

# Dale King: 4-H'er with a 'heart'

(continued from page 6)

"We run preventative maintenance on the equipment based on a planning schedule we keep. We perform safety tests to ensure patients' safety. Most of the tests are performed on a monthly basis," he said.

King's schedule is a 40-hour week, Monday through Friday, 7 a.m. until 3:30 p.m. That's the basic week. The nature of the work and King's sense of responsibility make it a 24-hour job. "I'm on call 24 hours," he said. "Some days I am here much later than 3:30.

"I have one class during the daytime and the hospital lets me take off an hour for it. Then I make up the time by working extra," he said.

He carries a class load of seven hours at John Woods and does the CREI studying in what other time he has available.

How did King land his job?

During King's senior year in high school, Mike Sullivan, then the biomedical engineer at Blessing, spoke to seniors at Quincy High. "I was trying to determine which area of electricity and electronics I wanted to enter. Mike told the seniors he was looking for an assistant. I applied and went to work in March of 1975. In June, Mike left the hospital for another job. That's when I became head of the department," King explained.

Before going to work for Blessing, King worked for Richards Electric Motor Co. in Quincy, repairing and rewinding motors and generators.

The study at John Woods and CREI will lead to a bachelor's degree, King said. He then plans to gain certification as a biomedical engineer.



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IR 156



# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

With the hustle and bustle of the holiday season over and as the New Year begins, it is time to settle down to the job ahead. The complexities in the operation of an electric cooperative are many. Our nation's economic condition and the energy crisis are two that come to mind readily. Our nation will begin the New Year under the leadership of President Jimmy Carter and his Cabinet appointees. The economic condition and energy crisis, I know, are high on these gentlemen's list of priorities, among others, that need their immediate attention. We as cooperative members, directors and management should look with interest to the manner in which our new national leaders acknowledge the existence of problems facing the electric utility industry, including Monroe County Electric Cooperative, and to the actions taken to alleviate and reverse the trends of inflation and high costs.

The members, directors, management and employees of the cooperative must be fully aware of how prominent the decisions made by our national leaders, early in 1977, will be in our own decision making roles in formulating long-range plans for the cooperative.

It will be no easy task for President Carter and his Cabinet nor will it be for the cooperative's directors and management. Yet we accept the challenge forthrightly.

Looking ahead, the management and staff have been busy preparing work plans and a budget for 1977. Preparing such documents gives the cooperative guidelines where and how to direct our efforts to best utilize the cooperative facilities to meet the growing membership needs.

The year 1977 will be one of growth and system improvement for the cooperative. Urban people are migrating to and building new homes within the cooperative's service area in St. Clair and Monroe County at a steady pace. One hundred fifty-two new accounts were placed in service on the cooperative's system through mid-December of 1976 and we cannot see a slackening in new account activity in 1977. There are several projects under construction and/or scheduled for completion in

1977.

The U.S. Corps of Engineers in conjunction with local levee districts have three pumping stations either in the planning stage or under construction. The largest is the Maeystown Creek Pumping Station southwest of Fufts, which will have three 900-horsepower motors. Needless to say, this will create a large demand. This requires that 3½ miles of transmission line be built to the pumping station site. Completion date for this unit is April 1, 1977.

The other two pumping stations are smaller and will be supplied by a three-phase distribution line. The Franey Creek Pumping Station will have two 75-horsepower motors. The Long Slash Creek Pumping Station is somewhat larger. It will use three 300-horsepower motors. Cooperative linemen have already completed construction of the major portion of the three-phase feeder lines for these two pumping stations. The Franey Creek Pumping Station will be ready for operation as soon as metering equipment is received and installed. The completion date for the Long Slash Creek unit has not been set at this writing.

The cooperative will supply the electric service for the well pumps of the new Maeystown water system. The three-phase line is built to the site but has not been energized.

Other system improvements scheduled for 1977 include: eight miles of three-phase line from the Poe Substation to Ames, 2½ miles of double-circuit, three-phase line from the New Athens Substation to connect a main north-south feeder line, and four miles of three-phase line from Coxeyville to the Gilmore Lake area. This tie will connect the Millstadt and Waterloo substations.

The above mentioned system improvements will enhance the cooperative's efforts to continue to provide a reliable continuity of dependable service to our membership.

Cooperative representatives and the power supply department of the Association of Illinois Electric Cooperatives have spent a considerable amount of time this past year in negotiations with our power supplier—Illinois Power Company—in establishing a new wholesale power contract. It is now apparent that there will be a 30-percent increase in the cost of wholesale power to the cooperative effective June 1, 1977. Needless to say, it will be necessary to pass on an appropriate amount of this increase to the membership effective June 15, 1977.

The board of directors, management and employees of Monroe County Electric Co-Operative extend our wishes for a happy and prosperous 1977.

# Budget Billing

Recognizing that electric rates have increased substantially in the past couple of years, and taking into consideration the abnormal cold weather we are experiencing, we are aware that your electric bills have been somewhat higher than in the past.

The cooperative has a budget billing program for members who have electric house heating.

Upon your request, the cooperative will establish a twelve-month, equal-payment plan for each individual member having electric house heating. The monthly payment will be figured in accordance with past history of your electric usage. On June 15, which is the end of the budget period, if the payments made under the monthly payment plan are more than actual consumption, a credit will be applied to your account. Should electric usage be higher than the monthly payments, a statement for the difference will be rendered at that time for remittance with your July 15 payment. Should there be a substantial difference in the amount consumed and the amount paid, an adjustment in your budget payment may be made for the ensuing year.

Since you do have high seasonal usage with electric heat, you may want to consider budget billing. Thus, you can avoid higher payments at time of peak usage and spread them throughout the year.

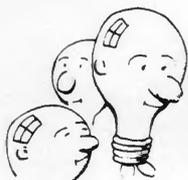
If you are interested or have questions concerning budget billing, please contact the cooperative, phone 939-7171.

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## Notice

DISCONTINUE USE OF YELLOW POSTAGE FREE ENVELOPES!

As of January 1, these envelopes were sent to the dead letter office. They are not being forwarded to the cooperative or returned to the sender.



## Savings Suggestions

Do you see the light? Fluorescent tubes are more economical than incandescent bulbs. For example, a 40-watt tube produces more light than a 100-watt bulb at half the energy cost—and the tube will last seven to 10 times longer than the bulb!

# YOUTH TO WASHINGTON TOUR UNDERWAY

Two area young people will be awarded an all-expense, one-week tour to Washington D. C., June 11-18, 1977, by Monroe County Electric Co-Operative, Inc.

