-ups and the scrambler, Ferris wheels and tractor pulls . . .

These are just a few of the delights you'll find at the fair. Whether you visit your local county fair, the DuQuoin State Fair or the Illinois State Fair, the electric cooperatives of Illinois would like you to remember the important role agriculture plays in our lives.

Just as electricity powers the modern farmstead, so the Illinois farmer feeds the world.



A salute to the Illinois farmer from:

Electric Cooperatives of Illinois

Good for all Illinois

Affirmative Action, equal opportunity employers

Farm Safety Week is Sept. 21-27

More than 30,000 collisions on public roads each year involve agriculture equipment. A motorist driving 50 mph has less than 10 seconds to react to a tractor 400 feet ahead that is traveling 15 mph. Watch for the triangular slow-moving vehicle emblem. Farmers, be sure that faded emblems are replaced, positioned with the point up and clearly visible from the rear.

We urge farmers to renew their commitment to safety, and be extra careful when working around electric lines.

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Millions of Americans belong to co-ops

Cooperatives—not-for-profit, member-owned businesses—comprise an important part of the American economy with annual sales of more than $100 billion. For example, about 30 percent of farmers' products in the U.S. are marketed through cooperatives. Electric cooperatives provide service to 30 million member-consumers. In fact, more than 100 million Americans belong to more than 47,000 cooperatives in the United States, according to the National Cooperative Business Association (NCBA).

Co-ops are of three types: producer-owned, consumer-owned and worker-owned. Farmers, producers, or small busi- nesses own producer-owned co-ops. consumer co-ops—electric co-ops, for example—buy and sell services or commodities. In addition to electric co-ops, consumer co-ops may buy and sell food or heating fuel or even operate childcare facilities. Worker-owned co-ops are businesses owned and controlled by their employees; in the U.S. these include food stores, restaurants and taxi cab companies, as well as other examples in both light and heavy industry.

Source: National Cooperative Business Association

An E-Mail address for your refrigerator?

The year is 2005 and you've just had a new refrigerator delivered to your home. You plug it in, and it's ready to go. However, the refrigerator is doing something on its own. It is also registering itself electronically with the manufacturer. And, the warranty you purchased with the refrigerator enables the machine to diagnose itself and to report any problems to a local service contractor.

This is a vision of the future offered by Steve Drenker, manager of the Electric Power Research Institute's (EPRI) Information Systems & Telecommunications Business Unit. "The load control and remote meter reading that utilities do today via telecommunications technologies are just the beginning," says Drenker. He believes that technological advances in telecommunications, combined with the increasingly popular and accessible Internet, are going to change how we live today—in a big way. In the not-too-distant future, he predicts, virtually everything will have an Internet address, from telephones to gas pumps to home appliances.

"We're going to see an abundance of things communicating on the Internet, and they won't be people," says Drenker. EPRI is organizing a consortium of appliance and telecommunications companies to develop standard messages for communication between these devices.

At this point, no one knows precisely what an appliance's Internet address would be used for. But there are lots of ideas floating around, and the business opportunities for utilities are significant. On the most basic level, a utility could monitor the power consumed by Internet-linked appliances and perform remote diagnostics as a billable service to the owners. But advances in sensor technologies that are now underway further increase the possibilities.

EPRI is a nonprofit research organization for electric utilities. The National Rural Electric Cooperative Association works closely with EPRI to ensure that industry-wide research receives input from electric cooperatives.

Energy-efficient mortgage will help you buy more house

If you're in the market for a new home, investigate the possibility of obtaining an energy-efficient mortgage (EEM). An EEM allows a homebuyer to qualify for a larger mortgage by allowing a higher debt-to-income ratio than lenders normally use to calculate loan potential.

EEMs allow the significant monthly energy savings of an energy-efficient house to be put toward a higher monthly mortgage payment. Home buyers upgrading an existing home to qualify as an energy-efficient home may add the cost of energy conservation measures to the mortgage. By adding this cost to the mortgage, the homebuyer may profit from tax benefits and longer-term interest rates.

You can find out if EEMs are an option by asking your lender. Four federal lending programs offer EEMs—Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Housing Administration (FHA), Federal National Mortgage Association (Fannie Mae) and the Veteran's Administration (VA).

Time to buy a new water heater?

Although most water heaters last 10 to 15 years, it's best to start shopping for a new one if yours is more than seven years old, according to the Department of Energy. Doing some research before the old one fails will help you select the best heater for your needs—and help you cut your energy costs.

There are a number of factors to consider, so you might want to call or stop by your electric cooperative. Your co-op will be glad to help you select the right unit for your needs—one that saves you energy dollars, too.

Types of heaters. There are now a variety of water heaters—conventional storage, demand, heat pump, tankless coil, indirect and solar. It is also possible to purchase water heaters that can be connected to your home's space-heating system. The conventional storage water heater remains the most popular type for homes in the United States. It releases hot water from the top of the tank when a hot water tap is turned on. To replace that hot water, cold water enters the bottom of the tank, ensuring that the tank is always full.

