

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

Prototype microwave clothes dryer

The speed and convenience of microwave cooking may soon apply to drying clothes. The electric utility industry's research arm, the Electric Power Research Institute (EPRI), recently completed the prototype of a microwave clothes dryer that promises to bring the benefits of microwave technology to wash day.

The prototype not only dries clothes faster, it also saves more than 20 percent of the electricity used by conventional dryers. It is also less damaging to wool and other sensitive fabrics. Because temperatures required to heat clothes are lower with the microwave dryer, there is a corresponding reduction in wear and shrinkage. With the new technology, some delicate fabrics that ordinarily would be sent to a dry cleaner can be dried at home.

Conventional dryers heat air blown into a drum to temperatures as high as 350 degrees. Within the drum, clothes move in arcs so the heat can reach them. Because of evaporation from clothing, which cools the air blown into the drum, the heat transferred to the surface of wet clothing typically causes clothing temperatures to climb from 110 degrees to 160. Heat is conducted into the fabrics and water is carried out as vapor. High temperatures are needed to shorten drying time, which decreases efficiency and weakens fabrics.

By contrast, the microwave dryer targets water molecules clinging to the clothes rather than molecules constituting the fabrics. Air that is typically not heated is directed to the water and leaves the fabric largely unheated. Temperatures inside EPRI's experimental unit generally do not exceed 110 degrees, a cooler temperature appropriate for drying delicate fabrics. Greater energy efficiency is achieved because air and clothing are not heated. Rather, the water molecules are heated, not unlike a microwave oven. But EPRI officials caution not to try this at home with your microwave oven. A microwave oven is not optimized for drying clothes because it does not have the air flow necessary to carry away moisture. Also, unless clothes are continually turned over and exposed to air flow that carries moisture away, they will remain wet for a long time.

Field testing of the microwave clothes dryer is scheduled for 1993. The major problem confronting scientists now is excessive heating of metal objects. They say metal buttons and zippers are not a problem, but thin metal objects such as bobby pins can heat up and scorch clothing. EPRI wants to perfect the microwave dryer and eliminate this problem before it is placed on the market.

Reader prize

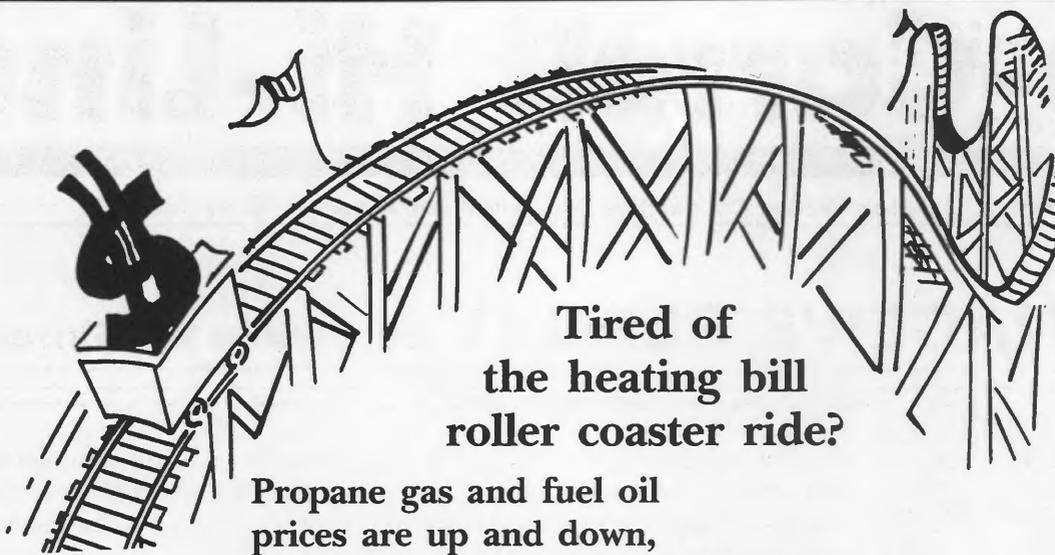
Each month, we print the name of a Jo-Carroll member who is eligible to win a monthly \$25 readership prize. If your name is printed in this month's edition, and not a part of any story, contact Jo-Carroll and claim your prize no later than the 10th of the month following publication.

Office hours

7:30 a.m. to 4 p.m.
Monday through Friday

Outages and emergencies

call 858-3311
24 hours a day



**Tired of
the heating bill
roller coaster ride?**

**Propane gas and fuel oil
prices are up and down,
and they're never down for long!**

But heating *electrically* — with all its advantages of safety, cleanliness and quiet comfort — lets you budget smoothly through the season, with stable prices and low, off-peak rates to save you even more money.

Get away from the ups and downs of heating bills. Contact Jo-Carroll Electric Cooperative.

Blinking digital clocks and trimming trees

Coming home to a digital clock flashing "12:00" is an annoyance at best. It's a tell-tale sign that your power has been interrupted, even if for only less than a second.

It may be small consolation, but it's highly likely that the power "outage" lasted only as long as it takes a tree limb to touch a power line while swaying in the breeze.

Most systems that distribute electricity use protection devices on their lines. When these devices, called reclosers, sense a disturbance, they actually open or by some other means break the circuit and very briefly interrupt the flow of electricity through that section of line.

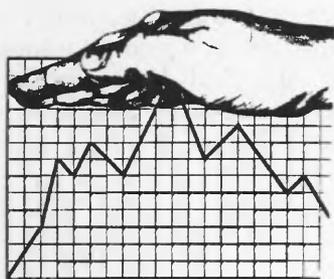
This disturbs your digital clocks or timers, true, but it also protects the equipment and in many cases, prevents a prolonged outage. The protection device recloses reconnecting the circuit. If the disturbance that tripped the device in the first place is still present, it will interrupt service again briefly and try to reclose again. Most protection devices will go through this process three times before the line goes dead.

The disturbance to the line is often caused by tree branches. This explains why most electric utilities have an aggressive tree-trimming program in place. But, back to the flashing clocks.

There are some solutions to the problem. You can buy digital clocks and appliances with back-ups for the digital display. These days, many clocks, timers on computers, video tape recorders and kitchen appliances are designed to take a battery that will take over during power interruptions. Call your co-op for other suggestions.

Think about your landscaping plans and don't plant trees near the line, or recognize that branches may be trimmed when or before they grow near lines. You may want to report trees that need to be trimmed away from power lines, but by all means, don't try doing so yourself. Any contact with live electrical lines is life-threatening.

Peak nights cost big bucks



With the arrival of winter, we are in the season of the highest electrical demand for the cooperative. This means that we must build all equipment from the power plant down to the wires to your house to handle the anticipated load on the coldest nights of the year.

In recent years, the wholesale cost of power that we pay for the energy that is delivered to your homes and farms has begun to more clearly reflect the cost of the power. Since energy used at the highest peaks of the year is what determines the need for equipment from the plant to your home, peak usage now basically determines what our cooperative must pay for its share of this equipment.

Quite simply, Dairyland Power Cooperative, which supplies our power, needs approximately \$60,000,000 per year for demand-related expenses. At the end of the winter, Dairyland looks at the five highest one-hour peaks that occur on the system and then determines what percentage of that total demand we at Jo-Carroll Electric Cooperative used. We then get billed for that percentage of the \$60,000,000. For the typical Jo-Carroll member, nearly 30 percent of the total yearly power bill will be determined by what is used during these five peak times. We have made great strides in managing our demand by the use of our load management equipment, which now is tied into nearly all the electric water heaters on our system and 155 electric heating loads. These devices save cooperative members nearly \$200,000 in demand charges every year.

We also need member cooperation to save even more. If each member would do his or her part to reduce peak usage between 5:30 p.m. and 8:30 p.m. on those nights that have a 10 degree or colder wind chill, we could all save even more money on our wholesale energy bill.

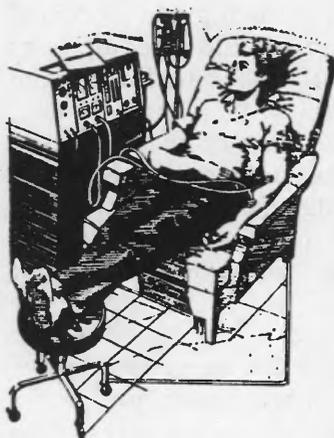
Think about the potential costs/savings that this offers. A car heater or electric space heater (1.5 kw) that only runs those five key hours could add more than \$150 to the wholesale power bill for the next year. Drying clothes with an electric dryer during these five hours could add nearly \$600 to the wholesale cost of power. Think about it for a moment — drying clothes at the wrong time could equal half the total energy bill for a house for a year. Ten horsepower of milking equipment running on peak adds more than \$1,000 to the total wholesale bill. Even little things like Christmas lights can add up substantially. Five hundred watts of Christmas lights running during the peaks could cost \$50 in demand charges.

We encourage all members to do their part to reduce our demand during the early evening hours on cold evenings. Please refrain from using any unnecessary electric loads during these hours. The impact of your usage will not only affect power costs today, but also tomorrow.

If we reach certain thresholds of power usage at peak time, we must again start new power plant construction. If or when this occurs, demand costs will rise dramatically from the levels of today. When the next generating plant is build, it will be too late. We will all pay for it. Right now, however, what we do at peak times can and will affect the need for the future generating plants and what we do on cold evenings this year will directly affect the price we pay for energy in the next decades. Even your children and grandchildren will be affected by what you do at peak times as early as this winter. The day will probably come when individual members will be charged for energy based on their individual usage at peak times. Metering technology is evolving to that point, and already many large power users are billed in this manner. When that day arrives, members will directly see the impact that their peak demand has on their bills.

Until that time, however, if each member uses energy responsibly during peak times, we can all benefit from the reduced cost of energy. Through cooperation and responsible usage at peaks, we can control energy costs next year and into the next decade. Every bit of help saves us all money.

Life-support equipment



Jo-Carroll Electric Cooperative strives to maintain the best possible service to all of our members. Uninterrupted service would be a manager's dream — never an outage call. In reality, though, there are many factors present in the environment that are working against that dream: wind, lightning, ice storms, faulty equipment, trees, animals, and vehicles are a few examples of things that come into contact with the line to cause outages. In addition, many of the maintenance jobs that our crews perform require the line to be de-energized. These are planned outages and are usually quite short. Nevertheless, if someone were dependent on life-support equipment that operates on electric power, the planned outage could be very serious.

In this issue we are running a clipout form to return to us if you are utilizing such equipment, as well as the steps to take in case of an outage. Your cooperative needs to know the names and locations of our members on life-support equipment, and we keep a registry of these on file in our office. We will make every effort to give priority to restore service on life support systems.

James Dewberry

Life-support registry

If you or a members of your family depend on life-support equipment, please fill out the form below and mail to us.

Name _____

Phone _____

Address _____

Location number _____

Type of support equipment _____

Days of use _____ Time of use _____

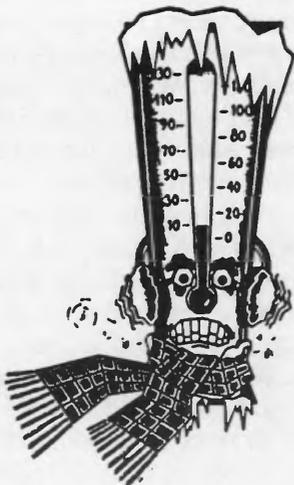
Do you have an emergency standby generator to operate this equipment?

Yes _____ No _____

Mail the above form to:

Jo-Carroll Electric Cooperative, Inc.
P.O. Box 390
Elizabeth, IL 61028

Learn To Recognize Hypothermia Symptoms.



Older people are especially susceptible to hypothermia — a reduced body temperature that can be life-threatening. But anyone, regardless of age, can suffer from hypothermia.

Watch for these symptoms in others:

- Poor coordination and slowing of pace
- Thickness of speech
- Blueness of skin; dilated pupils
- Weak or irregular pulse

And, in yourself:

- Intense shivering; fatigue
- Feeling of deep cold
- Intense thirst
- Poor articulation and coordination

Check with a health-care expert or agency to find out more about hypothermia and the proper first-aid tips you should follow. Or, check with us on how to get additional information on becoming hypothermia-smart.

A health message from your local electric cooperative.

Jo-Carroll Hi-Lines

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Shireman

Your annual meeting

Your member-owned, member-controlled electric cooperative will conduct two of the most important events in the cooperative's year during the next few weeks.

The first event, one that is very significant in that it firmly places democratic control of your rural electric system in the hands of its member-owners, is the director elections. This year the directors representing Districts 2, 6, and 9 will be up for election, and the nominating committees met at the cooperative headquarters on January 19, and selected the following candidates for election:

District 2 — Blenda Weinen, 4471 W. Stagecoach Tr., Galena, IL 61036
Stanley Cox, 4693 N. Broadway Rd., Apple River, IL 61001

District 6 — Thomas Lundy, 6701 N. Airhart Rd., Savanna, IL 61074
Keith Rath, 6853 N. Elizabeth Rd., Mt. Carroll, IL 61053

District 9 — John Janssen, RR 2 Box 125, Chadwick, IL 61014
Dan Nye, RR 2 Box 32, Chadwick, IL 61014
Bart Ottens, RR 2 Box 84, Mt. Carroll, IL 61053

The election for directors from these districts will be conducted through the mail. Only members who reside in the districts in which elections are being held this year will receive ballots. Members in those districts should carefully review the material they will receive in the mail and promptly return their completed ballots to Jo-Carroll Electric.