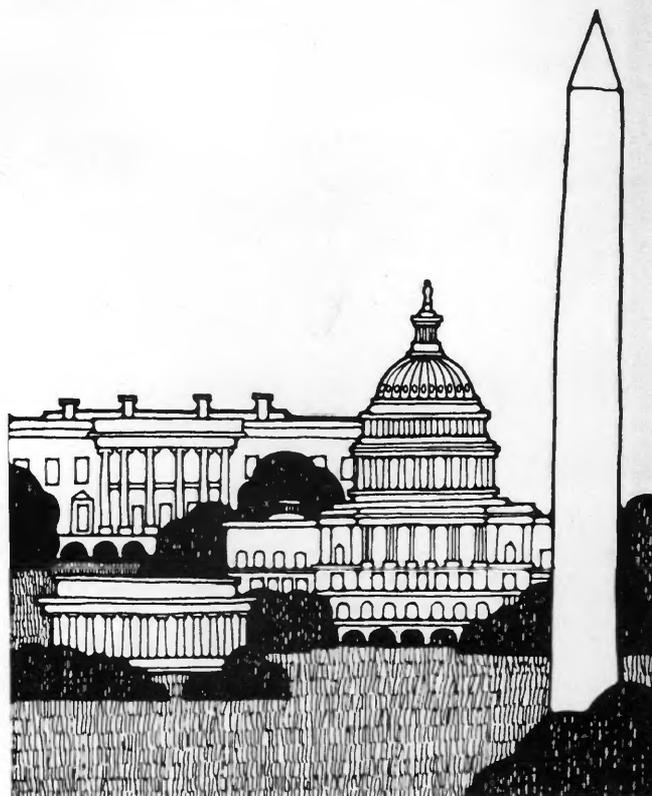
This format of this year's competition will be similar to that of last year. We encourage participation from high school sophomores and juniors of high schools within the cooperative service area. Students from Columbia, Dupo, Freeburg, Gibault, New Athens, Red Bud, Waterloo and Valmeyer high schools are eligible to enter into competition.

A questionnaire will be attached to the entry forms. It must be completed and returned to the cooperative office by March 18, 1977. Students with the five highest scores on the questionnaire will qualify as finalists. These five finalists, upon notification, must submit a two-page, typewritten essay titled, "The Role of the Electric Cooperative in Today's Society." The students who submit the most original and informative essays will be chosen as winners to participate in the Washington tour.

The five semifinalists will be invited to participate in the "Springfield Youth Tour" that will be held in the latter part of April.

Entry forms will be available at your high school or at the cooperative office in Waterloo.

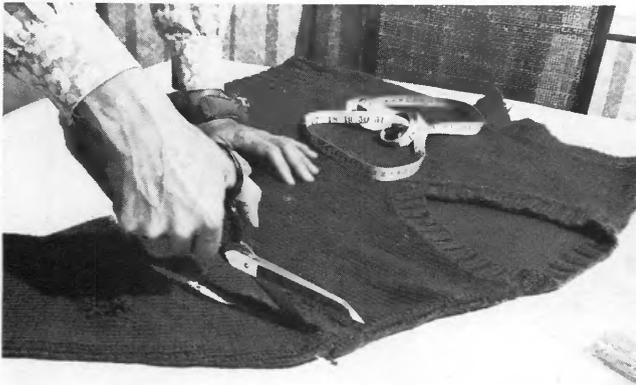
Remember, all sophomore and junior students in area high schools are eligible.



# .....'Recreate

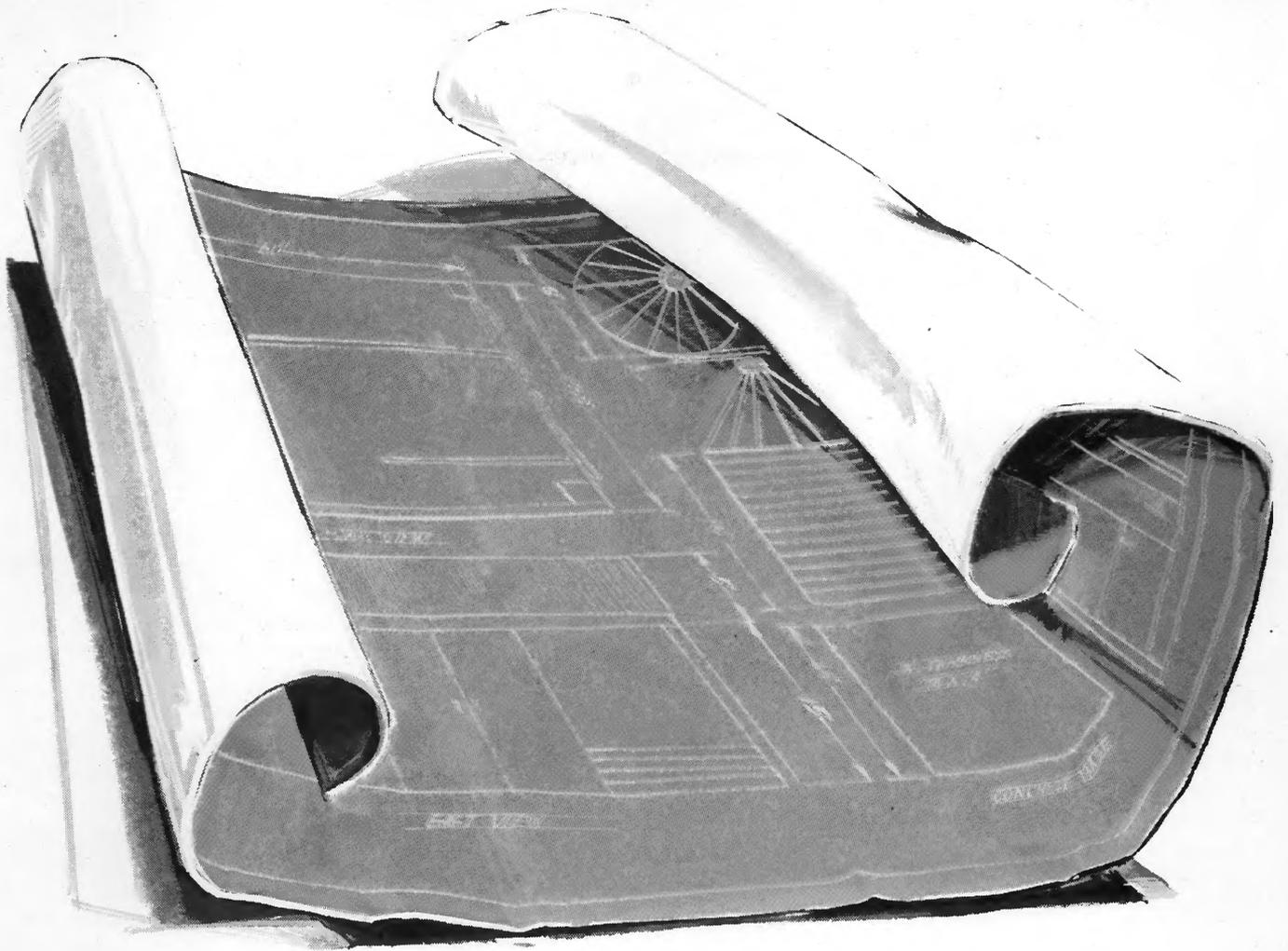


*If jeans become too short, but the fabric is good, create a fashionable jeans skirt. Open inner leg seams, lay front and back flat, measure length of wearer, cut off bottom of pant legs and use to fill in the triangles created when you lay the garment flat. With some topstitching, the skirt is ready for wearing.*



*Except for the bad hole in the sleeve, this sweater is in good condition. Cut the worn sleeves off leaving about 1½ inches of sleeve. Finish the cut edge by adding a zigzag hem. Turn the 1½-inch portion inside and tack loosely into place, making it a sweater vest.*





**If you have  
a good reason to build  
...you have a good reason  
to visit your local Land Bank.**

If you have plans for building or improving, chances are the Land Bank can help with a long-term loan at reasonable cost. Maybe it's a new farrowing house, a carousel milking parlor or new grain drying and storage facilities. Maybe you're planning to build a new home... or remodel the old one. Whatever your plans, stop in and discuss them with your local Land Bank Association.





# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

By the time you read this article you will have read your meter and figured your February 15th electric bill. I am certain for most of you it will have been one of the higher electric bills you have paid, particularly if you have an electric heating system. Thus far the 1976-1977 winter season has been one of the coldest in history. October and November 1976 were recorded as the coldest October and November since the 1880's. December 1976 and January 1977 will, I am sure, when statistics are available, also be shown to have been near record cold months for the winter season.

With low temperature comes a higher number of degree days, which is the official statistical measure for coldness. The higher the degree days in a given period, the more energy required to heat your home, regardless of the type fuel you are using in that period. Add to the colder weather the fact that rates and fuel costs to generate electric energy have increased over the past several years, and it is not difficult to understand increased electric bills.

We at Monroe County Electric Cooperative are concerned over the power costs that some of you with electric furnaces and mobile homes are experiencing. We make it a practice to give recommendations concerning insulation, capacity, duct work, controls and other system designs for electric furnace installations. Fortunately most electric heated homes on our system are well built and properly insulated. These members are well satisfied with their electric heating system and monthly costs.

Unfortunately, we find some houses and many mobile or modular homes that simply do not measure up in their construction and insulation standards commensurate with today's energy costs. Most mobile home builders are members of the Mobile Home Manufacturers Association (MHMA) and meet the A 119.1 MHMA standards which the State of Illinois require. However, it is our opinion, and the opinion of others in the industry, that these standards are not sufficient to meet insulation recommendations for electrically heated homes.

Many of us make inquiries about our electric bill and

say that they are too high. But what are we comparing? Are we comparing the cost of electricity to the cost of meat or coffee or the cost of groceries in general? Maybe we are comparing it to the cost of gasoline or new cars. Probably not. Instead most of us look at our monthly electric bill and compare it to what it was five to ten years ago. We agree it is higher today than it was. But we hope you have stopped and given serious thought to all the advantages you are receiving from the use of electricity. We challenge you to sit down and make a list of all of the items electric energy touches and enumerate the benefits you derive from electricity. You may be surprised. I think you will find electricity at today's cost is still a bargain.

What have you done in recent years to reduce energy consumption to be in accordance with suggested national energy conservation programs? Most of us complain about the costs of products and services but do little to cut back or conserve, even though it is costing us considerably more.

It is still early enough in the new year to make a resolution—a resolution to use electricity but use it wisely and properly, which is good for all of us. We must extend the use by being prudent in planning of new homes and reevaluating how we are putting "Willie Wiredhand" to work in the older homes and on the farm.

## HEATING HINTS

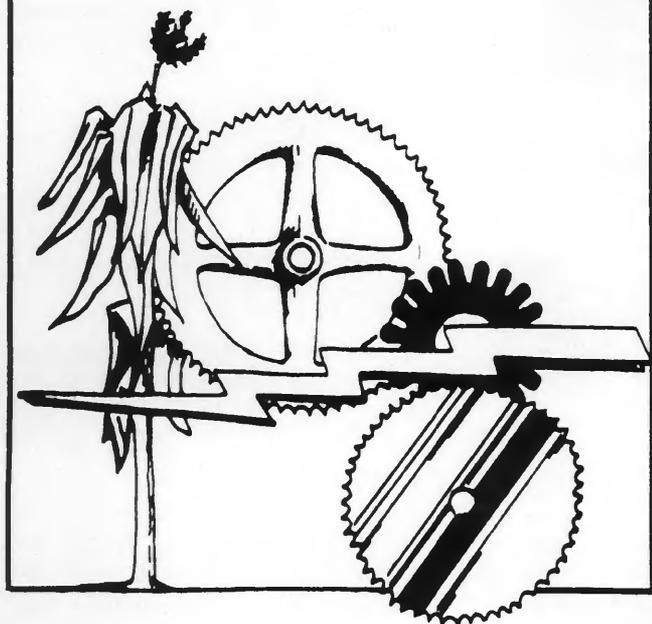
**CHECK YOUR THERMOSTAT SETTING . . .** regardless of the type of fuel you use to heat your home, be it gas or electricity, your thermostat can be the key to more economical operation. The lowest comfortable settings naturally mean the greatest in economy.

### TEMPERATURE—COST RELATIONSHIP

Room Temperature	Based on 70 Degrees
68 Degrees . . . . .	Costs 6.2% less
69 Degrees . . . . .	Costs 3.1% less
70 Degrees . . . . .	Costs 0
71 Degrees . . . . .	Costs 3.1% more
72 Degrees . . . . .	Costs 6.2% more
73 Degrees . . . . .	Costs 9.4% more
74 Degrees . . . . .	Costs 12.5% more
75 Degrees . . . . .	Costs 15.6% more
76 Degrees . . . . .	Costs 18.7% more
77 Degrees . . . . .	Costs 21.9% more
78 Degrees . . . . .	Costs 25.0% more
79 Degrees . . . . .	Costs 28.0% more
80 Degrees . . . . .	Costs 31.0% more

# 16th Annual Farm Materials Handling Show

**Washington County  
Fairgrounds  
Nashville, Illinois  
March 1, 2 & 3, 1977**



## 39th Annual Meeting

The cooperative's 39th Annual Meeting will be held Monday, April 11, 1977 at 7:30 p.m. Registration will begin at 6:45 p.m. at the Waterloo Grade School gymnasium. A drawing for an Early Bird attendance prize will be promptly at 7:20 p.m. Attendance and door prizes will be awarded. Refreshments will be served after the meeting.

Mark your calendar—April 11, 1977—Monroe County Electric Co-Operative Annual Meeting.

FEBRUARY, 1977

# Youth to Washington Tour

Two area young people will be awarded an all-expense, one-week tour to Washington, D.C., June 11-18, 1977, by Monroe County Electric Co-Operative, Inc.

This format of this year's competition will be similar to that of last year. We encourage participation from high school sophomores and juniors of high schools within the cooperative service area. Students from Columbia, Dupo, Freeburg, Gibault, New Athens, Red Bud, Waterloo and Valmeyer high schools are eligible to enter into competition.

A questionnaire will be attached to the entry forms. It must be completed and returned to the cooperative office by March 21, 1977. Students with the five highest scores on the questionnaire will qualify as finalists. These five finalists, upon notification, must submit a two-page, typewritten essay titled, "The Role of the Electric Cooperative in Today's Society." The students who submit the most original and informative essays will be chosen as winners to participate in the Washington tour.

The five semifinalists will be invited to participate in the "Springfield Youth Tour" that will be held in the latter part of April.

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Remember, all sophomore and junior students in area high schools are eligible.



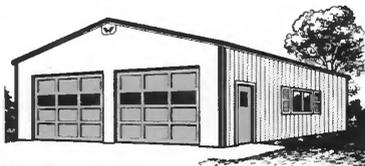
*The 1976 Youth Tour semifinalists take time out from activities during "Illinois Rural Electric Youth Day" in Springfield to have a photo taken in front of Lincoln's Tomb. They are from left to right: Rene' Heller, Barbara Roider, Shirley Grab, Linda Ferry and Brenda Daugherty. Barbara and Linda were winners of the coveted week-long trip to Washington, D. C.*

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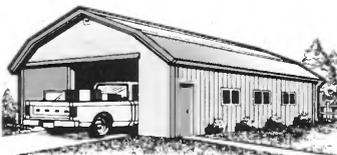
Does anyone ever have enough space to store all the things that make life more enjoyable? Like boats, camper trailers, motor homes, snow-mobiles? Not to mention the everyday problem of finding room for a second or third car, lawn and garden equipment, the outdoor furniture, or dozens of other things that require weather protection.