Energy factor rating. The Federal Trade Commission requires that many appliances, including water heaters, have labels or fact sheets on energy consumption. For a water heater, the Energy Factor (EF) is the overall efficiency of the heater, with the higher the rating the more efficient the unit. Here are energy rating ranges for water heaters that use electricity, gas or oil to heat the water (these are conventional storage water heaters that can also use propane):

Type	Min. Range	Max. Range
Electric	87 to 91	94 to 98
Gas	51 to 56	60 to 86
Oil	48 to 53	60 to 63

The EF is based on recovery efficiency (how efficiently the heat from the energy source is transferred to the water), standby losses (the percentage of heat lost per hour from the stored water compared to the heat content of the water), and cycling losses.

Other factors, including FHR. When shopping for a new unit, make sure that the one you purchase has at least 1 1/2 inches of insulation around the tank. In addition, consider the First Hour Rating (FHR) of the system. FHR measures the maximum hot water the heater will deliver in the first hour of use—this figure must appear on the unit's EnergyGuide label, and for good reason. Although some consumers base their purchase on the size of the storage tank, the FHR is actually the more important figure. So, before you shop, estimate your household's peak hour demand and look for a unit with an FHR in that range.

Comparing total costs. Another important factor in the pur-chase of a water heater is the total life-cycle cost that encompasses purchase price, lifetime maintenance and operation expenses for the entire time you own and operate the unit. For example, units with longer warranties usually have higher price tags. However, the water heater with the lowest purchase price is often the most expensive to operate.

Technician Certification Program benefits consumers

Everyone breathes more easily when heating, ventilating, air conditioning and refrigeration equipment is properly installed. A new national certification program will help ensure that equipment is installed and serviced by technicians who are competent to handle a wide range of heating, ventilation, air conditioning (HVAC) and refrigeration systems.

The North American Technician Excellence (NATE) program, an independent industry testing and certification organization, recognizes and prepares technicians through voluntary testing and certification. Developed by the Electric Power Research Institute (EPRI) and several of its member utilities, NATE has broad support from utilities, manufacturers, contractors and affiliated organizations.

"Proper installation and servicing of equipment leads to greater customer satisfaction," says Dennis Rice of the Omaha Public Power District. The Air-Conditioning & Refrigeration Institute, Gas Appliance Manufacturers Association, and the National Association of Plumbing Heating Cooling Contractors also join EPRI in support of the new program.

"Everyone benefits from the NATE program," says Clark Gellings, EPRI vice president of customer systems. "Customers get the best service and the benefits of the latest HVAC and refrigeration technology, and utilities achieve energy goals (and receive fewer customer complaints) through the promotion of properly installed high-efficiency equipment.

"In addition, utilities have a unique opportunity to become involved in the formation of a national certification process and insure that their interests are being served," Gellings says.

EPRI is a nonprofit research organization for electric utilities. The National Rural Electric Cooperative Association's Rural Electric Research program works closely with EPRI to ensure that industry-wide research receives input from electric cooperatives.

Is it time to update your wiring?

Many people treat electricity far more casually than they should. It's easy to plug in an appliance or flip a switch, so we sometimes forget that the power used to light a lamp or run a washing machine is also strong enough to do physical harm.

Each year, some 1,200 people in the U.S. die by accidental electrocution and in electrically related fires. A book available from the U.S. Consumer Product Safety Commission stresses that many of those deaths could have been prevented if people knew how to maintain their home wiring system.

Using clear illustrations and a problem/solution format, the Home Electrical Safety Check guide lists symptoms of potential electrical hazards, discusses do's and don'ts, and poses questions to help you keep your home safe.

One of the best things you can do to keep your home's electrical system working safely is to have an electrician or electrical inspector check it at least once every 10 years.

Between inspections, it's important for you to do your own checking. The most obvious indication of an electrical problem is a blown fuse in your fuse box or a tripped switch in your electrical panel.

This happens when more electricity is demanded in a certain area than the system was designed to handle. If turning on a particular appliance causes a problem, check to see if you've overloaded the circuit or if the appliance is faulty. If it is, have a professional make repairs.

And whatever you do, don't try to increase its capacity by replacing a blown fuse with a penny or by installing a larger-capacity circuit breaker to remedy a tripped switch. Fuses and breakers are designed to be the weakest link in the system, and if something goes wrong, the problem is confined to the metal box it's in. If you strengthen that link you are, in effect, moving the weak link to inside your walls, where it's invisible and where there are flammable materials.

Don't do it! You'll risk shock or fire.

Many blown fuses and tripped breakers are caused by overloads. Most kitchens, for example, now have far more appliances than they had 20 or 30 years ago. If the circuit hasn't been upgraded, that can cause problems. For example, if you had a toaster that you always plugged into a favorite outlet, it probably worked fine. But if you added a microwave to the same circuit, that might still be fine—until you tried using both at once.