The second upcoming important event, perhaps the most important of the year, is the 54th Annual Meeting of Jo-Carroll Electric Cooperative members. This meeting is scheduled to be held March 20, at the River Ridge School Gymnasium in Hanover. As in the past we will feature reports of directors, officers and the manager of your cooperative. A guest speaker, musical entertainment, a box lunch and attendance prizes will be provided to all Jo-Carroll members who attend. More details about the annual meeting will be provided in the coming weeks. We urge all cooperative members to make plans now to attend.

Virginia Palmer

Mark your calendar!!

March 20

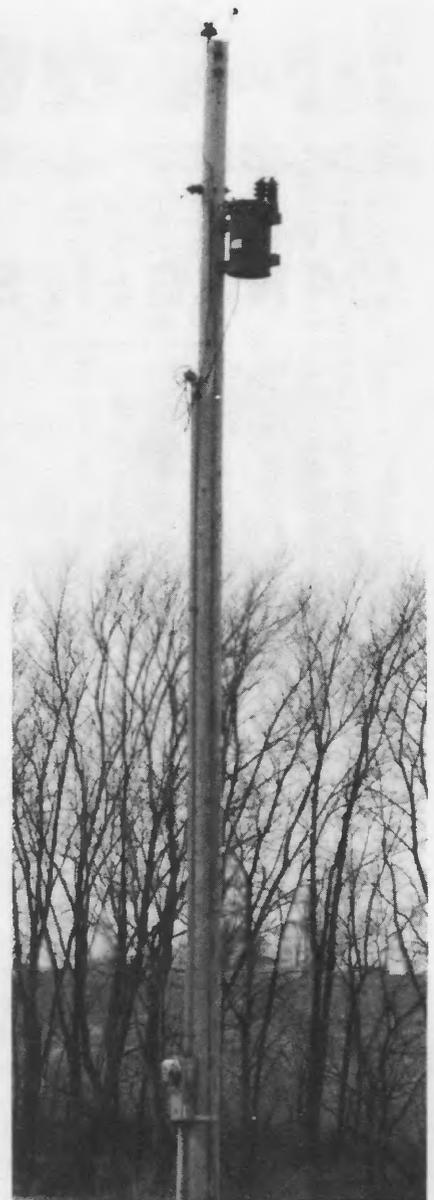
Jo-Carroll Electric Cooperative
Annual Meeting

March 1993

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			



The pad-mount transformers are used with underground lines. These are often spotted near subdivisions.



Pole-mount type transformers found near homes or businesses transform high voltage into a lower, more usable form.

Frequently asked question: Why does a transformer buzz?

Most people know what a transformer is. It is often described as "the thing that looks like a round can" near the top of a pole. However, many people are not aware of the function of that transformer. Just what is it? What does it do? Finally, why does it buzz?

That "round can" is a steel tank containing thousands of feet of wire coiled around a special laminated steel core, and then filled with an insulating oil. The buzz or hum you hear is caused by the vibration of the metal core edges or laminations. The vibrations are the same frequency as the power being transformed (60 cycles at Jo-Carroll). Transformers increase voltage for efficient long distance transmission and then lower voltage for use at farms, homes and businesses.

When electricity is generated at a power plant, its voltage is low, less than 30,000 volts. To be sent over transmission lines for long distances, the voltage must be given a boost. Transformers at generating stations increase it as much as 765,000 volts.

Reaching the area where it is to be used, electrical voltage is reduced through substation transformers. It travels at 7,200 volts through Jo-Carroll Electric's distribution lines to your farm, home or business. The voltage is reduced to your requirements — 240/120 volts for most services.

Transformers vary in size and style. It is not unusual to find one rated 1,000 kilovolt amperes (kva) or more serving a big power user. A typical new home is usually rated 10 or 15 kva (roughly 10 to 15 horsepower).

The pole-mounted "round can" style is the most recognizable. Found at sites where electricity is provided through underground lines are the pad-mounted styles.

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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.

Low voltage is still a danger

A lot of people who would not go within 50 feet of a high-voltage power line fearlessly play around with 120-volt household current without giving a thought to whether it is dangerous or not. It is, and it can give a deadly shock.

About 1,000 people are electrocuted every year in the United States, and here is how some of these accidents happened:

- A do-it-yourselfer using a defective electric drill in the basement is electrocuted when he touches a metal laundry tub.
- A woman, whose basement was flooded by heavy rains, wades through the water to reach her freezer. She is electrocuted when she touches the lid of a shorted electric freezer.
- A child dies when he plugs one end of a detachable appliance cord into a wall socket and puts the other end in his mouth.
- Two children die when a radio falls into the bathtub where they are taking a bath.

What causes electric shock?

Actually, it's not the number of volts that causes shocks, but the amount of current (amperage) that enters the body, how long the shock lasts and the path which the current follows.

One milliamperere (1/1000th of an amp) passing through the skin creates a tingling sensation. Only seven to 10 milliamperes can rob you of muscle control so that you can't let go. One hundred milliamperes (just 1/10th of an amp) can kill if the shock lasts for one second or longer.

Current's effect on the heart

Usually, the current passes in a hand and out of a foot, which may not be too bad. The real danger lies when the current passes in one arm, through the chest area and out the other arm. When this occurs, the current can paralyze the respiratory muscles, causing breathing to stop.

Such paralysis may last even after the person is disconnected from the electrical source. Too, the current can strike the heart, causing fibrillation, resulting in instant electrocution. The heart goes into unsynchronized fluttering cutting off blood and oxygen circulation to body cells, including the brain.

Because the way electricity works, low voltages surprisingly can be more dangerous than high voltages. A heavier jolt can "clamp" the heart and prevent fibrillation. People have been known to recover from comparatively large jolts of electricity, while smaller amounts, under certain conditions, can kill.

Ecowatts: electricity with ecology in mind

Some technologies can perform work better with electricity than with other fuels. That's an old premise with a new a name: ecowatts. According to Mark P. Mills, the energy consultant who came up with the name, ecowatts means using electricity instead of another fuel and gaining benefits for the global environment, with a side benefit of gaining convenience or economic advantage or even easing local pollution. He uses lawn mowers as an example.

A standard gasoline mower with three horsepower uses a quart of gasoline in two hours. The same job can be done with electricity using 2.2 kilowatt-hours (about a tenth of what a home uses in a day). Burning the gasoline releases 36,800 BTUs of heat. By contrast, the electricity creates 24,400 BTUs, an increase of one third in efficiency.

Also, over a seven-year lifetime, an electric lawn mower would cut carbon monoxide, hydrocarbons and other pollutants, and that's important in a country that has about 84 million lawn mowers.

Jo-Carroll Hi-Lines

Jo-Ca

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

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Shireman

Hope, a small town

Before November 3, 1992, Hope, Arkansas might never have appeared in the World Almanac, except for its prize-winning watermelons. But on that day the town joined Independence, Missouri, Abilene, Kansas, and over 30 other small towns that have sent their sons to the White House.

Seems that small towns have a way of bringing up youngsters with virtues Americans admire — like realism about the present, optimism about the future, and the determination to get things done. Over the years, we ourselves have learned what small towns and rural communities can do.

Back when our homes had no electric light or power, we rolled up our sleeves and went to work. We built the nation's rural electric co-ops, and lit up the countryside. We've had our sleeves rolled up ever since, helping with all kinds of imaginative efforts to stimulate local economies, create jobs, improve health care, and strengthen education.

From a tradition of cooperation and community spirit deeply rooted in millions of members across the nation, rural electric cooperatives are continuing to show how the country gets things done — with new ideas, new energy and, sure enough, new hope.

Brad Lutz

High winter bills?

As winter winds down (finally!) and spring shows signs of making a welcome arrival, do you look back on your winter electricity bills and think that they might have been higher than they should have been? Many people do. As a matter of fact, many of our members comment on the size of their winter bills.

While we have some idea of why members' bills are higher during the winter — ours are too — we do not know specifically why a particular individual's electricity usage is up. We do not know because we are not the ones who used the power. We have an idea, because we have a similar situation, however.

It is sometimes difficult to determine where all that power went because we use electricity for so many things, so many times a day, without really thinking about it: It's that convenient.

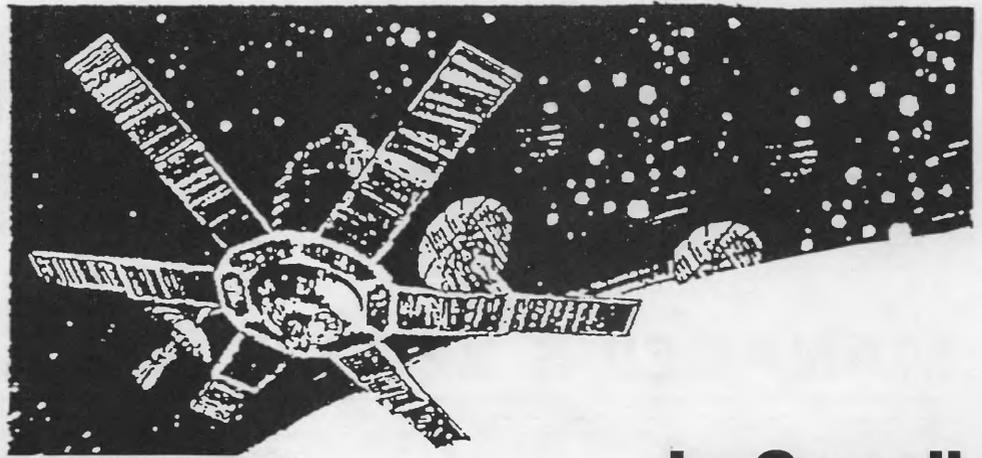
As we look at our usage, we think of several reasons winter hits us in the pocketbook. For one thing, there's the holiday cooking and baking. We used our lights a lot because the days were so short, and we had some Christmas decorations going, too. Most heating systems require the use of electric power, and sometimes run nearly constantly when the temperature outdoors plunges.

Portable space heaters, used to add just a little more warmth to that one place, add some to the bill. Electric blankets and heating pads are used more, too, and so are clothes dryers.

And, with so much cold and darkness, the TV set gets more of a working out. For many, it's couch potato time.

All these factors add up to make winter a more expensive time of year when it comes to electric bills.

But think what winter would be like without all that help from electricity!



Jo-Carroll Electric Cooperative

Satellite dish needed

\$15.00 hookup fee

Choose your own programming

HBO/Cinemax/Disney – All three \$20.95 per month

Disney – \$7.95 per month

HBO/Cinemas – \$14.95

HBO – \$7.95 per month

HBO/Disney – \$14.95

Cinemax – \$7.95 per month

Cinemax/Disney – \$14.95

****Special offer for new hookups only – Good through June 1, 1993, HBO & Cinemax \$7.95 for both.**

**Expanded Basic Package \$15.95 per month . . . includes all basic programs
Plus: Arts & Entertainment, PrimeTime 24, Superstar Plus**

Basic package – \$9.95 per month and Prime Network

CNN

WPIX New York

ESPN

WGN Chicago

Headline News

The Weather Channel

CBN The Family Channel

Country Music Television

USA Network

The Discovery Channel

Nickelodeon

The Learning Channel

Lifetime

The Nostalgia Channel

KTVT Dallas

The Nashville Network

The Travel Channel

Superstation TBS WTBS Atlanta

G-5 Package – \$8.95

Includes: Arts & Entertainment, CNN, Country Music TV, Discovery, ESPN, Family Channel, Headline News, Nashville Network, USA Network, WGN, WTBS



You must have a signal decoder to receive programming.

Phone (815)858-2207

Look up and be safe!



This time of the year most people are outside enjoying the nice days . . . cleaning up, making home improvements, getting into the fields or just enjoying the nice weather.

Whatever takes you outdoors this spring, remember to look up and be safe! Electric lines, both overhead and underground, can be deadly!

Whether you're moving tall farm equipment, flying kites, cleaning gutters or planting trees, be aware of the electric lines in the area. Jo-Carroll Electric Cooperative, your member-owned utility, wants you to be safe and sound this spring. Electricity is a wonderful, often taken for granted servant. But remember not to take those electric lines for granted—they can be deadly!

Look around!

Watch the overhead power lines in the farmyard and near the fields! These lines carry deadly, high-voltage loads. Any contact between the lines and augers, combines, antennas or other equipment might be deadly.

Don't fly kites . . .

. . . near power lines. Spring is ideal kite-flying weather, but keep those kids and kites away from the utility lines. Electric lines and kites form a deadly combination!

Call before you dig!

Putting in a brand new garden or planting trees this spring? Be sure that you don't plant or dig near underground power lines. You might be shocked to find buried cables by accident. If in doubt, call Jo-Carroll Electric to find the location of underground lines in your area.

Look up around the home or farm!

When you are carrying metal ladders, long boards, pipes or poles, remember to be on the alert for any utility lines in the yard. When you're on the roof making repairs, cleaning gutters or working on an antenna, be alert for any power lines within reach.

During emergencies . . .

stay clear of fallen electric lines. Call your electric cooperative immediately! Never assume that a fallen power line is dead!

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When you think about electric utilities, remember . . .

There Is a Difference!

Even though all electric utilities face common problems—and often arrive at the same, or similar, solutions to those problems—there are still major differences between electric cooperatives and investor-owned and municipal electric utilities.