A low-cost Wickes utility building can solve the problem for you—right now, and for years to come. These handsome, maintenance-free

structures are available in the size, model or plan you need for a spacious garage, storage place or workshop, or all three in one if you want. In beautiful color steel or aluminum—your choice.

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**Solar Grain  
Drying Conference**

*(continued from page 5)*

collectors are in use each year, it also has the advantage of being relatively inexpensive—once the collection system is built—and readily available.

Solar's potential was summed up by Sims, who said, "I think this thing is really going to catch on, and there are a lot of farmers out there ready to start using it. There is plenty of energy out there."

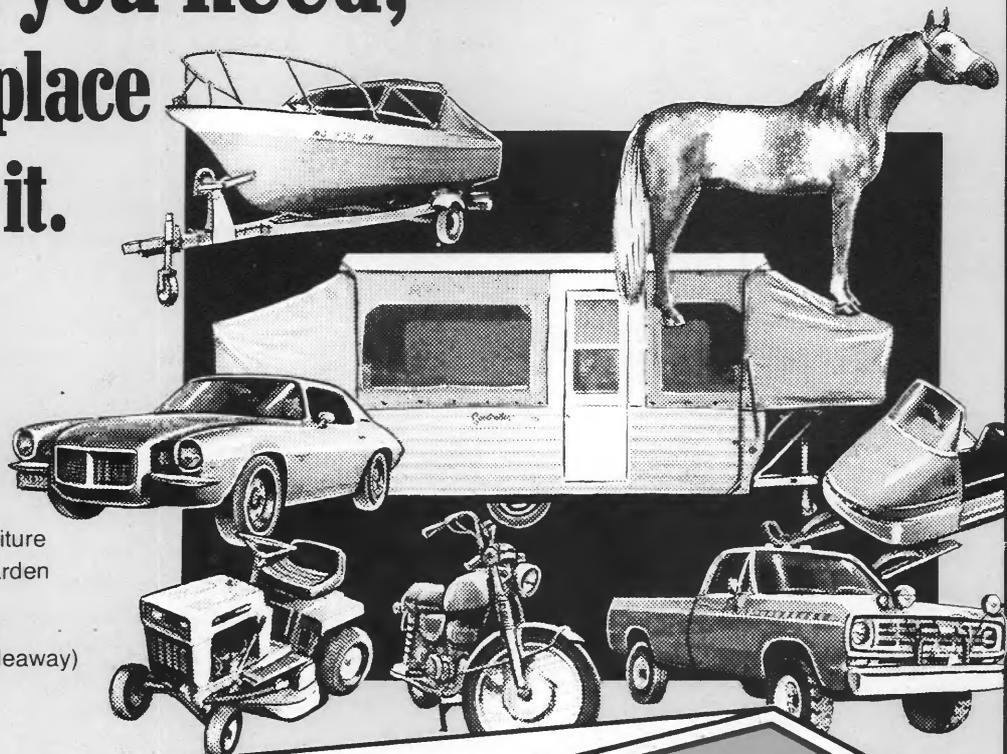
Several Illinois electric cooperatives sent representatives to the conference. Attending were: Roger Mohrman, Adams Electrical Co-Operative; John Kober, Egyptian Electric Cooperative Association; Vince Ijams and Charles Kyle, Corn Belt Electric Cooperative; Randall Beasley, Holly Shriver, Rick Phelps and Frank Gibbons, Coles-Moultrie Electric Cooperative; Victor Ketten and David Barbey, Southwestern Electric Cooperative; Ray Weiss, Howard Schweighart and Leo Klingelhoffer, Illini Electric Cooperative; Lowell R. Riffey, M.J.M. Electric Cooperative; and Bob Lands, Southeastern Illinois Electric Cooperative.

*Below, John Kober, member services director for Egyptian Electric Cooperative Association, and Terry Heffernan, assistant director of member services for AIEC, compare grains dried with and without heat. The display was set up at the Solar Grain Drying Conference in Champaign.*



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- Trailers
- Outdoor Furniture
- Lawn and Garden Equipment
- Snowmobiles
- (A Handy Hideaway)

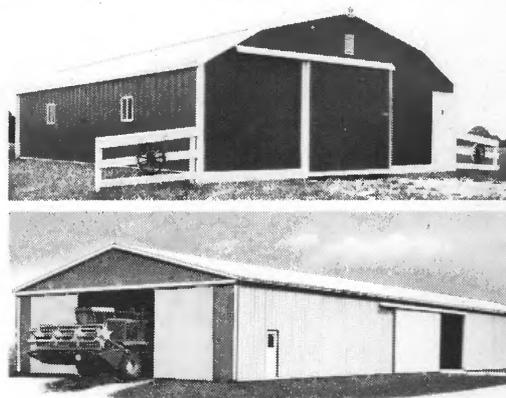


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IR 384



# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

After several months of negotiation, the directors and management of the cooperative have reluctantly agreed to a 30.2 percent increase in the wholesale cost of power by our power supplier effective June 1, 1977. This is a sizable increase, and one we do not take kindly to, but one somewhat smaller than the approximate 50 percent increase originally requested in June 1975.

One of the major factors involved in the wholesale power cost increase is the method of pricing demand. Maximum KVA demand will be the highest number of KVA delivered to the cooperative substations during any fifteen minute period in a monthly billing period. The cooperative will be charged for (a) The maximum KVA demand measured for the billing month or (b) 75 percent of the maximum KVA demand established during the period June 15 through September 15 of the previous twelve months, whichever is greater.

This means that the cooperative, normally having a peak in the summer months, would have to pay for 75 percent of that peak during low demand months such as April, May and October, whether it is recorded or not. Thus, we must develop a form of load management for the cooperative system and encourage efficient utilization of energy by all cooperative members, particularly during the summer months. It could mean the cooperative members be requested to cut back on their KWH demand during these peak periods. Doing this could be beneficial and economically feasible to both the member and the cooperative.

Above we have tried to explain the reasoning behind the increase in our wholesale power cost. It stands to reason with a 30.2 percent wholesale power cost increase that it will be necessary to pass to the member consumer a proportionate amount of the increase.

Our present member assessments were examined with respect to their ability to provide required revenue for the 12 months ending June 30, 1978. It was found that the present rate schedule would produce a negative net margin of \$143,000.00 with patronage capital and operating margins of a negative \$170,700.00. The proposed new

member assessments will provide an additional \$372,000.00 of operating revenue for the 12 months ending June 30, 1978. This amounts to an increase of approximately 23 percent.

In order to determine the effect of the new wholesale cost of power to the cooperative, we applied the new cost figures to the 12 months' actual data ending December 1976. By doing this we found the cost of purchased power per KWH. This cost was then applied to the kilowatt-hours projected to be purchased during the test period. Thus, the new rates were designed to provide the necessary revenue to recover the increased wholesale power cost based on the fuel cost base of the new wholesale rate.