The rest of the house may well be the same way. A large color TV will use more current than the old black and white jobs did, and you may have an "entertainment center" where there was a simple stereo not long ago.

Even if you've been careful not to overload your circuits, electrical problems can still occur. And whether the problem is with a cord, plug, fixture, or outlet, the signs of an electrical hazard are the same—sparks, arcs (bright flashes of light), sizzling or buzzing, shocks, warm plugs or receptacles, or an odor of burned or overheated wiring or insulation. Don't use the problem appliance or lamp until you can have it repaired.

Many electrical problems and accidents can be prevented by using appliances and fixtures only as they were intended to be used. Don't pinch electrical cords by placing them in doorways or under rugs or furniture, and never staple them.

Pull the plug, not the cord, when disconnecting appliances from outlets. And don't overload outlets or extension cords. Avoid using old cords that may be brittle, damaged, or have a low wattage capacity. Keep your lamps and lighting fixtures from overheating by checking to see that bulbs are of the right wattage. Newer fixtures are marked with the size of bulb you need. Although they're not always marked, most older fixtures are designed to use a 60-watt bulb or less.

In addition to using your electrical equipment correctly, you can help prevent electrocution by using ground fault circuit interrupters (GFCIs).

These special outlets or attachments to existing outlets stop the flow of electricity when they detect an electrical current leakage. You could get a shock before the GFCI shuts off, but the unit will prevent serious injury and death. GFCIs should be used in wet areas of the home such as the bathroom, kitchen, basement, garage and outdoor receptacles where the threat of electrical shock is greater.

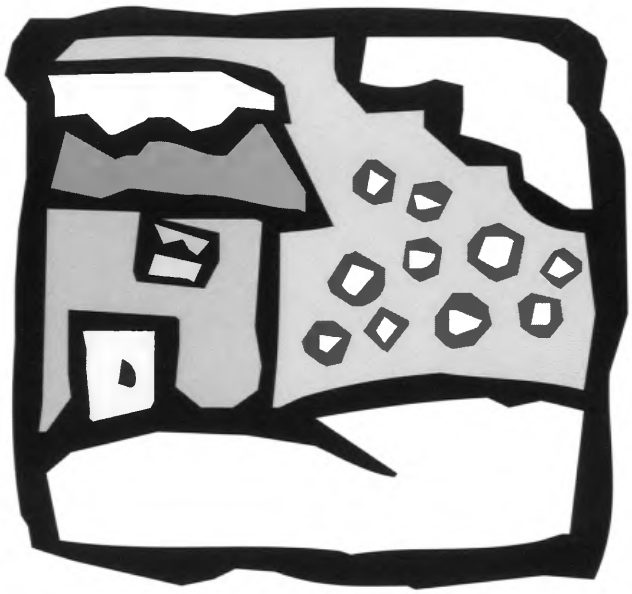
Learn more about keeping your home wiring system working safely and efficiently.

A home Electrical Safety Check should help you. Send your name, address and 50 cents to R. Woods, Consumer Information Center - 7B, P.O. Box 100, Pueblo, CO 81002.

Thinking of insulating? Do your homework first

If the economic crash that lasted from 1929 until the beginning of World War II was known as the Great Depression, then the approach of fall and the winter that inevitably follows might well be known as "the not-so-great depression."

As the leaves begin to turn and as summer tapers off into autumn, many of us again begin thinking about how difficult it was to heat our homes last year. If you're included in that group, you may be wise to look at the possibility of adding insulation to your home.



Many homes, especially rural ones, were built before the energy crunch of the early 1970s, when fuel was cheap and it was a snap to warm a home: you just turned up the thermostat. The cost amounted to little more than pin money. Insulation was considered an unnecessary expense and was often installed in bare minimum quantities, if at all.

With the rude awakening that came with the Arab oil embargo also came the realization that jogging up the old thermostat had some very real consequences on the energy bill.

But a lack of insulation is usually not the only culprit. Older homes were also built less "tight" than newer ones, simply because it was easier for the builder. Again, heating was no problem. You just added cheap heat.

At any rate, most older homes need both more insulation and tightening up before they'll be both comfortable and affordable to heat.

If you want to build a new house or addition, it's a fairly simple matter to have insulation installed as construction progresses, and that's by far the best bet. If you're even thinking of building, be sure to emphasize to your contractor that you want plenty of insulation and that you want your home sealed well, too.

This column deals primarily with those who need to have insulation added, and assumes that the easy installation during construction is not an option.

The first step in doing your homework is to check with your local co-op. They have trained professionals to help you. They can tell you how much insulating capability you'll need in your area, and will offer suggestions on how to best meet that capability, which is measured in R-values.

Please note that it's the R-value that counts, not just the thickness of the insulation.

At any rate, if you're adding insulation in an attic, you may have the option of putting in fiberglass or mineral wool batts (long rolls), or you can have loose-fill insulation blown in.