Illinois electric cooperatives serve only 5% of the state's electric consumers. Cooperatives receive 4% of the electric revenues, yet they maintain 34% of the total miles of electric distribution lines serving consumers in Illinois. System investment and maintenance costs are primarily related to miles of distribution line; ability to pay increased cost is primarily a function of consumer density, or meters per mile of line.

Electric cooperatives are working closely with other electric suppliers to meet their common problems. At the same time, when urbanized areas grow into cooperative service areas or new commercial or industrial loads offer potential to increase a system's revenue density, electric cooperatives are capable of serving those loads and stand ready to use all legitimate avenues to maintain the territorial integrity of service areas they have developed. To do less would be to abandon the interests of member-owners of the electric cooperatives.

Consumers (Per Mile Of Line)		
Distribution Cooperatives	Investor-Owned Utilities	Municipal Utilities
4	43	83
Revenue (Per Mile of Line)		
Distribution Cooperatives	Investor-Owned Utilities	Municipal Utilities
\$6,066	\$80,474	\$119,732

Consumers per Mile of Line

Low consumer density means high investment per consumer served by an electric distribution system. This is a built-in handicap which electric cooperatives have had to overcome as they seek to achieve rate parity between their members and the customers of investor-owned and municipal electric utilities.

Revenue per Mile of Line

With about 10 times the consumer density, investor-owned public utilities receive approximately 13 times the revenue per mile received by electric cooperatives. Municipal electric utilities have approximately 21 times the consumer density of electric cooperatives, according to published reports, and receive approximately 20 times the revenue per mile of line.

Density Compared with Size of Distribution System

While serving 5% of electric consumers and receiving only 4% of electric energy revenues, electric distribution cooperatives have constructed and maintain 34% of the electric lines spread over approximately 80% of the land mass of Illinois. These numbers demonstrate dramatically the handicap electric cooperatives face as they seek to improve the quality of life within their service areas.

Consumers Served	Revenue	Pole Miles of Line
5%	4%	34%

Electric Cooperatives of Illinois

Good for ALL Illinois

Jo-Carroll Hi-Lines

Jc-Ca

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

Getting things done

Editor's note: This column was written by Bob Bergland, general manager of the National Rural Electric Cooperative Association.

One especially encouraging priority of the Clinton Administration agenda is its emphasis on investing in the nation's infrastructure. Improvements to roads and bridges are usually cited as examples of the infrastructure priorities needed to keep the country productive and competitive. Other equally important parts of the infrastructure for any modern economy include a strong education system, access to health care, water and sewer systems and, of course, reliable and affordable electricity.

These are the building blocks for a nation as well as for the communities that make up that nation. Aggressive attention to such things can only strengthen our ability to improve the quality of life for all citizens.

Rural electric systems provide an essential part of that infrastructure — the electricity that our increasingly high-tech society needs in order to function.

But that's only the most obvious part of what we offer. The rural electric program is also a proven pipeline for delivering on the promise of reinvigorating the general rural infrastructure. As locally owned utilities, we know what our communities need and how to get things done in our towns and counties. The rural electric co-op is often one of the biggest, most sophisticated businesses in town. It has computer know-how, project planning capability and experience dealing with government at all levels.

Since their beginning, rural electrics have successfully assisted in the whole range of activities that strengthen not just the rural economy, but the economy of the United States.

We achieve all this in ways that ought to be especially attractive to an administration that stresses building partnerships between government and business, and that is properly concerned about the enormous federal deficit. We efficiently combine private enterprise with public investment, and provide an enormous return on that investment.

REA could be the model for how to make private-public partnerships work. As the population continues to grow, the directors, managers and employees of rural electric systems do the hard work of making sure new homes and new businesses have the power to provide new jobs so the rural economy can keep pace with the nation and the world.

And this is done at a cost that ought to be copied by more government programs. Last year REA electric and telephone loan programs cost the government some \$250 million. What do we get for that investment? An indispensable contribution to an agriculture industry that's the envy of the world and the salvation of our balance of trade. The preservation of communities that the people of this country still look to as keepers of our traditional values like honesty and hard work. Places where people like to vacation and retire in large part because they have things like electricity.

One more thing — REA loan repayments provide the U.S. Treasury with about \$3 billion a year in income.

The economists would say that rural electrics "leverage" a relatively small investment in REA loans into enormous benefits. We say that's how rural people get things done.

REA also works with rural electrics on other essential areas of rural

(Continued on page 12d)



Connie M. Shireman, manager of Jo-Carroll Electric Cooperative, congratulates Stanley Cox of Apple River after his election to the member-owned utility board. From left are reelected directors Thomas Lundy of Savanna and John (Jack) Janssen of Chadwick. The election was conducted by mail balloting prior to Jo-Carroll's annual meeting Saturday, March 20. Results of the elections were announced during the meeting.

A look at the future

Jo-Carroll Electric Cooperative officials focused on the member-owned utility's future in their reports during Jo-Carroll's 54th annual meeting March 20 at River Ridge School in Hanover.

Richard H. Reusch of rural Elizabeth, using the theme "Our Framework for the Future" for his president's report, said electric cooperatives' responsibilities today are not unlike those of 50 years ago during the beginning of rural electrification. Reusch said the members elected as directors today have the same fundamental responsibilities as the directors elected 50 years ago: "Be sure the cooperative is a strong, viable business organization and a reliable source of electric energy for our membership."

"By conscientiously fulfilling our duty as a director, we are assuring that the framework for the future will be in place for our children and our children's children," Reusch added.

He cited several components of this framework, including Jo-Carroll's dedicated employees, its strong financial position, a well maintained distribution system, its highly serviceable headquarters building, and the cooperative's strong commitment to local and regional economic development activities.

"It is true that many challenges face a board of directors each month at the board meeting and that the concerns of the moment sometimes seem to be overwhelming. However, this board of directors recognizes the importance of not only fulfilling our monthly jobs as directors, but also having the foresight necessary to prepare the framework of the future that our succeeding directors will find Jo-Carroll Electric Cooperative in as good or better shape than we found it when we took office," he said.

Manager Connie M. Shireman expanded on Reusch's comments about the directors' stewardship responsibilities, saying, "Their goal is to leave the system in as good or better shape than they found it. This is also true of a general manager."

Shireman reminded members of the not-for-profit nature of electric cooperatives. "As you know, an electric cooperative does not make a 'profit'

like other power companies do. We do, however, strive to retain member equity that will help keep us in a sound financial position to obtain the necessary capital to keep the system strong," she said.

She outlined a number of maintenance and new service projects that took place in 1992, adding that the cooperative's outage record in 1992 reflected the maintenance and improvements undertaken. "As recently as 10 years ago, Jo-Carroll averaged 3.28 hours per member per year of outage time. Last year that number fell to 1.3. That is a dramatic improvement in the quality of service to our membership."

Shireman cautioned members about possible changes in the financing program for electric cooperatives. "We recognize and support President Clinton's efforts to control federal spending and reduce the deficit. We also support the President's goals to revitalize the national economy.

"We are, however, concerned that the President's proposal to reduce the federal subsidy for electric co-ops is the only electric utility subsidy slated for reduction. It leaves untouched the subsidy afforded the municipal electric systems and would increase the subsidy of the investor-owned utilities, providing for an investment tax credit for a two-year period.

"We don't oppose the federal assistance provided to other utilities, but we do oppose singling out the subsidy for rural electric systems."

Thomas H. Moore, general manager of the Association of Illinois Electric Cooperatives, Springfield, continued on the subject of the Clinton Administration's proposal to reduce federal assistance to electric cooperatives. He said the critics of the rural electrification program today echo opposition expressed 50 years ago when electric cooperatives were struggling to bring the benefits of electricity to areas that private power companies could not or would not serve. He cited the Chestnut Mountain ski resort as an example of the type of rural economic development that drew criticism from program opponents when it was established. He said no one today can question the benefits that project and other development in Jo-Daviess and Carroll counties have provided and continue to provide to the area's economy.

During the meeting, results of mail voting for directorships in Districts 2, 6 and 9 were announced. Incumbents Thomas Lundy of Savanna (District 6) and John (Jack) Janssen of Chadwick (District 9) were reelected. Stanley Cox of Apple River defeated incumbent director Blenda Weinen of Galena in the balloting in District 2.

Treasurer John Janssen reported that revenue totaled \$5,429,278 in 1992, down slightly from the 1991 revenue of \$5,447,014. The decline was attributed to mild weather conditions throughout the year. Janssen added that margins in 1992 totaled \$351,734.

Larry Heagle, a comedian and musician, was the special guest speaker. The band Delta provided music during the lunch, which was furnished by Jo-Carroll and served by the Jacobstown Community Club.

Stanley Cox is new Jo-Carroll Electric director

Stanley Cox, a dairy, hog and beef farmer, is the newest member of the board of directors of Jo-Carroll Electric Cooperative. Cox, who lives near Apple River in Jo-Daviess County, was elected in mail voting just prior to the 54th Annual Meeting of Jo-Carroll, which was held March 20 in Hanover. Results of the election were announced at the meeting.

Cox and his wife, Sharon, have three children: Michelle, of Apple River; Kimberly (Mrs. Larry) Voigts, of Belmont, Wisconsin; and Boyd, of Scales Mound. (Boyd and his wife, Tricia, operate a dairy farm they purchased recently.) Cox has farmed since 1959, and he has been at his present farm since 1966. He is a director of the Jo-Daviess Holstein Club, a former school board member for the Warren district and a former county board member in Jo-Daviess County. They are members of the Apple River Methodist Church.

(Continued from page 12a)

infrastructure. Recent, modest REA programs provide assistance to improving access to health care, to bringing satellite television technology to rural schools, allowing them to offer a greater variety of courses, and even to helping directly with rural development programs that bring a variety of jobs to rural communities.

This enormously successful government-industry cooperative venture is carried out through local utilities owned by the people they serve. If President Clinton hadn't already written a book called *Putting People First*, it could be the title of a book about the rural electric program.

As the White House and Congress look for ways to put into action their plans to pump up the nation's infrastructure, they couldn't do better than to assure a strong REA and network of rural electric systems. They won't find a more broadly based, willing and able partnership.

It's how the country gets things done.

Fernado Fantalla

Getting the most out of your air conditioner

One of the best ways to ensure that you get the most from every fuel dollar is by keeping your cooling system in top working order. The following are items that can reduce the running time of your air conditioner resulting in cost savings and more comfort for you in the hot summer months ahead.

- Air conditioning systems should be checked by a service person once a year. A service technician will check the air conditioner to see that it is in good working order. This should include a check of the refrigeration unit itself, lubrication of the fan motor and a look at the refrigerant connections.
- Between checkups, replace the air filters every 30 to 60 days and clean dust and dirt off the condenser coils. A dirty air conditioner filter or leaking refrigerant will reduce the efficiency of the cooling system and increase your energy consumption.
- If the condenser unit is located outside your house it should be shaded from the sun to conserve energy. When shading the condenser, be careful not to obstruct the flow of air.
- When buying an air conditioner, be sure to check the EER — the energy efficiency ratio. The higher the EER, the less electricity will be used to cool the same amount of air. You may find an energy guide label instead of an EER on the unit. This label allows you to compare energy efficiencies and annual operating costs of all similar units.
- Watch your thermostat — you can save about 3 percent of your air conditioning bill for every degree you turn up the thermostat.
- Turn off lights during the day — most of the electricity they use makes heat, not light.
- Don't use heat-generating appliances, such as dishwashers, during the hot part of the day.
- If using a room air conditioner, make sure that drapes and furniture are not blocking the air flow.
- Caulk the cracks between your room air conditioner and the window frame.
- Close off unused rooms. If necessary, weatherstrip the doors or use a fabric draft stopper at the threshold.
- It may also be a good time to inspect your home to see if it is properly insulated or needs changes made to better manage your energy resources.

Office hours

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Outages and emergencies

call 858-3311 24 hours a day

Reader prize

Each month, we print the name of a Jo-Carroll member who is eligible to win a monthly \$25 readership prize. If your name is printed in this month's edition, and not a part of any story, contact Jo-Carroll and claim your prize no later than the 10th of the month following publication.

Jo-Carroll Hi-Lines

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

Some items of interest

As we leave behind a most unusual winter, I have a few odds and ends of special interest to Jo-Carroll Electric members:

- This spring and summer, Jo-Carroll will continue our meter testing program. We have purchased and equipped a van that will be used for meter testing. Jo-Carroll tests meters on a 10-year rotation, and the meters that were last tested in 1983 will be done in the coming months. Approximately 700 will be tested.

- The Rural TV program is now offering an after-hours support service. By calling 1-800-333-9711, our members can obtain dealer referrals, descrambler swaps, or unit rehits 24 hours per day. Please call Jo-Carroll during working hours, but on the weekends or evenings the 800 number will put you in touch with a service rep.

- Another service recently added to the Rural TV program is the free "Preview Package," which can also be ordered 24 hours each day. The package has 22 channels that can be watched for free for a five-day period by calling Jo-Carroll during working hours or 1-800-333-9711 other times. You can then either subscribe to the programs or the channels will automatically be scrambled again after five days.