The new member assessment is based upon wholesale purchased power cost of 18.41 mills per KWH. The energy charge in the above rate shall be increased or decreased 0.11 mill per KWH for each 0.10 mill or major fraction thereof, by which the cooperative's wholesale power cost per KWH purchased exceeds or is less than 18.41 mills per KWH.

Since we are a self-billing cooperative, consideration must be given to our power supplier's projected cost of fuel for the contract period. We will wait as long as possible to determine the wholesale power adder to be included with the new member assessments which is to be effective June 15, 1977.

Your board of directors, management, employees and consultants have spent many hours of work in negotiating a wholesale power cost from our power supplier. Many more hours of time and thought have gone into the study and design of the new member assessment so that an equitable and reasonable rate could be applied to all member classifications so that each would share the burden equally.

We trust your understanding and cooperation in this matter. If you have questions concerning the new member assessment or areas of the cooperative's operation, please contact us at our headquarters building or call 939-7171.

## Annual Meeting Notice

39th Annual Meeting

April 11, 1977

7:30 P. M.

Waterloo Grade School Gymnasium

4-Early Bird Prizes Awarded

7:15 P.M.

7:20 P.M.

7:25 P.M.

7:30 P.M.

Sharp Calculator

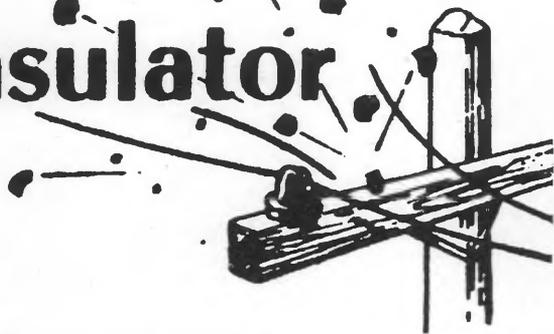
West Bend Slo-Cooker

Hamilton-Beach Mixer

Wen Electric Chain Saw

Refreshments served after meeting.

# It doesn't take a "crack shot" to shoot an insulator.



## A "crackpot" can do it

It doesn't take much of a man nor any particular skill to win a shootout with an insulator. It's a wasteful, irresponsible act—and obviously unlawful.

It can't be shrugged off as kids' play. Anyone old enough to shoot a gun is old enough to respect its use and to be responsible for willful and malicious destruction of property.

On two separate occasions in mid-January we received calls from members reporting outages resulting from insulators and arrestors and other line hardware being damaged by gunfire. Both of these incidents occurred in the northeast section of the cooperative service area; one northeast of Smithton and the other north of New Athens.

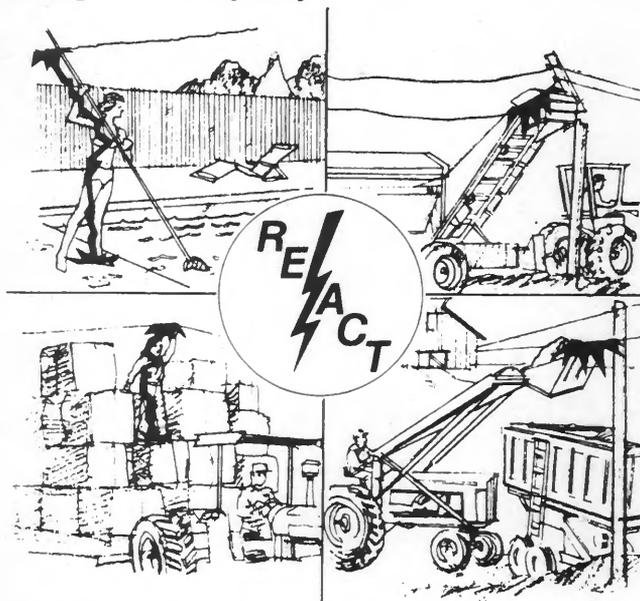
We are constantly receiving reports of cooperative owned security lights being shot out. Replacement of lamps, reflectors and other security light hardware is costly in both material and labor to replace.

Legitimate costs keep rising. These illegitimate costs are especially unwarranted. They are a factor in the upward trend of electric rates, and affect your pocketbook. What a price to pay for an irrational few having a little "fun."

Besides the costs involved in replacing damaged equipment, danger to those involved and to others is important. Persons responsible for such acts are causing injustice and inconvenience to others. People today depend on uninterrupted electric service. This kind of vandalism which causes electrical outages can be controlled.

If you see anyone shooting at insulators or at other cooperative equipment, report the act immediately to your local law authorities and to Monroe County Electric Co-Operative. You'll be helping to crack down on crackpots.

You may expose yourself to overhead danger in many ways . . .



## REACT AND LIVE

- Consider any overhead line dangerous. Keep objects at least 10 feet away from powerlines.
- In areas where your equipment will be operating, inspect for possible interference with overhead lines.
- Don't attempt to raise or move electric lines . . . call your power supplier.
- If powerlines are buried . . . let your electric service representative locate them before digging.
- Report any potential powerline hazard to your electric Cooperative.



*Line foreman Ermin Brinkmann and plant accountant Chip McGuire inspect insulators and arrestors shot by vandals on two different occasions in January.*



Winter bitterly cold temperatures froze the Mississippi along Illinois' western border, halting barge traffic and delaying shipments of vital supplies north. In addition, Ohio River barge traffic was halted because of ice, leaving hundreds of barges and towboats virtually stranded.

## Degree-day records illustrate winter's severity

(continued from page 14)

no matter what kind of energy provided the heat.

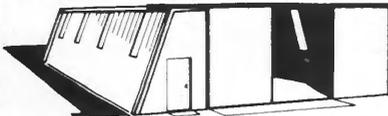
To make matters worse, the degree-day figures do not take into account the wind-chill factor. As far as the degree-day is concerned, the wind makes no difference at all. And, when it comes to heating your home it may not—provided your home is well-sealed against the wind with caulking, weather stripping and storm windows.

Even as cold and expensive as the weather has been here, we have been fortunate. To the east of us, the weather was much worse. Schools closed and factories reduced hours or went completely out of production. Millions of workers were idled; many are still not back at work.

All in all, it has been the kind of winter our grandparents talked about, but this one was worse, according to the records. Throughout Illinois, it has been a winter to remember, even though most of us would rather forget it.