If you need to add insulation to existing walls, you may be limited to loose-fill insulation, since it comes in bags and can be blown into spaces using special equipment. On outer walls, the installer simply drills a hole in each stud cavity and blows in a certain amount of insulation. Then he reseals the hole.

There are three kinds of loose-fill insulation, and your co-op representative will tell you of his preferences. The first is mineral wool, which is spun smelter slag. Fiberglass is much like it, but is spun from molten glass. Both are about equally environmentally benign, and both have similar properties.

Many experts like cellulose insulation, since it does a good job and uses recycled materials that might otherwise be wasted or wind up in landfills. Cellulose is made from finely chopped paper or cardboard, which is treated for fire retardance and to repel insects.

Installation of some insulation products is beyond the capability of the less handy, but may be a viable option for a home handyman. If you decide to try it, be sure to wear a good respirator, goggles, and suitable clothing. The stuff tends to fly everywhere, and it's extremely uncomfortable if you get much of it on you.

But before you do anything, be sure to talk to the people at your co-op. Ask them for a copy of the booklet, "A Builder's Guide to Energy Efficient Construction Standards." While it's intended to spell out ways to build a new home so it'll be as energy efficient as possible, it has a lot of good information for those who just need to caulk, weatherstrip and insulate. It's a good publication, and it's free.

Visit your co-op today.

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In the photo at left, Teresa displays a "before and after" photo of her mother. The original had been repaired with layers of transparent tape. The new one also has more contrast. In the larger photo, Teresa, surrounded by equipment and stuffed critters, works on an old photo.

Restoring old photos for fun and profit

It is interesting to watch as Teresa Ikemire of Hardinville works. She can take a faded, mangled photograph and make it look like new. "It takes a really good computer program, a scanner, a computer and a lot of work," she says.

Teresa, a Ste. Marie native, had painted come canvases for her husband, Bill, and they bought a copy of the Photo Studio computer program so she could experiment with its built-in art.

"You can use the program to enlarge an image," she says, "or to reduce it. You can put in things that weren't originally there or take something out, and you can colorize a photo, too."

She hadn't had the setup long before she decided to try improving some old family photos, a few of which date back to the civil war. She was astonished at how much better the restored photos looked than the old ones, which hadn't been harmed in any way by the process.

"I got to where I was so pleased with the improvements on my photos, that I decided to make a business of restoring them," she says, "and I had some business cards printed up. I'd had to leave my job at a candy factory for health reasons, and this is something I can do without worrying about my health."

She uses a scanner to digitize a photo, saves it to memory and calls it up on her monitor to work her magic. Once she saves her "new" photo, she can make as many copies as needed, just by using her printer.

"All the equipment is necessary," she says, "but it takes more than that, too. I've done quite a bit of painting, and it helps to understand light and shadow. It makes the difference between a pretty good restoration and a really great one."

You can call Teresa at (618) 557-3513. Her mailing address is 5688 E. 450th Ave., Oblong, IL 62449.

October is Co-op Month!

Toad Lane? Yep, Norris Electric Co-op is descended from a buyers' co-op that was located in a tiny store on that modest thoroughfare in Rochdale, England. It was formed in 1844, and known as the Rochdale Equitable Pioneers Society. Rochdale co-op members bought food staples in quantity and sold them to each other at low prices. The result was the first successful cooperative of the industrial era. The Rochdale pioneers' idea was simply that a group of people could pool their resources to satisfy a common need that they couldn't satisfy any other way. But while co-ops got their start in England, they are a very important part of the American economy today. According to the National Cooperative Business Association, more than 100 million Americans belong to one or more of 47,000 co-ops.

COOPERATIVES EXPANDING PEOPLE'S HORIZONS

There are three types of co-ops: producer-owned, consumer-owned and worker-owned. Electric co-ops are consumer-owned, and, like most co-ops, were organized when nobody else would provide a service people neded. In addition to electric co-ops, consumer co-ops may buy and sell food or heating fuel or even operate childcare facilities. And while many are not aware of it, your friendly credit union is a co-op, too.

Save energy when using your fireplace

With crisp fall weather bringing cool nights to many parts of the country, you may decide it is time to enjoy a fire at night. Before using your fireplace, here are a few tips that will help you save energy—and cut your fuel bills.

Keep the damper closed, when you don't have a fire going in your fireplace. An open damper on a 48-inch square fireplace can let as much as 8 percent of your home's heat escape up the chimney.

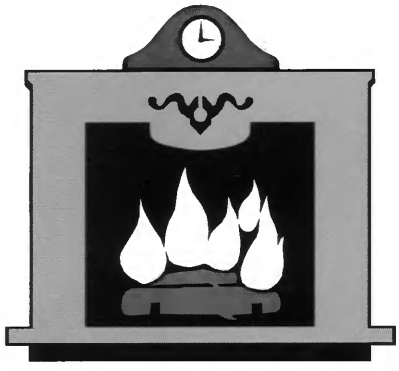
If you use your fireplace to supplement the heat provided by your regular heating system, you can take a few simple steps to make the most efficient use of your fireplace.