- Don't forget that Jo-Carroll is a member of "JULIE," the underground locating service. Before you dig anywhere you suspect that there may be underground wires, please call 1-800-892-0123, and allow 48 hours time for the locating to be done. The operators will call Jo-Carroll and any other utilities that may have facilities in that area. Please don't call the Jo-Carroll office directly, as we now have to have all these calls routed through the 800 number.

- Jo-Carroll continues to offer the "Main Street Messenger," the "smart" telephone that is also a personal emergency response service. Jo-Carroll is a member of CRC, the Cooperative Response Center, which monitors these phones, 24 hours a day, 365 days each year. In an emergency, pushing one button that is located on a pendant will automatically dial CRC, which can go into immediate voice contact with the person or call an ambulance if necessary. The telephone has a large lighted dialing pad, as well as visual ringing and memory keys that accommodate persons with vision, hearing, or dexterity handicaps, but are ideal for anyone.

- This is the time to "tune up" your air conditioners for the coming summer. A little preventive maintenance can improve its performance later.

- This is also the time that children are out flying kites and climbing trees — make sure that your children know to stay away from power lines — they can be deadly.

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The Old County Poor Farm, originally built in the 1870s, near Galena on Blackjack Road, has been restored and remodeled and now houses "Fried Green Tomatoes."

Fried Green Tomatoes

When Ron Kahn speaks of food, he uses his hands to gesture, his eyes dance, and his obvious love of the restaurant business shines through. Ron says, "When we put together the menu for 'Tomatoes,' we went through old Italian and French cookbooks, we researched 'peasant' style cooking and the Italian 'cacciatore' style, and we strived to create new, unique dishes, as well as prepare the old traditional favorites."

The reason Ron is so excited lies in the fact that he and his wife, Sandy, along with their partners, Joe and Darlene Regan, have opened a new restaurant, "Fried Green Tomatoes," in the old county "poor farm."

This structure, located on Irish Hollow Road just off Blackjack Road about three miles east of Galena, was built in the 1870s as a "poor farm" for the county and has lain idle for many years. A local developer has completely renovated and remodeled the building, and the new partners have created an upscale, though reasonably priced restaurant. Jo-Carroll brought in a primary line for the new 600-amp electrical service.

The new business has seating for over 200 inside on several levels, and more seating is available at outdoor tables on patios and balconies, as well as a bar and lounge area. The restaurant will serve dinner nightly beginning at 5 p.m. After June 1, "Tomatoes" will be open for lunch



Left: The dining room illustrates the degree of renovation. Below: The sign that greets visitors.



daily For reservations, call 815-777-3938.

Ron and Sandy have been in the restaurant business for several years in this area, founding and operating at various times such establishments as Kahn's Kove on Apple Canyon Lake, Grant's Place and Cafe Italia in Galena, Gadzooks in Plateville, and Pasta O'Shea's in Dubuque. After operating in these locations, Ron is quick to point out "At 'Tomatoes,' we have plenty of parking." He also mentions that reservations are suggested, but walk-ins are welcome if they have room.

Two other buildings on the site that were also part of the county poor farm are being renovated at this time. One will be a 32-unit inn that is scheduled to open soon. The other building, an old barn, is being converted to an entertainment complex that will offer a wide variety of programs and events in the future.

The menu at "Fried Green Tomatoes" will feature traditional Italian dishes as well as unique speciality items, fresh seafood, steaks that are hand cut and priced by the ounce, duck, and a complete wine and beverage list. All meals are cooked to order, and all desserts are prepared on site.

Ron and Sandy Kahn are old friends of Jo-Carroll, from the days when they operated Kahn's Kove on Apple Canyon Lake, served by the cooperative, and their home, also on the co-op's lines. Ron commented, "I've been associated with Jo-Carroll ever since I came into this area, both at my home and at the Kove, and I have always enjoyed a good business relationship with them."

We at Jo-Carroll feel the same way about the Kahns, and we wish them and their new partners great success in the new venture.

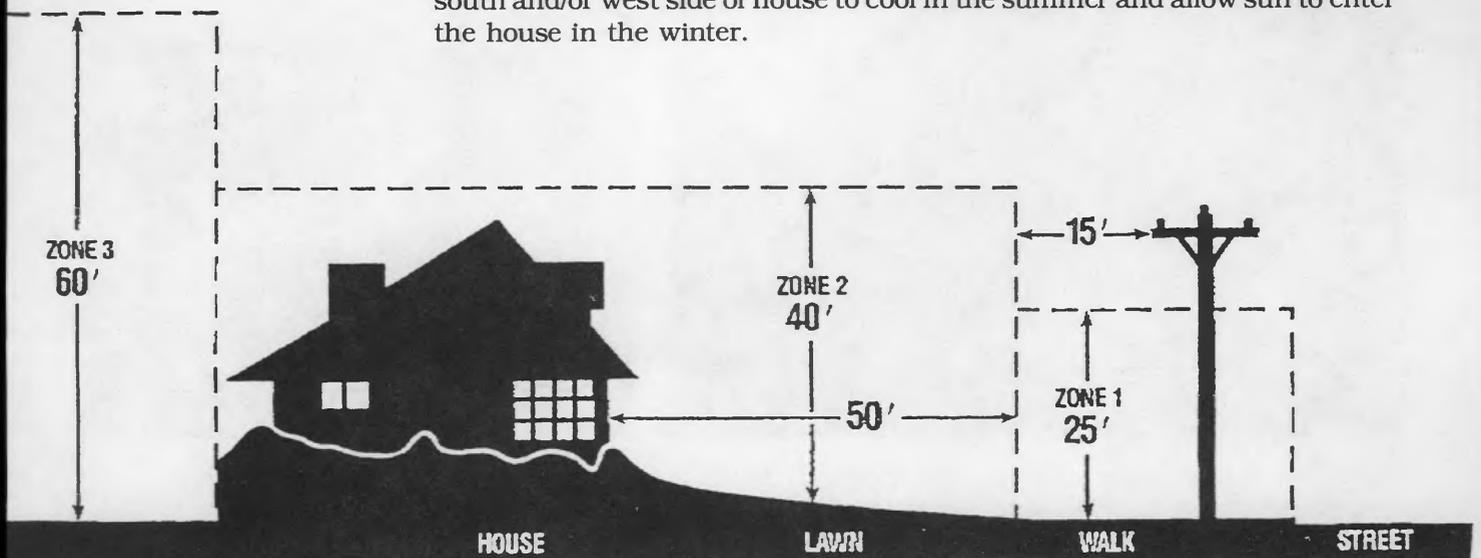
Proper places for trees around homes

(Planning for the future)

Because different trees have different mature heights, special attention must be paid to where you plant each tree. Good landscaping helps frame your home, rather than hiding it, and also incorporates use of plant material compatible with existing facilities. Planting the right tree in the right place will enhance property value and prevent costly maintenance trimming and damage to your home. Good landscaping will also utilize shrubs and low-growing trees compatible with electric utility lines. Low-growing trees will not reach electric lines and, therefore, will not create power outages to you or your neighbors. **Robert McIntyre**

Windbreaks — should be evergreen planted on west or north side of house, approximately 50 feet or more from house.

Temperature — Deciduous (leaf dropping) trees should be planted on the south and/or west side of house to cool in the summer and allow sun to enter the house in the winter.



Zone 3

Trees that grow 60 feet in height

Larger types of trees can be used here, however, the tree planting should consider your neighbor's view or his own planting of flower beds and trees. Large trees should be planted at least 35 feet away from the house for proper root development and to minimize tree damage to the house or building.

Zone 2

Trees that grow no taller than 40 feet

This zone which takes in mostly lawn area is used to decorate or frame your house instead of hiding it from sight. Trees should be selected first, then shrubs can be planted to complement the trees.

Zone 1

Trees that grow no taller than 25 feet

This zone ends 15 feet away from electric utility wires. If you have further questions concerning the planting of trees near electric lines located away from homes, call your local electric utility, as these lines may be of a higher voltage and require greater clearance distances.

Your nurseryman will gladly help you select the proper tree.

Jo-Carroll Hi-Lines

Jo-Ca

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

Member rights, responsibilities and advantages

We hate to admit it, but sometimes we have a tendency to forget that **all** of our customers haven't **always** received their electricity from an electric cooperative. You may not all know about the advantages of receiving electricity from an electric cooperative — your rights, your privileges and your responsibilities.

If you receive your electric service from an electric cooperative, you should know:

- You are a member of the cooperative and as a member you are legally part-owner of it.
- You have a right to attend your annual members' meeting and to vote on directors of the cooperative.
- You have a responsibility to keep up with developments affecting your cooperative.
- Your cooperative was established by local activists at a time when existing utilities refused or neglected to serve the area where you live now.
- Most electric cooperatives have received loans from the federal government to build and extend their systems. Some subsidy is involved, but this is not unique in the utility business. All types of electric utilities, including the investor-owned utilities (IOU) and municipally owned utilities (Muny), benefit in one way or another. In fact, studies show that federal subsidies to electric cooperatives are not as large as those to the IOUs and Munies.

Why do I receive REN magazine?

Electric cooperatives began publishing periodicals such as this in the 1940s to communicate with their members when the cooperatives were being attacked in extensive advertising and publicity campaigns.

Today, distorted and otherwise inaccurate information is still a problem and the attacks by our competition continue today.

Your electric cooperative relies on the REN magazine, not only to relay information about your business, but also to encourage you to use electricity wisely and safely. Promoting electrical safety can help save the lives of cooperative members and can save money.

Promoting wise use of energy can benefit you in a number of ways, including these:

- Helping shave electricity use during peak periods of the day or season. Lowering peak demand helps hold the line on everyone's rates. We here at Jo-Carroll Electric Cooperative will be doing that by using load management controls on your electric heat and water heater.
- Helping our members make informed decisions in purchasing new, efficient technology, such as the ground source heat pump and the new energy efficient air source heat pump. These two comfort conditioning

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appliances operate three to four times more efficiently than the highest efficiency fossil fuel furnace. They can do this because instead of burning a fuel to make heat, they simply move existing heat from one place to another. In the case of the ground source heat pump; it moves heat from the earth, where the temperature is a constant 50 degrees year round, into your home. The air source heat pump moves heat molecules from the air into your home.

When something comes up, Jo-Carroll Electric won't let you down

Wind, rain, summer or winter storms are just a few things that can cause damage and interrupt your electric service.

Our professional and experienced crews are trained to put things back in order as fast as possible.

As your locally owned electric cooperative, we take pride in serving our members. Our commitment to you and our community is to never let you down, no matter what. In fact, every member of the co-op staff — from linemen to receptionists and managers, full-time or part-time — is there to assist you.

So when trouble pops up, so do we. It's all part of being a co-op. And we wouldn't have it any other way!

Nairn Kilpatrick

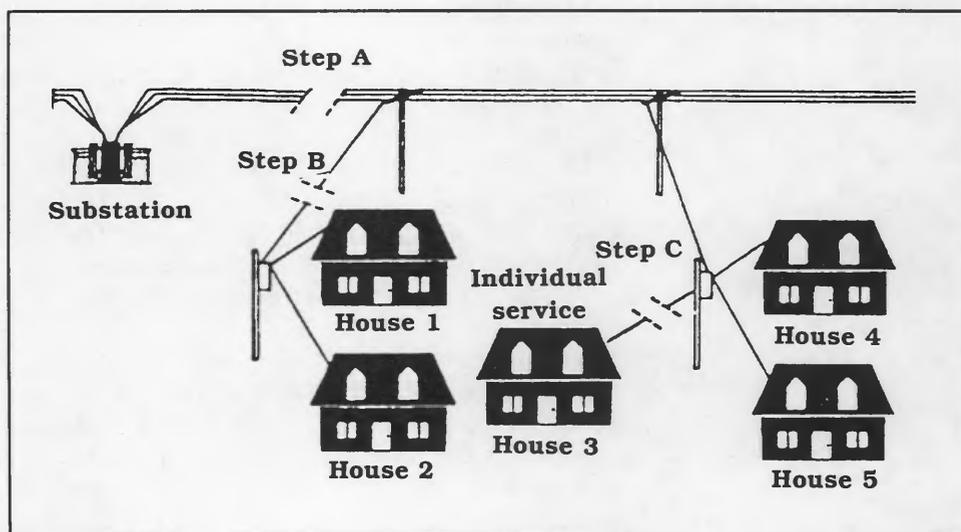
How does a co-op decide which electric lines to fix first?

When an outage occurs, restoring electrical power is often a complicated process. Damage done by wind, ice or other bad weather usually occurs at several point in the distribution system. The idea is to get the power back on for everyone in the most efficient manner.

When a widespread outage occurs, the first location the repair crew checks is the substation.

Linemen then work their way out on the main distribution line, restoring service to the main feeder lines, then lines serving groups of homes and finally individual consumers.

Fixing the power at an individual home first is useless if the main line is dead. No electricity would flow into the home anyway. By repairing the main line first, many more people would have their power restored.



The diagram shows that Step A would be repairing the main distribution line. Since there is no damage leading to houses 4 and 5, this would automatically restore their power. Next (Step B), the problem with the tap line leading off the main line would be cleared up. This would restore power to houses 1 and 2. After the high voltage lines are repaired, power to individual members (house 3 in the diagram) would be restored (Step C). The entire system would then be in good working order.

A blown fuse or tripped breaker

You have a blown fuse or a tripped breaker. Don't just reset the breaker or replace the fuse and forget it. Investigate the circuit to find the problem.

That blown fuse or tripped breaker is your electrical protective system sending you a message. A message that there is a problem that needs your attention.