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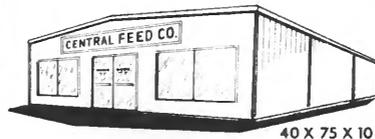
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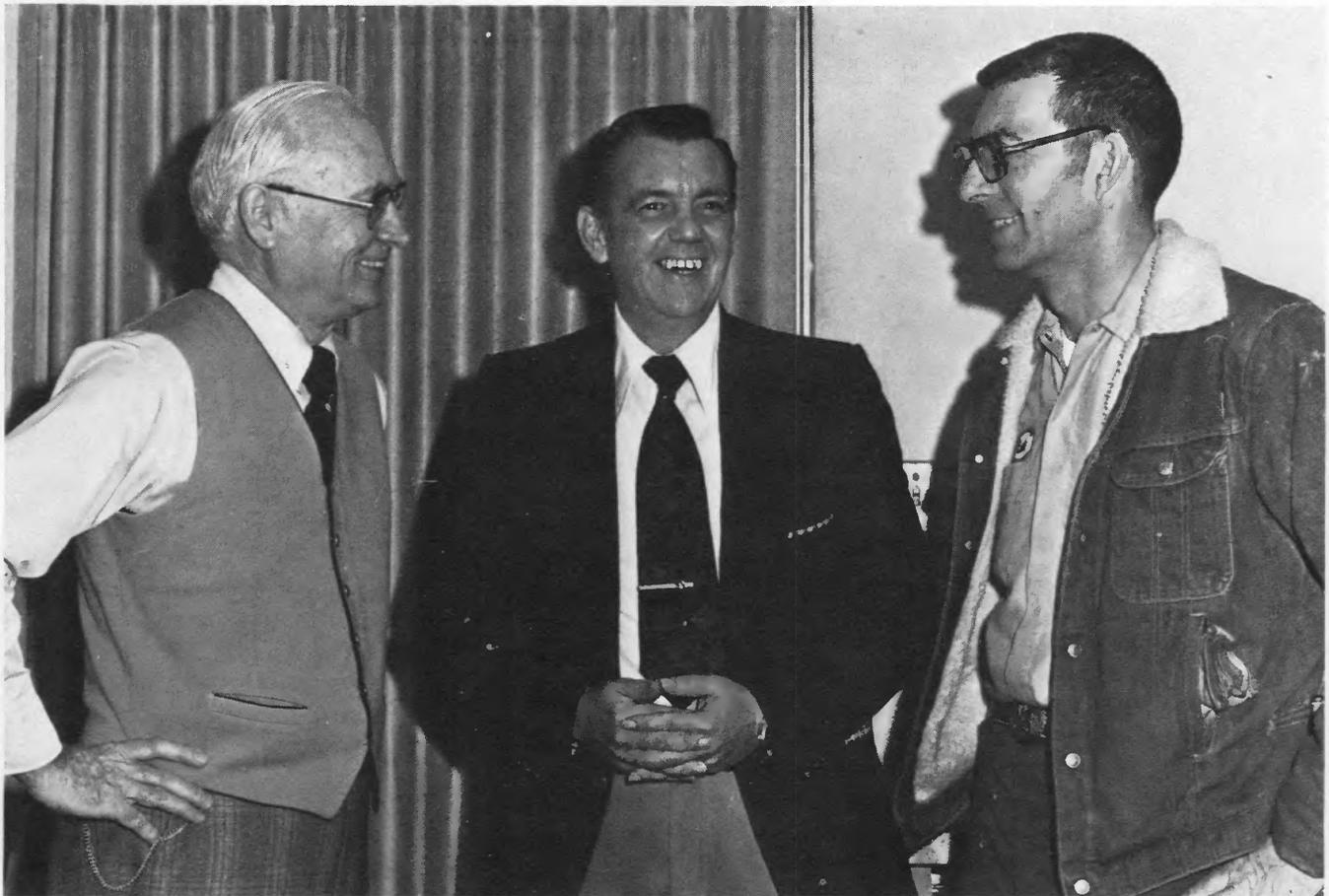
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SIZE NEEDED: \_\_\_\_\_ X \_\_\_\_\_ X \_\_\_\_\_

DATE TO BUILD: \_\_\_\_\_

# helps Weather Service



*Tornadoes were the topic of discussion at Spoon River Electric Co-operative recently when the cooperative hosted a tornado spotters meeting. Manager Bill McCamey, left, talked weather with Roger Geer, center, official-in-charge of National Weather Service office in Peoria, and Gene Burchett, coordinator of the Fulton County Emergency Services and Disaster Agency (formerly Civil Defense). Geer praised the area tornado-spotting organization, calling it "one of the best in the nation."*

"and we always ask spotters to look for rotation. In fact, we have a slogan that goes like this: 'If it doesn't spin, don't call it in.'"

"On the average," Geer told his audience, "about 700 tornadoes strike each year in the United States, and no state is really safe from them. We hope that by having spotters we can keep loss of life to a minimum. We can't save property, but we can save lives, and that's the most important thing."

A good estimate of wind speed is helpful in keeping track of storm systems, Geer said, and it is possible to estimate wind speeds fairly closely.

"If large branches are moving and

you can hear whistling in overhead wires, the wind velocity is about 25 to 31 miles an hour, and if whole trees are moving and it's inconvenient to walk against the wind, that indicates speeds to 32 to 38 miles an hour.

"If small branches or twigs break, and the wind impedes walking, the wind is blowing 39 to 46 miles an hour, while speeds of 47 to 54 miles an hour will cause slight structural damage and break larger branches and weak limbs," Geer said.

"Winds of 55 to 63 miles an hour will cause moderate structural and tree damage," he continued, "and winds of 64 miles an hour and above cause

heavy-to-severe structural and tree damage."

Information on hailstorm activity is appreciated by the weather service, too, Geer said, and the data is more useful if the size of hailstones is reported. "It's helpful if you relate the size of the hailstones to the sizes of such common objects as peas, marbles, golf balls, and so on," he told the utility men, "or if you tell us its approximate diameter in inches."

Geer also outlined what should be done in the event a tornado watch is broadcast. "A tornado watch is issued

*(continued on page 22)*



# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

In previous issues of the *Illinois Rural Electric News* magazine and at our annual meeting we have discussed the upcoming increase in member assessments effective June 15, 1977.

Higher rates are needed to offset increased costs in almost every area of the cooperative's operation and to produce necessary operating capital to provide a reliable continuity of electric service to our membership.

Inflation continues to have an effect on costs for materials, supplies, equipment, wages and taxes. With the new REA and concurrent CFC loan program now in effect, the cost of securing funding to finance system improvement and the construction of new services is at a substantially higher interest rate than we received in the past.

Fifty percent of the cooperative's total cost of providing electric service is the cost of wholesale power. As of December 31, 1976, the cost of purchased kilowatt-hours had increased by 78.8 percent over 1967 costs. As you have been previously informed, our wholesale power supplier has increased the cost of power to Monroe County Electric Co-operative by 30.2 percent over 1976 costs. This is a substantial increase which must be passed on to the membership.

The board of directors and management have spent many hours of deliberations and hard work taking into consideration long-range work plans and the financial budget in designing a rate that would be equitable and reasonable to each membership classification. It has been determined to increase membership assessments by approximately 16.5 percent effective with the June 15, 1977 billing period plus a wholesale power adder, which has not been determined at this time, to be applied at a later date.

There will be a significant change in the new electric heat rate schedule (Schedule A-H). In past years the electric heat rate has been applied on all KWH's consumed. Effective with the implementation of the rate increase in June, the electric heat rate will be applicable for the six months October through March or during the heating season. The remaining six months of the year the rate will

be identical to schedule A, Farm and Residential rate. Those of you qualifying for the electric heat rate will receive a rate schedule with both Schedule "A" and "A-H" included. No doubt this will cause some confusion, however, with your patience, we are certain problems will be kept to a minimum.

We feel, despite the impending rate increase, electricity is still a bargain when compared to the cost of other consumer goods. For example, the consumer price index rose 74 percent from 1967 to 1976 while the average delivered cost per kilowatt-hour to Monroe County Electric Co-Operative members rose 42.5 percent.

During the same period other market basket items showed greater increases than the cost of electricity purchased by members of Monroe County Electric Co-Operative. According to the Federal Bureau of Labor Statistics, the Consumer Price Index for a dozen eggs rose 79 percent, a pound of butter increased by 57 percent, a pound of sugar by 82 percent, a pound of hamburger by 58 percent, a gallon of gasoline by 80 percent and medical services by 91 percent.