First, remember that the heat gain from a fireplace is confined to the room where it is located. At the same time, much of the heat from other rooms can flow into the room with the fireplace and then escape up the chimney. The warm air will be replaced by cold outside air. As a result, your thermostat will sense the heat loss and turn on your furnace.

What to do? While you may want a higher setting for comfort's sake, lower the thermostat to between 50 and 55 degrees F. You'll still lose some warm air through the chimney, but the furnace won't have to work as hard to maintain the set temperature.

And there are other things you should do when using a fireplace. Close all the doors and heat ducts in the room with the fireplace. Then, open a window near the fireplace about an inch, or slightly less. This will reduce heat drawn from the rest of the house and give the fire the air it needs. Don't do this if the fireplace has an outside air supply!

If you have a simple open masonry fireplace, install one of the following: a glass screen,

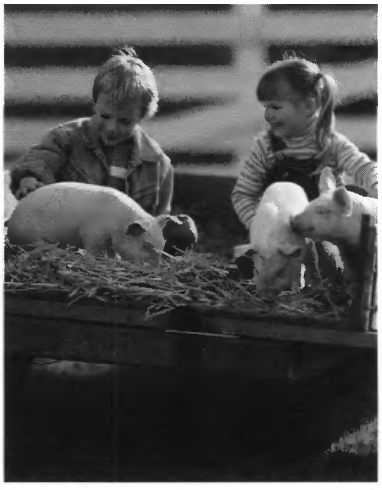


a convective grate, a combination convective grate with glass screen, a radiant grate or a fireplace insert.

Some of these devices will cut down on the loss of warm air through the fireplace chimney and may improve heat recovery from the fire.

With fall here and winter on the way, you may have other questions about how to reduce your heating bills. Contact your local electric co-op for help. Your friends there can provide you with any number of options for winterizing your home

Cooperative Main Street



Providing goods and services for friends, neighbors and community

All across the nation, cooperatives help their communities thrive. There are cooperatives for electric and telephone service, credit unions, farm marketing and farm supply, insurance, health and day care, farm credit, housing, florists and news services. Cooperatives get things done economically, efficiently—and democratically. Building communities the cooperative way benefits the entire nation.

Electric Cooperatives of Illinois

Good for all Illinois

Affirmative action, equal opportunity employers

A sense of security

Families and businesses in most Illinois rural areas and in many subdivisions look to their electric cooperative for a sense of security. These days, security alarms and lighting are not just a nicety, they're a necessity. Your neighbors at the electric cooperative can help you plug into safety.

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Who's responsible for electric facilities?

During the stages of new construction or upgrading of electric facilities, questions about ownership of poles, meter loops, wires and breaker panels are usually asked. When existing electrical equipment has been in place for many years, or if new facilities are required, ownership may not be obvious to the member-consumer.

It's good to know who is responsible for maintenance or repairs and we hope that this article will answer most questions.

Overhead electric service

The Cooperative is responsible for:

- Wires from the transformer to the meter pole and electrical connections on those wires.
- The meter.

The member is responsible for:

- The meter socket.
- The meter loop.
- Fuse and/or breaker panels, including disconnect switches.
- Wires leaving the meter pole to services at other locations such as homes, barns, garages, shops, and connections for those wires.

Underground electric service

The Cooperative is responsible for:

- Wires from the transformer to the meter location or pedestal.
- The meter.

The member is responsible for:

- The meter socket.
- Wires running from the meter location or pedestal to other locations such as homes, barns, garages, shops, and those connections.
- Any disconnect switches, fuse panels or breaker panels at the meter.

Going away this winter?

If you are planning to head to a warmer climate such as Arizona or Florida, please make arrangements for payment of your electric bill. You can call, stop by or send a letter to notify us you will be gone and how long you plan to stay.

Payment of your electric bill can be handled in various ways. You can make an advance payment of your anticipated usage. If you know the address of your winter residence, we can mail your bill to you. Arrangements also can be made with a friend or relative to pay your bill.

In all cases, we would like to know how to get in touch with you or whoever is taking care of your farm or home while you are gone. If there is an emergency or problem with your service while you are gone, it would be a big help to know who to contact.

NEC urges members to be alert for scam artists

Norris Electric Cooperative wants to warn its members of a scam that is being conducted in its service area.

Individuals driving a yellow or orange pickup truck have been posing as representatives of Norris Electric Cooperative.

They inform the resident that they need to do some maintenance work and request payment in advance. Do not give them any money. These people are not Norris Electric Cooperative representatives.

All Norris Electric Cooperative vehicles are either dark green or white, and have a co-op logo prominently displayed. If in doubt, call the co-op office at (618)783-8765 to verify that the person at your home is a Norris Electric employee.

We urge you to call your local police department if you feel you have been approached by anyone operating this scam.

Mushroom business springs up in underground building

From left, Melissa, Gregg, Ralph and Georgianne Weber in their underground farm, with a couple of blocks of mushrooms.