The problem might be as simple as a bad breaker, although fuses and breakers rarely go bad.

The problem might be as serious as a short circuit that could cause fire or electrocution.

Fuses and breakers do not interrupt the circuit for no reason. When your electrical system talks to you, be sure and listen.

What to do if a fuse "blows"

1. Unplug the appliance causing the problem.
2. Shut off the main power switch on the fuse box.

If a circuit breaker is tripped:

1. Unplug the offending appliance.
2. Reset the circuit breaker according to instructions (call an electrician if you need help).
3. Replace the burned fuse with a new one of the correct size.
4. Turn on the main power switch.

NOTE

ALWAYS keep a flashlight and extra fuses handy; stand on a dry surface when touching fuse/breaker box.

Never use a penny or aluminum foil to replace a fuse.

If you can't find the problem and the circuit breaker or fuse keeps shutting off the power, call an electrician.

Outdoor work a pleasure with electric tools

Tired of pulling your guts out to start your lawn mower? Is your gas-powered weed trimmer refusing its meals? Are you fed up with food from your patio grill that tastes like crude oil? Are the mosquitoes threatening to carry you and your loved ones away?

Often, it is too hot for hassles. Fortunately, there is an electric alternative for almost every outdoor task — from mowing grass to lighting the charcoal to zapping bugs — that will leave more time for enjoyable pursuits.

One flip of a switch on an electric mower takes the place of repeated and often fruitless pulls on a starter rope. An enlightened member says, "You usually can't hear for two hours after using a gas mower. If everyone used electric mowers there would be a lot less noise. All you hear with an electric is the click of the grass being cut."

An electric weed trimmer never runs out of gas and its fuel doesn't need mixing. A couple of electric bug zappers can replace countless cans of insecticide — without harming the environment.

And if you've ever suffered through a cookout unable to get the charcoal started (despite repeated dowsings with lighter fluid), try an electric charcoal lighter. This device is a coil that works like the burner on your electric stove. You place the coil on a bed of charcoal, cover it with more charcoal, and plug it in. Minutes later the charcoal is ready to use, without the fuss, the explosion, the smell or the taste of lighter fluid.

Better yet, get an electric grill. These grills are safe, with no open flames or danger of explosion. Use hickory or mesquite chips to create the flavor of a charcoal fire without the mess. And they are efficient too, costing about 15 cents per cookout to operate. Turn it on high for 10 minutes and it's ready to cook.

Often, yard work leaves a mess of leaves and grass clippings behind. Cleanup is no problem with an electric leaf blower. This device is a powerful fan that directs a blast of air where you point it. They come in handy when

autumn drops a tree full of leave in your yard.

If painting the house is on your "to-do" list, trade in your brush for an airless paint sprayer. Painting with a sprayer eliminates brush marks and actually uses less paint than a brush or roller. And it can cut in half the time it takes to paint.

If the cord is a problem, cordless equipment is available. In the past, rechargeable, battery-powered equipment lacked power. New technology has changed this, however. Cordless models may be your best bet if you don't have a lot of outdoor electric outlets.

If you invest in battery-powered equipment, do the recharging at night when demand for electricity is traditionally low.

In many cases, adding strategically placed outlets is cheaper than buying several extension cords. Generally, 200 feet is the longest practical length for an extension cord. Beyond this, a voltage drop occurs that may cause your equipment to function improperly. The National Electrical Code specifies a ground fault circuit interrupter (GFCI) for any outdoor electric outlets. The GFCI will shut off the power quicker than the blink of an eye should a short circuit occur. If your home doesn't have GFCI outlets, you should consider replacing them. In any case, always use three conductor cords and double-insulated tools.

Given a choice, most people would rather go fishing than cut the grass at this time of the year. So why not make your yardwork as pleasant as possible? Do it electrically.

ATTENTION:

Electrical contractors, metal and pole building distributors, farmers and grain bin distributors

Jo-Carroll Electric Cooperative wants you to be aware of changes in the 1990 edition of the National Electric Safety Code that are continued in the 1993 issue.

These changes specifically address the minimum clearance requirements for overhead conductors around grain bins. Buildings of any design or material must also meet these requirements and **the plan must be approved by our Engineering Department prior to the start of work at the construction site.**

In discussing the site plan with our engineers, questions about distances from our lines can be answered or suggestions made concerning the layout so as to eliminate any problems that may arise during or after the erection. If, as the only alternative, our facilities have to be rerouted or revamped to accommodate the construction, the owner of the bin/building will be billed for that cost. But, it is usually cheaper to do the work before the structure is built than after the fact.

If the site plan is not approved by Jo-Carroll Electric Cooperative; and if the bin or building is erected in violation of the N.E.S.C. requirements; the cooperative must then alter our facilities to accommodate the construction. The owner of the bin or building will be billed for the cost of the alteration and the service will not be connected until the full amount of the invoice has been paid.

We strongly urge you to contact our Engineering Department before any definite purchase or erection plans are concluded. It will save all concerned parties much anguish, frustration and money.

Jo-Carroll Hi-Lines

Jo-Ca

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

**If it blinks —
it's working**

The spring and early summer of 1993 has brought us an unusual number of lightning storms. Besides all the rain, these storms produced many "blinks," momentary outages to the electrical system. Jo-Carroll's members are served by a complex system of electric distribution lines subject to many possible occurrences that cause momentary outages or "blinks."

Blinks in your electric service are usually an indication that something has come in contact with the electric lines. Usually these problems can be traced to tree limbs, squirrels, birds, lightning and even cattle or horses rubbing against the guy wires. When the electric line senses a problem, the breaker (which is located on the power line) goes into operation. The breaker will shut the line off for just an instant so the line may clear itself. If it doesn't clear the first time, it may blink two or three times before it shuts the whole line off. Then, a cooperative line crew will be dispatched to clear the line. Were it not for these breakers out on lines doing their jobs, lines and substations could be destroyed, causing many consumers to be without power.

We realize these blinks are a nuisance to our member because of the need to reset digital clocks and VCRs, etc. However, these blinks are a blessing in disguise. If it were not for the oil-filled reclosers (automatic circuit closers that reset after the blink), each of these instances may have been a long

(Continued on page 12d)



U.S. Rep. Donald Manzullo of the 16th District cast an important vote for electric cooperatives during voting in the House of Representatives in late June in Washington, D.C. Rep. Manzullo met in May with Connie M. Shireman, Jo-Carroll Electric Cooperative manager, during a legislative conference in Washington. Manzullo supported electric cooperatives' position regarding loans from the Rural Electrification Administration.



The Center Hill School, located on Rt. 64 between Mt. Carroll and Savanna, will have all of the classroom lighting upgraded this summer.

Center Hill School lighting project

When 150 fourth through sixth grade students return to the classrooms this fall after their summer vacation, they will be doing the 'readin,' 'ritin' and 'rithmetic' under new, highly efficient lighting. This improvement is a result of School District 304, Jo-Carroll Electric and Dairyland Power Cooperative's efforts to conserve energy at the Center Hill School.

The Center Hill School, located on Highway 64 between Mt. Carroll and Savanna, was built in 1954. Jo-Carroll extended service to the new facility, which utilized energy efficiency measures that were the best available at that time. One example of the energy efficiency of the building was the installation of fluorescent lighting in all the classrooms, rather than the normal incandescent type lights. These fixtures and lamps have served the school well, but lighting technology has improved on the fluorescent design in the last 39 years since the school was built, and over the summer the lighting will be changed.

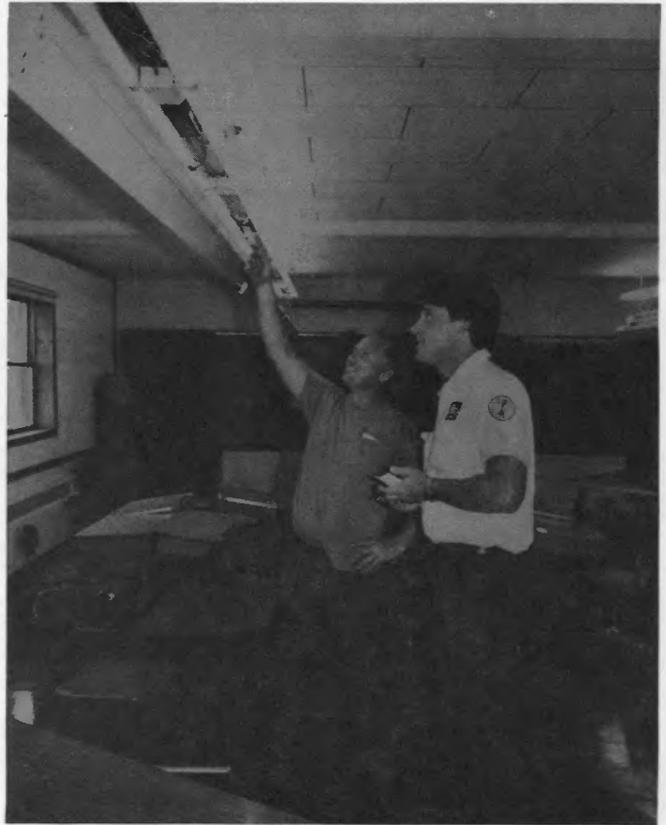
The school has 234 light bulbs (fluorescent tubes) and 117 ballasts, for a total of 11,232 watts of lighting. The new lighting will be rated at 7,020 watts, and actually give off more light. The energy saved will be 4,212 watts or the equivalent of removing 42 100 watt bulbs. The bulbs are used about 2,400 hours per year, so the school will save approximately 10,108 kwh, or about \$800 per year, while improving the quality of the lights.

Dairyland Power Cooperative (DPC), the supplier of wholesale power for Jo-Carroll, extended rebates on the energy efficient lighting ballasts, and the school has taken advantage of the additional savings. The DPC involvement is a part of the overall load management program, with the effect being the same as a water heater or dual fuel control. "We are attempting to curtail the need for future power plants," said Jeffrey Springer, an energy

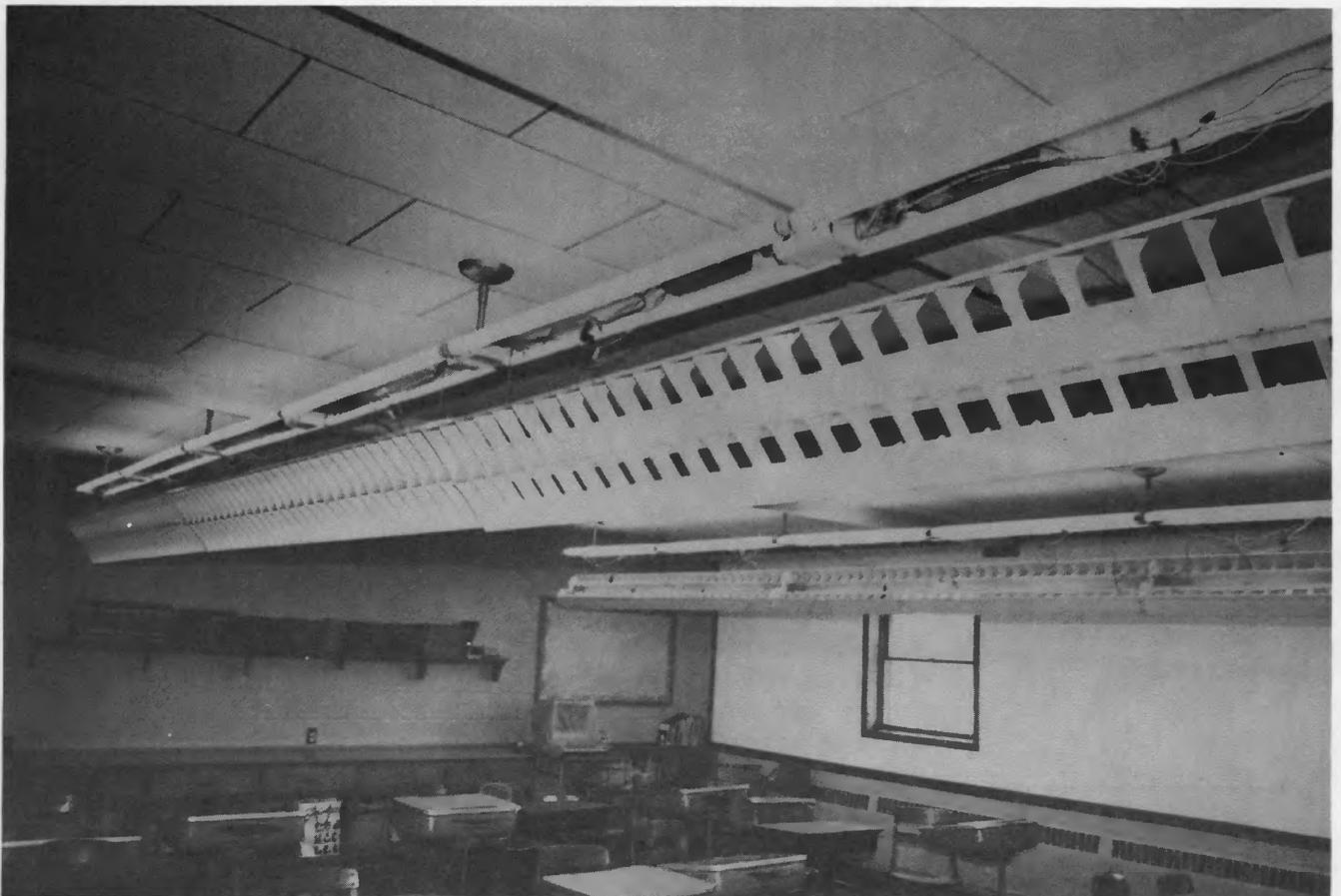
management engineer for DPC. "Any time we can reduce the peak demand, it benefits all of the cooperative's members," he said adding, "The rebate on the ballast allows the school to purchase a better, more efficient electronic type that provides additional reduction in energy consumption over the normal ballast that would be used."