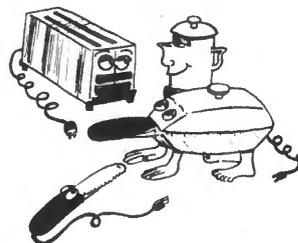
Other examples of CPI increases are: housing, 81 percent; boys' dungarees, 97 percent; women's handbags, 75 percent; men's shoes, 61 percent; automobile insurance, 99 percent; and a movie ticket, 80 percent.

These comparisons show that the cooperative has been successful in its efforts to provide an essential commodity to our members for a reasonable price in these inflationary times.

No one wants higher prices for any commodity, including the cost of electricity. In analyzing rising electric rates it is vital to put these increases in context with the effects of inflation on other consumer products. When this is done, electricity ranks as a relative bargain.

We respect your consideration and cooperation in this matter. If you have questions concerning operations of the co-operative please feel free to come in and discuss your concerns with us.

## Savings Suggestions



Think small — save big! Electric skillets, toasters, rotisseries, etc., generally use less electricity than the range for specialized cooking jobs. Don't brew your coffee all day, turn off televisions and radios performing to empty rooms, iron several pieces at once and change vacuum dust bags frequently.

ILLINOIS RURAL ELECTRIC NEWS



*Osmose representative George La Kinske boring into the base of a pole checking for heart rot.*

## Pole Inspection Underway

The cooperative has again contracted with Osmose Wood Preservation Company for the inspection of utility poles on the cooperative system. This is the second consecutive year that Osmose has conducted the pole inspection program.

Many of you, no doubt, have seen the Osmose representative working under the power lines, hitting the poles with a hammer and in some cases boring the pole with a bit. By hitting the poles with the hammer the technician is checking the pole for soundness and heart rot. If the pole does not "sound" solid he will bore a hole in its base to determine the degree of rot.

He then records the condition of the poles tested as either being sound, problem or danger poles. Those listed as danger poles will be scheduled for immediate replacement and the problem poles will be replaced on a regular scheduled maintenance program.

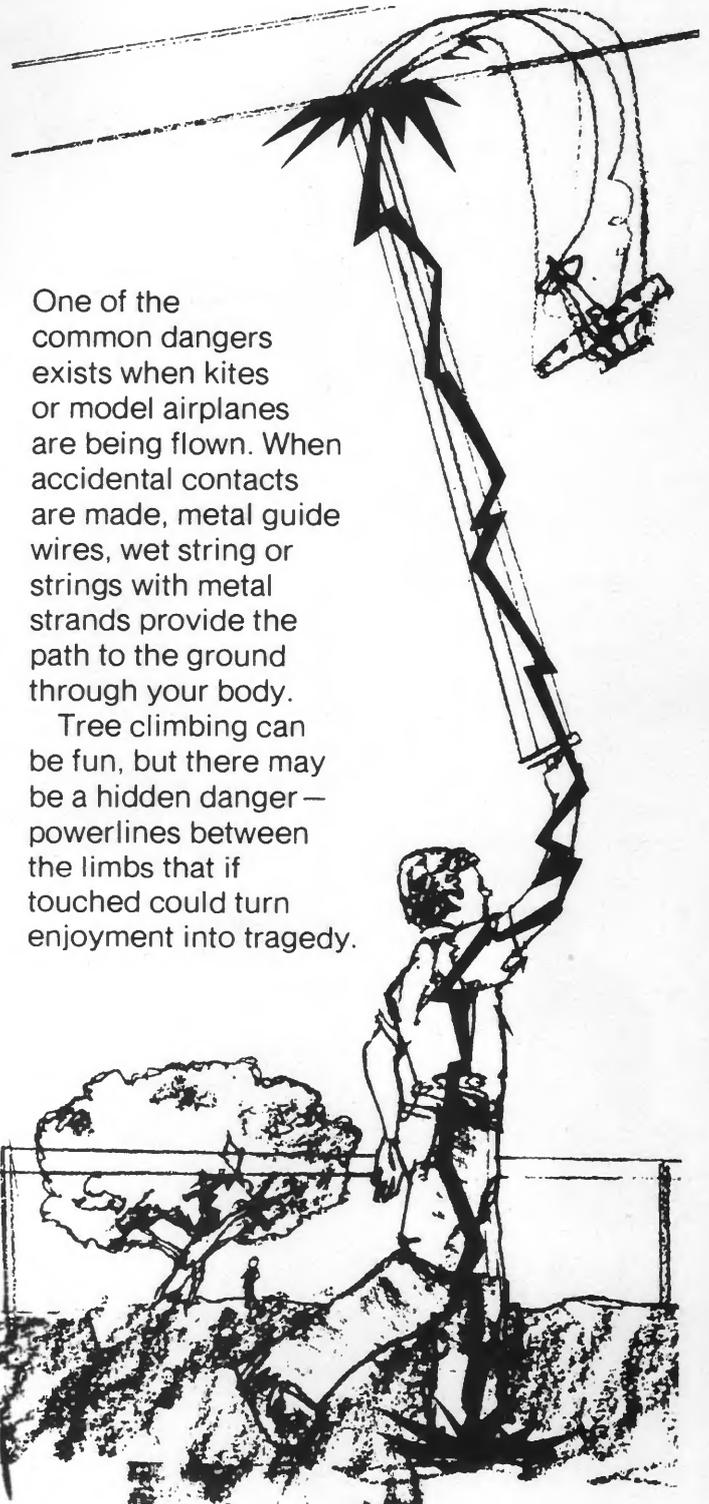
Last year 5,200 poles were tested and this year approximately 5,000 poles will be tested. This will be a continuous program. The approximately 20,000 poles on the cooperative system will be tested every four years.

Approximately 2½ percent of the poles tested in 1976 were found to be either problem or danger poles that need attention now or in the near future. These findings are average considering the age of some of the poles on the system.

With the cost of providing electric service in today's inflationary times, pole inspection and resulting preventative maintenance is important for the cooperative to provide a reliable continuity of electric service to our membership.

# REACT

## Responsible Electric Accident Control Today



One of the common dangers exists when kites or model airplanes are being flown. When accidental contacts are made, metal guide wires, wet string or strings with metal strands provide the path to the ground through your body.

Tree climbing can be fun, but there may be a hidden danger — powerlines between the limbs that if touched could turn enjoyment into tragedy.

# Agriculture leaders

# hear Governor for Century



*Governor James Thompson talks with Senator John L. Knuppel, Virginia, left, and Senator Thomas C. Hynes, Chicago. Knuppel is chairman of the Senate Agriculture, Conservation and Energy Committee and Hynes is President of the Senate and Majority Leader. At the far right is Sid Hutchcraft, executive vice president of the Illinois Pork Producers Association, who served as master of ceremonies.*

*Robert W. Vander Pluym, left, manager of Clinton County Electric Cooperative, Breese, and Representative Dwight Friedrich, Centralia, discuss matters of interest to lawmakers and agriculture leaders.*



Characterizing the program as one which could "potentially revolutionize food production as we know it," Governor James Thompson told over 330 persons attending the Illinois Agriculture Legislative Breakfast in March that he had recommended fiscal year 1978 commitment of \$3.7-million to a program which will cost about \$36-million during the next two years.

The Governor said the "Food for Century III" project "is to build the facilities that are necessary for expanded research efforts in the field of agriculture—research efforts directed toward increasing the overall productivity of agriculture."