Gregg Weber and his wife, Melissa, have a business that they started largely on a whim. Gregg's father, Ralph, who also works in the venture, notes that he was driving by an old AT&T structure and noticed that it was for sale.

"There was just a small building visible above ground," he says, "but we knew there was a big underground structure there, too. It had been built as part of the national emergency communications network in the early 1960s, and they'd had an open house so the public could see what their millions of dollars had bought. We knew that just the empty building had cost $2 million, and that was just the beginning."

He mentioned to his wife, Georgianne, that the place was on the market, and she'd wondered aloud at the possible uses for such a white elephant.

"About all you could use it for would be to grow mushrooms," he'd replied, and had mentioned the idea to Gregg a little later. He decided to pick up on the idea, and Kevin and Ronda Gurley got involved too, and Weber-Gurley Farms was off to a flying — or rather burrowing — start.

Gregg notes that they didn't know much about growing mushrooms, so he set out to learn, largely by going to a University of Illinois workshop that dealt with specialty crops.

"I learned that you need a perfectly sterile medium to grow mushrooms in," he says, "and we use blocks made up of a mixture off sawdust and millet. When they start producing, they'll grow mushrooms until there are no nutrients left in them. Then we start over."

The climate-controlled building, while stuffy, is perfect for mushroom production, he adds.

"When AT&T left," he says, "everything in the building was either concrete or steel. We've taken a lot of that out and replaced it with wooden racks and plastic mesh to put our blocks on."

For now, they're buying blocks from another producer, but they're working on making their own. They bought a hospital autoclave, which enables them to heat the medium to 250 degrees, under 20 pounds of pressure, to ensure complete sterility.

"We're just getting well into production," Gregg says, "and we're turning out a quality product that's selling really well. We're pleased that we were able to get into this building and put it go good use. The mushrooms are a good form of diversification."

The blocks of growing medium are spaced out on racks the Webers built in the old communications bunker.

Electric vehicles ready for market growth

Electric vehicles are no longer just the stuff of artist's drawings and auto show prototypes. Consumers can purchase electric vehicles now, and, more importantly, there are a number of new models right around the corner. According to the Electric Vehicle Association of the Americas (EVAA), several manufacturers will introduce a variety of new electric cars, minivans and sport utility vehicles before the end of the century.

An "EV" is propelled completely by electricity and, consequently, produces no harmful emissions. (However, EVs do use combustible fuels to power accessories, such as a heater or air conditioner.) While EVs are reappearing for the first time since early this century, their comeback will not happen overnight. EVAA predicts that EVs will become popular with consumers in phases over the next 10 years as technology, especially battery technology, continually improves.

Limited driving ranges are still a problem, as are a lack of recharging stations. While one can purchase a wall-mounted battery recharger for home, these units are often extra. The amount of time to recharge an EV is also problematic. According to General Motors, it takes three to four hours, using a wall-mounted 220-volt charger. A 110-volt "convenience charger" can take up to 15 hours to restore the battery to full power. Not surprisingly, improving battery technology is one of the most important goals of auto manufacturers.

Vehicle fleets are an important early market for EVs because businesses or government agencies can afford the recharging infrastructure. EVAA predicts that as a network of public recharging stations grows, so will the popularity of EVs among individual auto buyers.

Here is a glimpse of seven vehicles that have recently, or soon will, hit the U.S. auto market.

Chrysler EPIC Minivan — Chrysler plans to introduce the EPIC Minivan in model year 1998. EPIC is an acronym for "Electric Powered Interurban Commuter." Initially, Chrysler will target its marketing efforts for the EPIC toward fleet sales. With an advanced lead acid battery, it will have a 100-hp motor, be capable of reaching speeds of 80 mph, and have a range of 60 miles.

Ford Ranger EV — Based on Ford's best-selling compact truck, the Ranger EV will be powered by lead acid batteries and initially targeted to fleet customers. It will have a 58-mile range and a top speed of 75 mph.

General Motors EV1 — A two-seat coupe, the EV1 is the first vehicle in company history to carry a General Motors nameplate that was built from the ground up as an electric vehicle. The EV1 is being offered on three-year leases through Saturn dealers in Los Angeles, San Diego, Phoenix and Tucson. It can reach 80 mph and travel 70 miles in the city or 90 miles on the highway before needing a recharge.

Chevrolet S-10 Electric Pickup — GM also has an electric version of its Chevrolet S-10 pickup truck on the market. Using lead acid batteries, it has a range of 40 to 60 miles and a price tag of $32,795.

Honda EV PLUS — The Honda EV PLUS hit the U.S. market in the spring of 1997 and is available to individual buyers for a $499 monthly lease. It is an all-new, four-passenger electric car and the first in the U.S. market to use advanced nickel-metal hydride batteries. The EV PLUS can reach 80 mph and has a range of 60 to 80 miles.