The conversation of the lighting fixtures is being done by George Kruse, a local electrician who also works for the school district. George has already done the same type of conversion at other schools in the district. His comment was, "I really appreciate Jo-Carroll and Dairyland helping out with the rebate — it lowers our overall cost for the job and allows us to get the better ballasts. Another benefit of this project." George said, "The lighting will be brighter for the student, and the color values and the color tones of the new lighting are much better than the old type, so this project will also help the students, and that is what we are here for."

Jo-Carroll's marketing director, Don Schleicher, agrees with George. "This is a win-win-win-win project. The students will have better lighting, the school will save on operating costs, Jo-Carroll will reduce the peak demand, and DPC can defer the need for additional generating units. We are very pleased to take part in this project."



George Kruse, the electrician who will do the lighting upgrade, points out the old style ballast to Don Schleicher of Jo-Carroll.



A typical old style light fixture consisting of one ballast for two bulbs. The fixtures will remain and new bulbs and ballasts will be installed.

Shelly Callan

(Continued from page 12a)

outage. Jo-Carroll Electric regrets these inconveniences, but is pleased that not all "blinks" were lengthy outages.

Electronic equipment such as microwave ovens, digital clocks, VCRs and computers are so sensitive that the slightest blink may cause interruptions. All electric utilities experience these brief outages, and these appliances are the biggest "tattletales" for electric utilities. In most cases, if it were not for the clocks you would never know the power had "flickered" or gone off for a short time.

We have no control over squirrels, birds, lightning, cattle and horses, but we can have some control over trees and tree limbs. If you see limbs on the main lines, please contact us — we'll be out to cut the limbs out of the lines.

Remember — the next time you see your lights blink, you know the system is working right!!

Taking the heat off your air conditioner

It's "be kind to air conditioner" season — when taking a few important precautions will help your air conditioner keep you cool for less!

- **Weatherize** your home! This includes insulating your ceiling, sidewalls and floor; weatherstripping and caulking around windows and doors; and adding storm windows to those not needed for ventilation. You see, the same measures taken to keep heat in during winter months also keeps heat out in hot weather.

- **Ventilate** your attic! Teamed with full attic insulation, proper ventilation can lower your cooling costs by 30 percent or more! Without it, your attic can reach oven-like temperatures of 150 degrees or more. If not removed, this scorching air will radiate downward, causing your air conditioner to work harder and use more electricity.

- **Landscape** for coolness. Shade trees, especially on the south and west sides, will block out much of the sun's heat. Wide roof overhangs, window awnings and plant-laden trellises also help shade your home.

- **Close** drapes or window shades on sunny side of house.

- **Choose** light-colored roofing and siding to repel the sun's harsh rays. A dark roof can actually require up to 20 percent more air conditioning capacity than a white roof!

- **Cook**, iron, wash and schedule other heat-producing chores for the morning or cooler evening hours.

- **Plan** meals in all-day slow cookers, electric skillets or other small appliances. They keep a kitchen cooler than does your range or oven.

- **Run** exhaust fans in kitchen, laundry room and bathroom to carry heat and humidity outdoors. Make sure dryer is vented to the outside.

AND, REMEMBER TO . . .

- **Locate** your window air conditioner or the condenser of your central system on the shady side of your house. Avoid placing near shrubs or clothes dryer vent.

- **Place** a window unit in center of area to be cooled, away from corners and hallways. Don't block air circulation with drapes or furniture.

- **Insulate** air conditioning ducts in a central system.

- **Set** thermostat as high as comfort allows. Thermostat should be on an inside wall away from heat-producing appliances.

- **Clean or replace** your air conditioner's filter at least once a month.

Reader prize

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Office hours

7:30 a.m. to 4 p.m. Monday through Friday

Outages and emergencies

call 858-3311 24 hours a day

Jo-Carroll Hi-Lines

Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

Weather and outages

The summer of 1993 saw record flooding throughout much of the Midwest. Jo-Carroll Electric was affected by the flooding, as can be seen from the photos and story in this month's Jo-Carroll Hi-Lines. However, before the flooding were storms. What seemed like an endless string of thunderstorms traveling through our service area dumped gallon after gallon of rain that accumulated into the flood waters that became so notorious.

The June storms had one very visible by-product that affected all of Jo-Carroll Electric Cooperative's members: outages. We "track" or keep outage records by number of consumer-hours out of power. This means that if one consumer was out for one hour, that would be one consumer hour of outage time. By the same token, if 10 consumers were out for one hour, or one consumer was out for 10 hours, this would equal 10 consumer hours of outage time.

In "normal" month, such as May of 1993, Jo-Carroll has 600 consumer hours of outage time. Normally, Jo-Carroll averages about 6,000 consumer hours of outage time per year. In 1992, we had 5,050 consumer hours of outage time. This would average to each and every member of Jo-Carroll being out of power for about one hour and 10 minutes in the course of one year.

Richard Woodruff

June of 1993 was the exception. During June, we had more than 11,000 consumer hours of outage time logged. This is one of those "dubious records" that you really don't want to brag about. A great deal of the outage time can be attributed to storms. Part of our outages were on the local Jo-Carroll level, and a great number were on the power supplier level, meaning the transmission lines that feed the Jo-Carroll system were off, which of course, meant the Jo-Carroll system was off as well. In addition, to actual outages, literally thousands of OCR (oil circuit reclosure) operations were experienced by our members. These are the momentary "blinks," or very short interruptions in power that are caused by Jo-Carroll Electric Cooperative's protective systems opening the line in order to clear a lightning strike.

Even though these short outages are a terrific nuisance for our members, we need to have the protective equipment in place to avoid more serious damage to the electrical equipment. When lightning strikes the lines, or a tree limb is blown into it or the lines blow together, a great deal of current is created known as fault current. This fault current can cause terrific damage to transformers and other hardware. The OCR's open the line momentarily, much in the way a circuit breaker or fuse opens the circuit in your home. These devices automatically reclose after the fault is cleared, restoring the power. The member is kept in service with only a short interruption.

We appreciate all of our members' patience during this trying period of "blinks" and outages. All in all, we feel that the Jo-Carroll system held up rather well considering the amount of fierce weather that it withstood. Be assured that we are continually striving to strengthen the system to withstand such forces of nature.

Jo-Carroll line worker Bill Boehm is cleaning the meter socket on a cabin that was flooded. As the flood water rose, Jo-Carroll disconnected power to the entire area for safety reasons. The high water ruined the meter and filled the socket with mud and corrosion. Water and electricity do not mix, so both Jo-Carroll and the owners of the cabins that were flooded are forced to clean the electrical equipment before we can turn the power back on. Note the clothes line in the background and the fact that Bill is working from a boat.



Flood's effect on your system

By now, Jo-Carroll's members have probably heard as much as they care to about The Flood of 1993. However, there is one aspect of the high water that wasn't discussed much and may be of interest to the membership; the effect on the electrical system that they jointly own.

Jo-Carroll really did not suffer any very extensive damage. We are estimating that the total cost of the flood will not exceed \$10,000, far less than the original storms that created the flood caused in lightning damage to transformers and other electrical equipment.

The flooding was unique though, and the following photographs illustrate some unusual sights.



A strong current can be seen running at the bottom of this pole. This would normally be on dry ground. In some cases the current will undermine the pole, and cause it to lean over. Note the cabin in the background. The highest water had the window air conditioner partly submerged.



This pole line runs along a county road that has cultivated fields on both sides. After the water rose, the area was flooded. We may have to straighten some poles, but for the most part overhead pole lines should not be damaged by the high water.



Flooded cabins. Jo-Carroll disconnected power to about 20 cabins due to the high water, and will not be able to reconnect until after the water has receded and the electrical equipment is cleaned.

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'Will somebody please explain capital credits?'

Capital credits.

We talk to you about them all the time, but we sometimes neglect to explain what capital credits are and what they mean to you.

We hope this information helps.

Jo-Carroll Electric is a non-profit organization

Only current members (customers) of the cooperative and past members — not stockholders — can share any profits their cooperative achieves. In addition, the cooperatives's priority to provide a needed service, not to make money. Therefore, Jo-Carroll Electric Cooperative is considered a non-profit organization from an IRS income tax standpoint.

Still, like any other business, Jo-Carroll Electric must show a margin between what it costs to operate the business and what it takes in as income. If we can't show more income than expense, then we are financially unstable and cannot obtain loans to build, improve or maintain the electric system.

Why does Jo-Carroll need loans?

The business of building power lines is very expensive and borrowing the money to improve and maintain the electric system is less costly for the members than any other option.

Of course, when we borrow money, our banker needs to know that it can be repaid. Hence, the requirement of profit.

Retirement of capital credits

As a member of the cooperative you are also entitled to a share of the cooperative's profit. When Jo-Carroll Electric has a profit in any given year, your share of that profit is recorded as your capital credit allocation.

The goal is to ultimately refund this credit to you in the form of a check. In the meantime, it serves to pay back past capital credits and to provide adequate cash flow for reinvestment in the business and show the financial stability that's required to obtain loans from our bankers.

Under our current system of capital credit retirement, you receive your first refund check 23 years after the capital credit has been allocated to you. The retirement schedule can change, but that's how it's set up now.

But what if you're not a member 23 years from now?

It doesn't matter. As long as you let us know where we can find you, then we still can send a check to you whether you're a cooperative member 23 years from now or not. Just be sure to let us know where you're at so that we know where to mail the check.

Why wait so long for a check?

Even though Jo-Carroll Electric was founded in 1939 — it wasn't until 1958 that the cooperative had more profit than the prior year's losses, and, even then, the entire amount was reinvested to help stabilize the business and provide adequate cash flow for growth. So, instead of receiving checks, the members received capital credit allocations — promissory notes, so to speak, with business done in 1959.

In 1983, when the cooperative was financially sound enough to make its first capital credit refund to members, it made sense that those who were the first to invest in the cooperative were the first to be repaid. Therefore, the cooperative members of 1959 received capital credit refund checks in 1983. For most years since, the cooperative refunded capital credits on a 23-year cycle; for example, the people who received checks back in 1992 were the Jo-Carroll Electric members of 1968.

The size of your check is based on your patronage to the cooperative, including your monthly fixed charge, the more electricity you buy, the greater your share of the cooperative margin.

Do you have any questions?

Please write to us at: Jo-Carroll Electric Cooperative, P.O. Box 390, Elizabeth, IL 61028-0390.

MANAGER'S REPORT by Connie M. Shireman



Shireman

Jo-Carroll's new outage number:

1-800-927-5254

I am pleased to announce that your cooperative has instituted a new 800 number for reporting outages. Jo-Carroll responds to outages and emergencies 24 hours a day, 365 days a year. We hope that this new 800 number will enhance our outage response. One feature I am sure members will appreciate: The 800 number will save members a toll call when calling in outages.

The Jo-Carroll line crews are radio dispatched from the Elizabeth headquarters building. In the past our outage line rang into the Jo Daviess County Sheriff's Department. The Sheriff's Department did an excellent job in assisting Jo-Carroll with outage reporting, but will be unable to perform this service in the future. Jo-Carroll will now utilize the Cooperative Response Center as our answering service.

When you call Jo-Carroll Electric to report an outage, you should give the individual answering the phone your location number. This unique number is very important in helping our line crews locate where the outage is taking place. A sticker with the 800 number will be provided in bill next month with a space for you to write your location number. This sticker should be placed near your phone.

Our members are relied on to report outages, because a vast majority of outages occur without the knowledge of the co-op. However, each member should check fuses or circuit breakers before reporting an outage. If our crews are called out to a location and it turns out the problem was with the member's fuses or circuit breakers, a fee will be charged to the member.

In reporting an outage, it can be very helpful to report what information you have to the person answering the phone. One example would be whether it is an individual outage at your place only, or if your neighbors are also without power. In addition, information such as flashes that that you may have noticed near the transformer, or if trees have fallen nearby, or if there was a vehicle accident in the area, etc., should be reported when calling in.

No one can say exactly when, but at sometime there will be power outages. Jo-Carroll Electric Cooperative strives to provide uninterrupted power, but we cannot guarantee that the forces of nature or man will not in some way damage our system, causing a power outage. Rest assured that we are constantly working to further improve our reliability with regard to the steady flow of electricity to your homes and businesses. If an outage should occur, just remember to call **1-800-927-5254**.



The Sportsman's Paradise located about 3½ miles north of Savanna on Route 84 across from Palisades State Park.

Sportsman's Paradise

The right combination

When people go out to dinner they generally want to have a combination of fine food and pleasant surroundings. Everyone has had the experience of going to a truck stop or "greasy spoon" where the service was poor and the surroundings unpleasant, but they really had great food. Likewise, it is not hard to find a fancy restaurant with a beautiful dining room that has poor service and terrible food. At the Sportsman's Paradise dining out means a combination of excellent, freshly prepared food, good service and a unique dining room.

Paul and Jean Hertensen bought the Black Angus Supper Club last September. After completely renovating the building they opened the Sportsman's Paradise in May of this year. The restaurant is approximately 3½ miles north of Savanna on Route 84, just across from Palisades State



The "Bears Den Lounge," is a full service bar with popular brands and a complete wine list.



A full-size antelope greets the customers as they enter the Sportsman's Paradise.

Park. The building was constructed in 1968. After renovations it will seat 225 people with banquet facilities for 150. They also offer a full service bar, known as the "Bears Den Lounge."

Paul and Jean are from Savanna originally but lived in another state for nearly 20 years and wanted to move back home. They found their opportunity when they were able to buy the Black Angus and open the Sportsman's Paradise.

The restaurant features seafood, steaks, and other fine cuisine. They have a full salad bar, which is fresh made daily. Jean remarked, "Every night we throw out what is not eaten, and start fresh the next day." She also commented that they use nothing that is pre-prepared.

Paul is an avid sportsman and for some time has collected stuffed game animals. During the renovation of the Sportsman's, he brought in his collection, as well as specimens from taxidermists from around the area. The result is a museum-quality display of fine mounted animals of all descriptions. There are more than 100 specimens of small game of all types, as well as a full bear and antelope mount. In addition, there are a number of stuffed fish, old fishing rods, and ducks unlimited type paintings on the walls.

The overall effect of the fine food and the pleasant surroundings, as well as the game animals, is very striking and makes for a wonderful dining experience. Paul and Jean welcome wedding receptions, banquets and parties in their present banquet room, and plan to add a 600-seat conference room in 1994.

Mrs. Robert Saar

Jo-Carroll is particularly pleased to serve this type of facility, since it helps to support the growing tourism industry in our area, as well as creating a "tourist destination" all it's own with the stuffed animal collection. When asked, Jean commented, "Jo-Carroll was helpful in upgrading our electric service while we were doing renovations." She went on to say, "Jo-Carroll's always been there when we needed them."



More than 100 specimens of all types are on display at the Sportsman's Paradise. Some of the specimens are Paul's and some are on loan from local taxidermists.

MainStreet Messenger

=

Peace of Mind



Do you ever worry about a loved one who is living alone? Could they have fallen? Are they feeling okay? Do they need help?

Our MainStreet Messenger phone can help give you peace of mind. Using this special speaker phone, with wireless emergency call pendant, you can summon help from anywhere in the house and most places in the yard at the mere push of a button.

Our Cooperative Response Center (CRC) receives and responds to all calls for assistance, 24-hours a day. When a call is received, computerized records show who called and provide pertinent emergency information. Our trained specialists then follow pre-designated instruction on who should be notified and how to respond.

CRC stays in touch with the person needing assistance by way of the speaker phone until help arrives, so the person needing help is never alone during the difficult minutes before responders reach the scene.

This service is not just for the elderly or the handicapped. It could be used by a business to summon emergency help silently at the push of a button in the event of a robbery. The phone offers special features that can be used to check in with a latchkey child after school, or to remind people to take medicines, etc. With special optional equipment, the MainStreet Messenger can also notify CRC of a fire or unauthorized entry into a building.

Here's how the messenger service works when you need help:



Pushing the button on the wireless pendant immediately sends a signal to the Messenger telephone.



The Messenger is pre-programmed with the emergency number of the monitoring center.



The signal is received at the monitoring center where critical information regarding your medical history, medications and location of your home are kept.



After confirming the type of emergency with you via the two-way voice speaker phone, qualified help is dispatched immediately.

To learn more about the special features of MainStreet Messenger services, contact Jo-Carroll Electric Cooperative.

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Jo-Carroll Electric Cooperative, Inc., Elizabeth, Illinois — (815) 858-3311

MANAGER'S REPORT by Connie M. Shireman



Shireman

Outage calls, rebates and help

A reminder: Please call 1-800-927-5254 to report power outages. The transition to the new outage reporting number took place on October 1, and it seems to be going smoothly. As always, our goal is to provide the quickest response to outages and emergencies as possible, and we hope that the 800 number will only serve to enhance our performance.

Another reminder: The rebates for dual fuel heating and control of new electric water heaters continues. We are also providing ETS (electric thermal storage) heaters well below cost to qualified homeowners. These load management programs have been very successful in reducing Jo-Carroll's cost for wholesale power, a savings to all Jo-Carroll's members. However the members who save the most are those who take part by having electric heat or electric water heaters controlled. If interested, contact Jo-Carroll.

More reminders: ● Jo-Carroll offers a high-quality telephone that serves as a personal emergency response system. This device features a cordless response pendant, and professional, around-the-clock monitoring is provided. ● Jo-Carroll sells satellite programming under the Rural TV program. Movies, sports, educational programs and entertainment viewing of all types are available to those with satellite dishes.

Our office has been in contact with the Northwest Illinois Community Action and the Tri-counties Agencies, and they have provided the following information for those who are having trouble paying their electric bill.

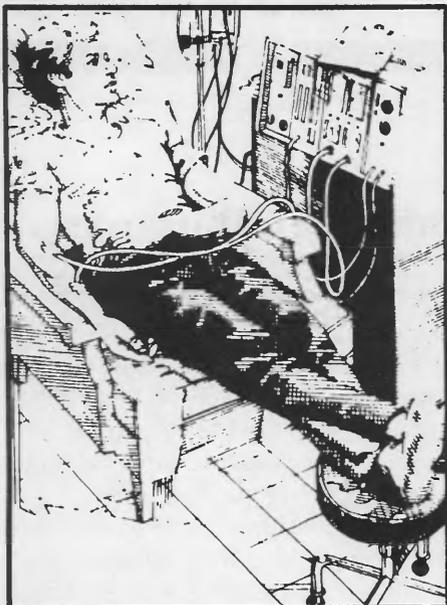
For assistance in Jo Daviess County, the NWICA program has two offices: Freeport, 232-3141, and Stockton, 947-2154.

You can contact either number for information or setting up an appointment. Prior to November 1, 1993, applications will be taken for assistance for the elderly and disabled and people who have been disconnected. After November 1, all other applications will be accepted. An appointment will have to be made and it is on first call basis for the appointments.

In Carroll County, call 1-800-323-5434 or 815-273-2257 for further information.

There is an outreach worker to take applications at Savanna on Tuesdays and Wednesdays at 101 Main Street. This is the city offices. Until November 1, 1993, applications will be take from the elderly, disabled and people who are disconnected. After November 1, all other applications will be accepted.

Life-support equipment



Jo-Carroll Electric Cooperative strives to maintain the best possible service to all of our members. Uninterrupted service would be a manager's dream — never an outage call. In reality, though, there are many factors present in the environment that are working against that dream: wind, lightning, ice storms, faulty equipment, trees, animals, and vehicles are a few examples of things that come into contact with the line to cause outages. In addition, many of the maintenance jobs that our crews perform require the line to be de-energized. These are planned outages and are usually quite short. Nevertheless, if someone were dependent on life-support equipment that operates on electric power, the planned outage could be very serious.

Below is a clipout form to return to us if you are utilizing such equipment, as well as the steps to take in case of an outage. Your cooperative needs to know the names and locations of our members on life-support equipment, and we keep a registry of these on file in our office. We will make every effort to give priority to restore service on life support systems.

Life-support registry

If you or a members of your family depend on life-support equipment, please fill out the form below and mail to us.

Name _____

Phone _____

Address _____

Location number _____

Type of support equipment _____

Days of use _____ Time of use _____

Do you have an emergency standby generator to operate this equipment?

Yes _____ No _____

Mail the above form to:

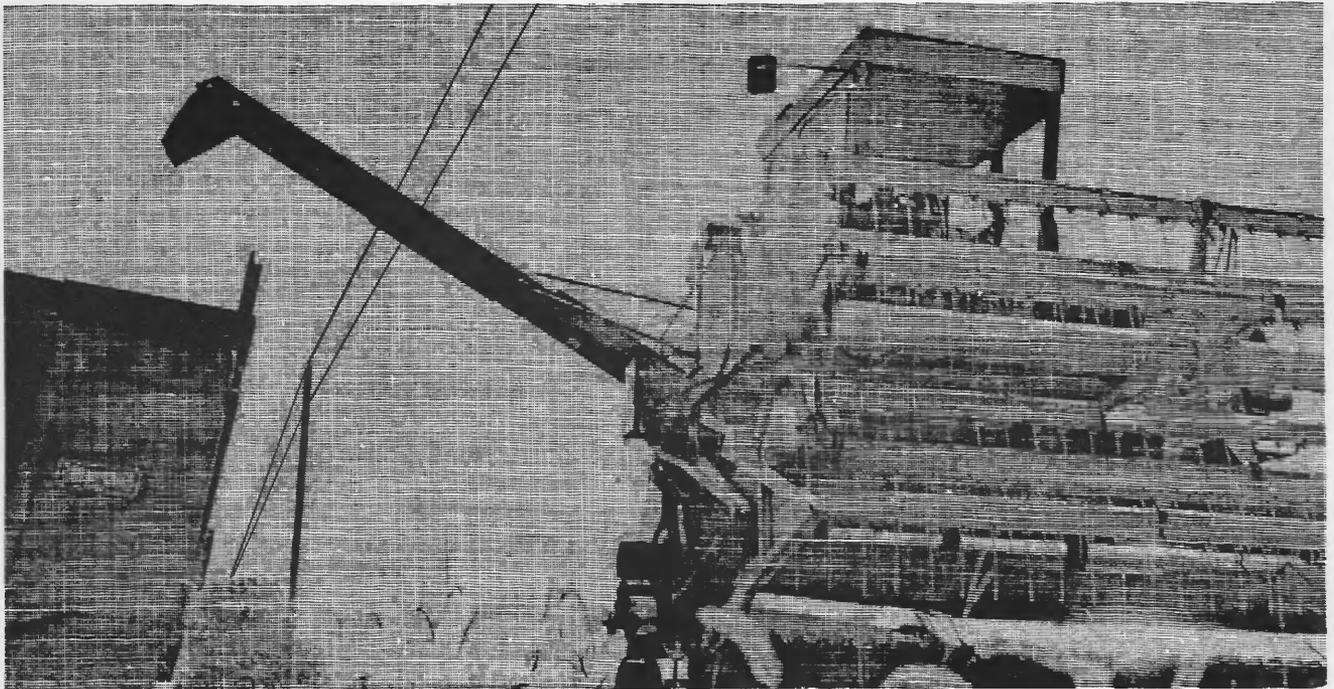
Jo-Carroll Electric Cooperative, Inc.

P.O. Box 390

Elizabeth, IL 61028

Help us credit your account properly

When paying your bill by mail, please send the stub from your bill, or write a note indicating to which account the payment should be credited. In the past we have received checks in the name of an individual who may have more than one account or have the bill in some other name. By sending in the stub, we can be sure that the payment is credited to the proper account. If the stub is not available, please include a note indicating to which account the payment should be credited.



Be alert during harvest season

This fall farmers throughout the Cooperative service area are hard at work bringing in this year's crop. This is a happy and anxious time as farmers prepare to reap the benefits of their hard work during the summer months.

Unfortunately, this is also the time of year when your Cooperative sees an increase in guy wire, pole, and line damage. We realize you have important tasks on your mind during this time of year and we do share in your concern to complete these tasks. However, today's equipment is larger and puts the operator of the vehicle further away from hazards and obstacles around the perimeter of the field. This makes it easier to overlook guy wires and other objects hiding near the edge of the field.

This year, do yourself and Jo-Carroll Electric Cooperative a favor. Take time to check for hidden obstacles as you go about your farm work. This is even more important if you have a new employee helping you during the harvest season. Don't let a guy wire or pole hitch a ride on your equipment, damaging both machinery and Cooperative facilities.

Load management tests scheduled

The radio-controlled load management program will be tested in November by Jo-Carroll Electric Cooperative and Dairyland Power Cooperative. These tests provide valuable information to the cooperatives about the upcoming load control season, and can also serve our members as a "test run." Please call Jo-Carroll if you experience any problems with your controlled electric water heaters or dual fuel systems. Members who do not participate in these programs are urged to call Jo-Carroll and get "signed up." Your participation benefits all of Jo-Carroll's members.

Water Heaters

Morning

Dates: November 9 and 17

Alert: 7:50 a.m.

Control: 8 a.m.

Restoral: Begins at 10:30 a.m.

Evening

Dates: November 9 and 17

Alert: 5:20 p.m.

Control: 5:30 p.m.

Restoral: Begins at 7:30 p.m.