Nissan Prairie Joy EV — In early 1998 Nissan will introduce the Prairie Joy EV, a four-passenger electric van with a driving range of 120 miles. It will incorporate lithium-ion (Li-ion) batteries - the first time a commercial EV will do so. One of the major advantages of the Li-ion battery is that it achieves a much higher energy density than a conventional lead acid battery or a nickel-metal hybride battery.

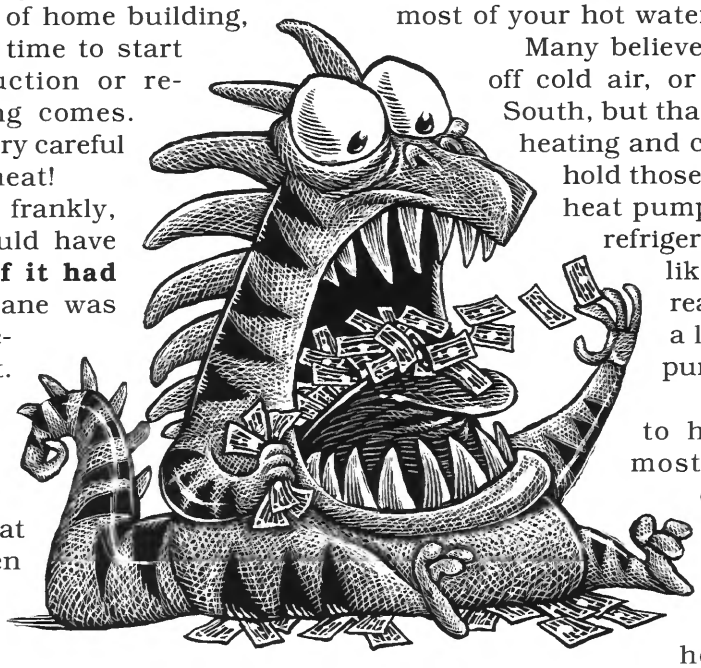
Toyota RAV4-EV — Using advanced nickel-metal hydride batteries, the Toyota RAV4-EV will have a range of up to 130 miles in the city. An electric version of the company's popular sports-utility vehicle, the RAV4-EV will be available in the fall of 1997 to fleet customers in select U.S. markets. Purchase price is approximately $42,000.

For more information about these new vehicles, or about the EV industry in general, please contact the Electric Vehicle Associations of the Americas, 601 California Street, Suite 502, San Francisco, CA 94108. You may call EVAA at (415) 249-2690. If you have access to the Internet, visit their home page at www.evaa.org.

Don't get shocked by high heating costs

If you had a home built lately without first consulting your local electric co-op, you may be in for a shock. Not because of wiring problems, but because you may have made an expensive mistake in choosing your heat source.

Now that 'tis no longer the season to be doing a great deal of home building, now might be a good time to start planning for construction or remodeling when spring comes. Whatever you do, be very careful about your choice of heat!



There was a time, frankly, when natural gas would have been your best buy, **if it had been available.** Propane was next and resistance electric heat came after that. Many assume that's still the case. It's not. The prices of both fossil fuels have climbed dramatically, while that of electricity has been going down, and heat pump technology has been improving.

Electricity, when coupled with a geothermal system or even an air-to-air heat pump, can often blow away the competition.

Before you set out to build — or replace your furnace — visit your local electric co-op. You'll be amazed at all the benefits, including lower cost, electricity offers you. It's surprising how few people even think of installing an electric heat pump or geothermal system in their new home. Most often, if natural gas is available, it gets the first nod. Otherwise, it's propane. In a tight, energy-efficient home, today's geothermal system or electric heat pump is often a better choice.

Please take some time to weigh your heating and cooling options very carefully. If you plan to install central air conditioning, you're only one small step away, in terms of equipment and money, from a very efficient whole-house heating and cooling system: an electric heat pump.

Geothermal systems are more expensive to install because of the geothermal heat exchange loop installed in the ground. However, they are very economical when you calculate the long-term benefits and operating cost.

Air-to-air heat pumps are also very efficient and give you the added bonus of central air conditioning in the summer. Geothermal heating and cooling systems can deliver efficiencies as high as 300-400 percent, returning as much as three to four times the heat for the amount of energy they use. They heat, cool and can provide most of your hot water needs.

Many believe that heat pumps give off cold air, or are only good in the South, but that's not true. Even some heating and cooling contractors still hold those outdated beliefs about heat pumps. If you look at cars, refrigerators, TV sets and the like from the '70s, you'll realize that they've come a long way. So have heat pumps.

Your co-op friends want to help you squeeze the most you can from your energy dollars. They can help you do that by showing you the operating and installation costs of electric heat pumps and geothermal systems versus those systems using fossil fuels. You'll find the numbers are very pleasing and, in some cases, almost unbelievable. When you compare the numbers, you'll see why co-ops are so excited about the benefits of new geothermal and heat pump technology.