Dual Fuel

Dates: November 16 and 30

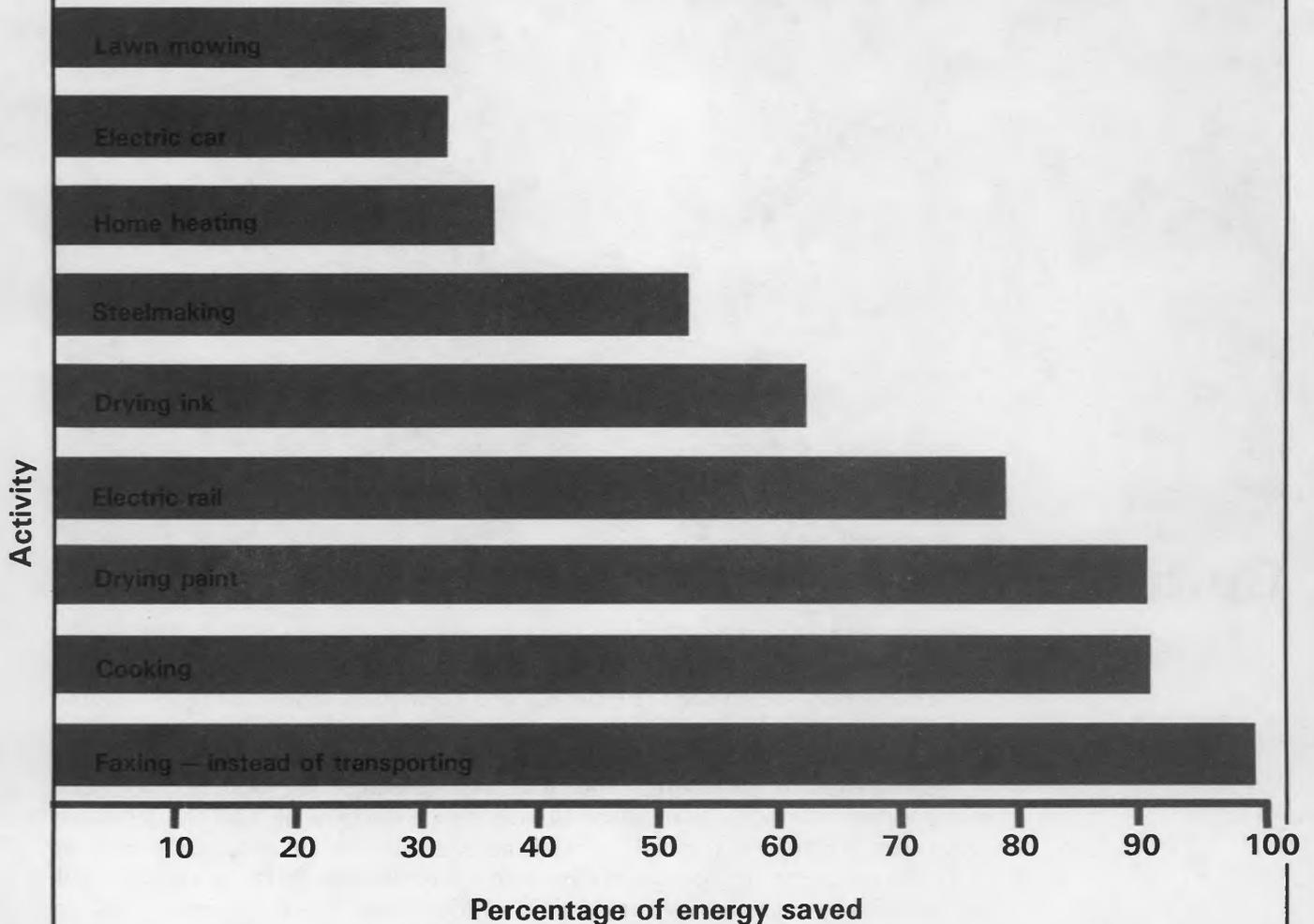
Alert: 2:30 p.m.

Control: 3 p.m.

Restoral: Begins at 9 p.m.

Dayrl Reitz

Electric alternatives save fossil fuel



Electrotechnologies applies in these areas displace substantial amounts of fossil fuel normally associated with the activity. Source: North Dakota REC/RTC Magazine, March 1993, as compiled from Mills, McCarthy & Associates data.

What can a penny buy?

For \$.01 you can . . .*

Watch your favorite TV show.
 Dry your hair for five minutes.
 Bake a potato in your microwave.
 Mix a cake.
 Listen to the radio for two hours.
 Vacuum for 10 minutes.
 Brew a pot of coffee
 Stay snug under an electric blanket
 for two hours.

Iron for 10 minutes.
 Shave with an electric razor for one
 month.
 Tape a TV program for three hours
 on your VCR.
 Stay cool for one hour with a cir-
 culating fan.

*based on \$.08 per kwh

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Jo-Ca

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MANAGER'S REPORT by Connie M. Shireman



Shireman

The power of power lines

Power lines carry electricity, a commodity that powers our appliances and tools, heats and cools our homes and work places, provides convenience and lights our way. Electricity can burn, injure even kill unless you respect it and exercise safety and extreme caution.

Similar to lightning, the flow of electric current is constantly seeking a path to the ground. Should you cause an object or part of your body to come in contact with a power line, you are immediately providing the path that the electric current is seeking.

Take care not to become the fatal link between electricity and the ground it seeks.

- Metal ladders are excellent conductors of electricity. Use extreme caution when using them around power wires, service drops and equipment.

- Antennas are cumbersome and hard to control. They can easily fall or be blown against nearby power lines. Before you install or repair a radio or television antenna that is near a power line, call Jo-Carroll Electric Cooperative.

- Many types of farm and well-drilling equipment are of such height and length that they can easily come into contact with overhead power lines. Always be aware of potential hazards.

- Grain augers can be excellent conductors. When raised in a fully extended position, they can contact power lines, causing you to become a fatal accident statistic. This may be the most dangerous piece of equipment in the Jo-Carroll Electric service area.

- Kites and model airplanes flown near power lines invite accidents. Keep them well clear. Instruct children never to climb in trees which have power lines running through their branches.

- Consider any overhead power lines dangerous. Keep objects at least 10 feet away from power lines.

- In areas where farm or industrial equipment will be operating inspect for possible interference with overhead lines.

- Don't attempt to raise or move electric lines. Call Jo-Carroll Electric.

- Report any potential power line hazard to Jo-Carroll Electric.

- If power lines are buried call J.U.L.I.E at 1-800-892-0123 and let a representative from Jo-Carroll locate them before digging.

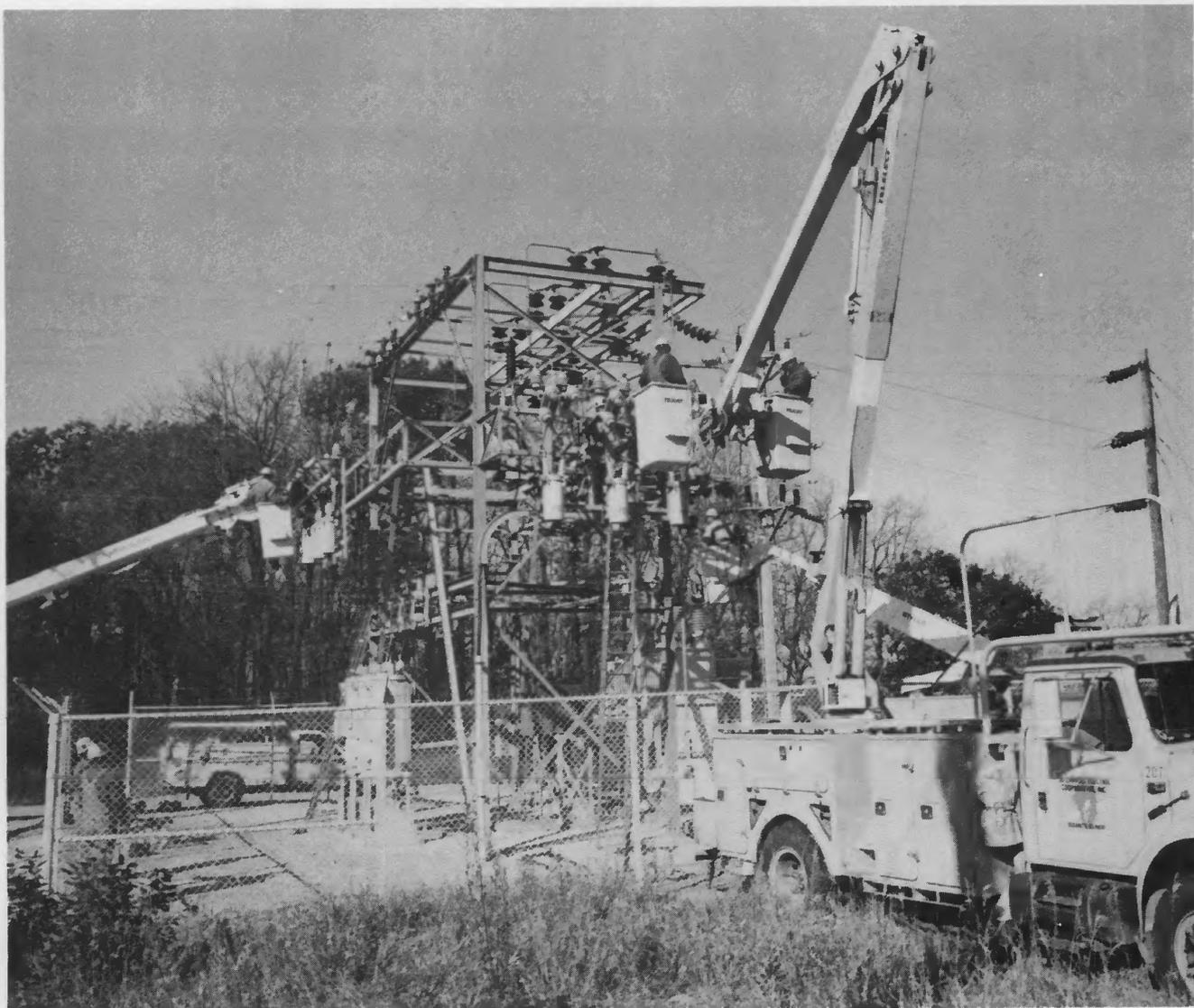
'Thank you' for prompt payment

We would like to express appreciation to the majority of our members who pay their electric bills promptly each month.

This promptness saves money, helps us hold down operating costs and helps minimize the frequency and amount of rate increases. Those who do not pay on time cost us extra money and contribute to increased costs.

Since we are a Cooperative, what one group of members does affects the rest of the membership. Paying bills on time affects everybody.

We appreciate you special members.



Trucks and equipment from Jo-Carroll and Dairyland Power are being used at the Scales Mound Substation by crews from both Cooperatives as a part of the October safety meeting and the annual station maintenance.

Annual substation training held at October safety meeting

A joint training session for Jo-Carroll and Dairyland power line workers was held on October 10 at the Scales Mound Substation. The training was a part of the October Jo-Carroll safety meeting for our electrical workers. Safety is a very important part of our operation at Jo-Carroll, and employee training is essential.

The substation training is also important to enhance the coordination between Jo-Carroll and Dairyland Power. Dairyland owns and maintains the substation, but Jo-Carroll operates the station in times of outage or emergency. At times our line crews will "switch" the delivery of power from one station to another, particularly during storms, and the recent training session enables all parties involved to be efficient.

As a by-product of having the substation turned off, Jo-Carroll and Dairyland crews also changed out the lighting arrestors, inspected all connections, and performed other maintenance on the station.

Robin Landwer

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.

Efficiency improvements for farm motor loads

Electric motors are so essential to farm and agribusiness operations that they deserve special consideration during farmstead energy audits. By helping farmers pinpoint the amount of electricity used by motor-driven equipment and suggesting simple maintenance and equipment adjustments, power suppliers can enable their rural customers to save energy and money.

Motors are vital to farm activities, whether they involve poultry, livestock, dairy, or crops. They are used in feed processing and transport; air movement for ventilation of animal buildings and for crop drying; refrigeration of milk, eggs, and other perishables; and water pumping for irrigation, livestock watering, or wash-down operations.

To begin analyzing electric motor use, make a list of all motors on the farmstead, including sizes, locations, and dates of installation. This inventory will be valuable in comparing the percentage of energy consumed by motors with other end-uses on the farm. Concentrate on larger horsepower motors or those with run times averaging six or more hours per day.

Simple lubrication and cleaning can improve efficiency and add years to the life of a motor. Changing motors to high-efficiency models is another option, but it's more important to look at the equipment being driven by the motors. High-efficiency motors can reduce consumption by only 3 percent to 8 percent and should be considered only for higher horsepower motors that operate 2,500 hours or more per year. Simple maintenance and proper selection of efficient motor-driven equipment can yield much higher savings.

For example, tests of two ventilation fans showed that an efficient 36-inch model operating for 120 days at 10 cents/kwh costs about \$150 to operate. To move the same amount of air, an inefficient model used over \$300 worth of electricity. Thus, over the life of the fan, the efficient model more than pays for itself from its energy savings alone.

Motor efficiency tips

Farmers might overlook routine maintenance, especially if motors seem to be operating adequately. However, the fact that a motor is running doesn't mean it is running efficiently. For example, dirty fan blades can reduce air flow by up to 40 percent. Other trouble spots that can cause motor loads to run at less than optimum efficiency include:

- Rusty or corroded moving parts;
- Clogged condenser coils on refrigeration systems;
- Dry or worn bearings;
- Belt drives that are too loose or too tight;
- Incorrect tolerances on irrigation pump impellers;
- Improper modifications made after installation.

Reader prize

Each month, we print the name of a Jo-Carroll member who is eligible to win a monthly \$25 readership prize. If your name is printed in this month's edition, and not a part of any story, contact Jo-Carroll and claim your prize no later than the 10th of the month following publication.

Office hours

7:30 a.m. to 4 p.m.
Monday through Friday

Outages and emergencies

call 1-800-927-5254
24 hours a day