Your co-op's goal is to see to it that you're as happy in your new home (or with a new system in your present home) as possible. They can achieve that by helping you think about your home's energy needs, including adequate insulation, high-quality windows, and the best heating and cooling system possible. If you make the wrong energy choice — one you'll have to live with for years to come — you won't be pleased, and neither will they.

Now is the time to make good energy decisions, before you build. Once the contractor hands you the keys, it's too late. Contact your co-op before you start to build. They'll refer you to a reputable and certified contractor for a comfortable home at the most reasonable cost. You'll be happy with a home that's snug and affordable to heat and cool, and they'll be happy with a satisfied member.

Talk to them before making that decision.

Norris Electric News

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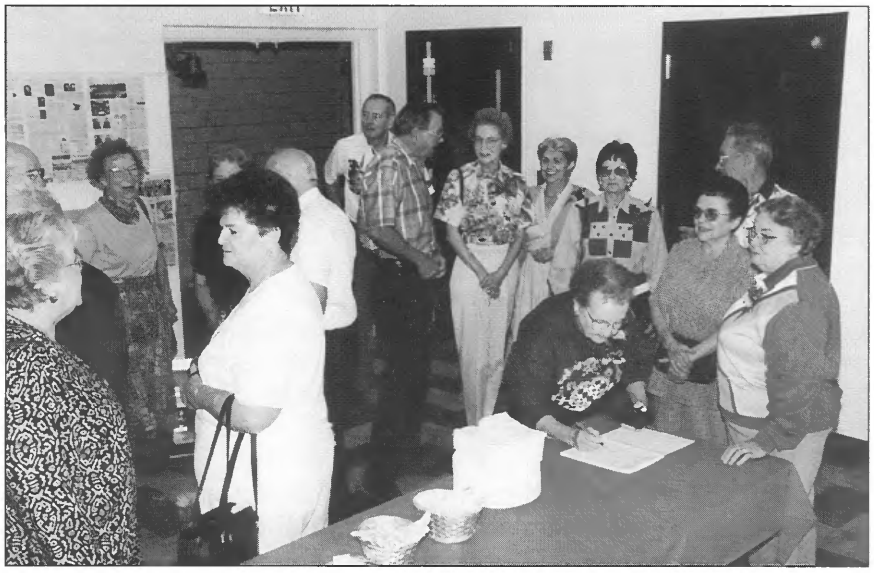
NCHS Class of 1947 celebrates reunion with brunch

Some 36 members of the Newton High School Class of 1947 attended the Saturday morning brunch on October 4, and took a minute to have their picture made.



Visiting classmates took advantage of an opportunity to renew old acquaintances while waiting to register for the event.

The Newton High School Class of 1947 held its class reunion brunch at the high school on Saturday, October 4, and Norris Electric Cooperative was well represented. Ernest Weber, manager, and his wife, Marilynn, were there, and so were several co-op members. Mr. and Mrs. Ted Marrs, Mr. and Mrs. Mervin Reisner and Mr. and Mrs. Norman Benefiel came out for the festivities, and so did Mr. and Mrs. Burl Shull, Mr. and Mrs. Paul Henderson and the Eugene Wagners. Member Joe Probst also showed up.

While those people came a little ways, there were several who had to make a fairly serious trip to get to the reunion. John and Janice Ragon came in from Vandalia, Ohio, and Bob and Rita Clark wheeled in from

Indianapolis. Mabel Law and Max Turner came from Lansing, Michigan.

Three couples came up from Florida. Bob and Barbara Robards came from Crestview to visit with old friends and acquaintances, Jack and Eileen Delahunt came from Naples, and Paul and Betty Whitehead came from Lakeland. Loretta and Don Woods came from El Paso, Texas, for the event.

While many of those who have moved away headed south, the western U.S. was well represented. Carl Brunson came from Las Vegas, Nevada. California was represented by Clifford and Mary Utley of San Bernardino, and Mac and Daniela McCord of Sacramento.

It has been said, only partly in jest, that reunions are things people get together at to see who's coming apart, and there was a lot of good-natured ribbing about midriffs and hairlines, as might be expected.

Those attending had an opportunity to look at a memorabilia board made up of various clippings from the past. The board was assembled by NEC member Donna Keller. They were also able to visit with their class sponsor, who noted that she remembered the class of 1947 as having "the prettiest girls and the orneriest boys."

All in all, it was a good opportunity to mingle and catch up on old times. We were pleased to see many old friends who had come from faraway places to visit. And we were also pleased to be reminded how many people there are who enjoy our area enough that they still live here, in God's country!

There was a good turnout for the event, and classmates were able to visit with people they hadn't seen in years. The memorabilia board in the background was put together by NEC member Donna Keller.

Several co-op members are pictured here, including Burl Shull, Mr. and Mrs. Paul Henderson, and Mr. and Mrs. Norman Benefiel.

Some old buddies take a moment to pose for a snapshot in front of a 50th anniversary display. From left are Cedric Wright, Jim Yates, Jack Wheat, Robert Fear, Jack Delahunt and Ernest Weber, manager of NEC.