The annual breakfast is sponsored by 32 commodity groups, including the Association of Illinois Electric Cooperatives.

Noting that agricultural programs, services and research are closely tied to colleges and universities, the Governor pointed out that many people still think of agriculture in the context of the classical dirt farmer of several decades ago, buying seed, planting it, reaping the crop and hauling it to market.

"Yet we know that the tremendous crop yields that result year after year are tied directly to research advances," the Governor said, "and we also know that farming, therefore, involves a continuing education aspect for farmers. This education occurs directly through the Cooperative Extension Service of land-grant universities and state agricultural experiment stations.

"Also, there is a need for professionals in the agriculture fields, such as the specialists involved in providing services to farming or running agriculture-related industries," he said.

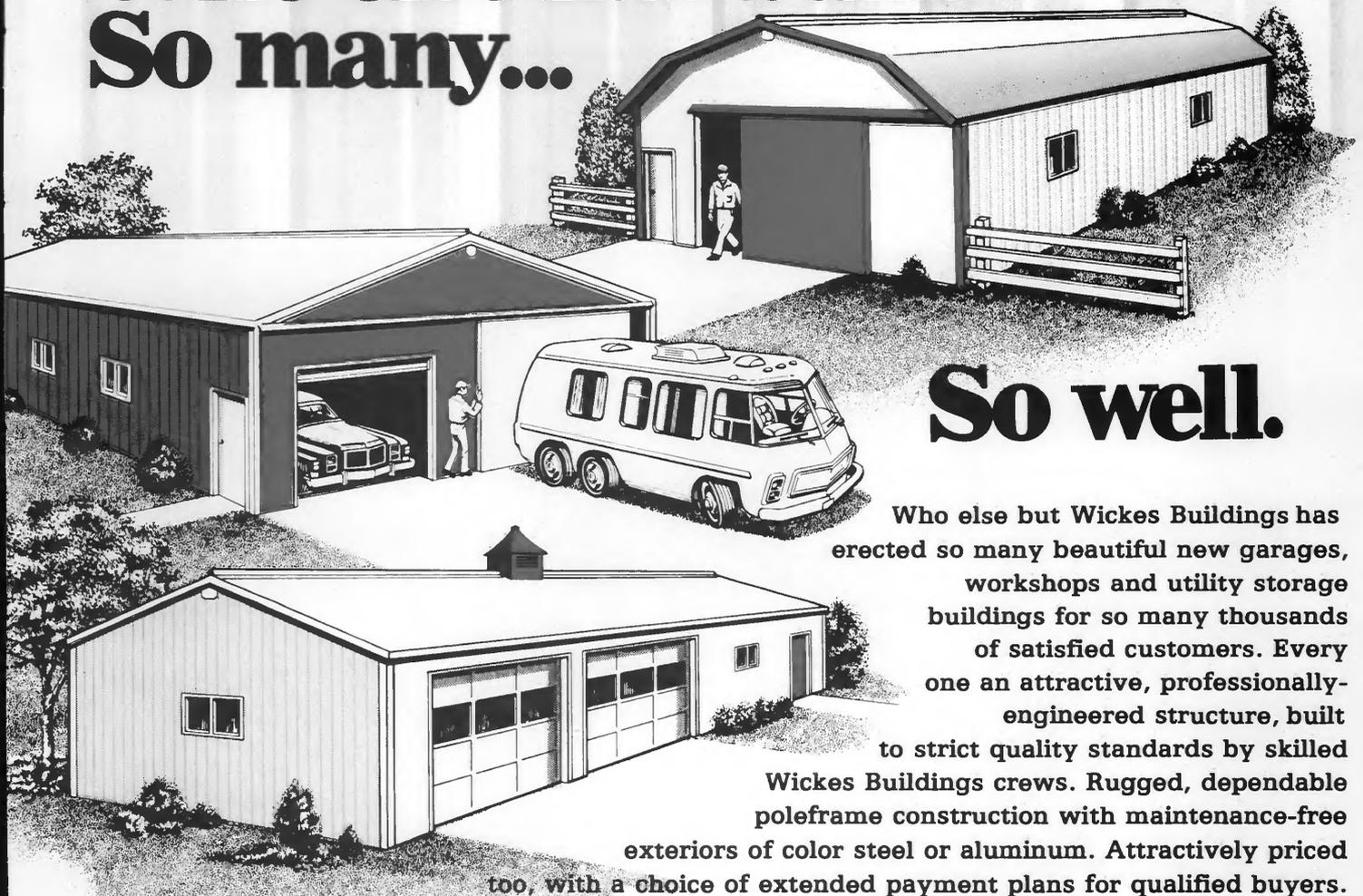
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# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Stumpf elected to Monroe Ele Rusteberg honored for 21 years

Kenneth W. Stumpf, Columbia, a grain and livestock farmer, was elected to the board of directors of Monroe County Electric Co-Operative April 11, replacing Raymond W. Rusteberg, Valmeyer, who retired after serving 21

years as a director of the Waterloo-based electric distribution cooperative.

Two incumbent board members, Lawrence J. Kaiser, New Athens, and Preston A. Mosbacher, Prairie du Rocher, were reelected to the board.

The election took place during the cooperative's 39th annual members' meeting at the Waterloo Grade School Auditorium. The three will serve three-year terms.

Stumpf, who recently retired as a



*LeRoy V. Hard, left, manager of Monroe County Electric Co-Operative, Waterloo, congratulates Kenneth W. Stumpf, Columbia, newly elected member of the electric cooperative's board of directors. Lawrence J. Kaiser, New Athens, second from right, and Preston A. Mosbacher, Prairie du Rocher, were reelected to the board.*

Another good-sized crowd turned out for Monroe County Electric Co-Operative's annual members' meeting in April. In addition to the cooperative business conducted, the members were treated to entertainment by the Looking Glass Players of Lebanon.

## ric board; of service

director of the Monroe County Farm Bureau, is presently a director of the Illinois Corn Growers Association and the Columbia National Bank. Kaiser operates a grain and dairy farm and has served as a Monroe director since 1962. Mosbacher is a grain and livestock farmer and has been a director of the cooperative since 1959.

Rusteberg was the subject of a resolution of appreciation unanimously adopted by the crowd of about 500 attending the meeting. President of the cooperative for nine years and vice president for two years, Rusteberg was cited for his outstanding service to Monroe and the state and national electric cooperative associations.

Rusteberg was a member of the board of the Association of Illinois Electric Cooperatives for 15 years, serving as president for four years and secretary-treasurer for two years. Since 1968 he represented Illinois as a director of the National Rural Electric Cooperative Association.

Manager LeRoy V. Hard, during his report to the membership, explained that increases in the cost of wholesale power amounting to slightly more than 30 percent have necessitated increases in base electric rates. Hard said the board of directors had approved increases which total 20.4 percent for an average user of 1,000 kilowatt-hours, including an estimated wholesale power adjustment.

"Every effort has been made to develop fairness among classes of



consumer-members, as well as the usage levels of the membership, and keep our rates competitive," Hard said.

Hard added that the energy problems of the nation are, briefly: (1) even though there is no worldwide shortage of mineral fuels, the country must give highest priority to reducing its oil imports, and (2) extreme environmental concerns are in conflict with energy use in today's society.

"Economic growth and energy demands are historically closely related," Hard said.

"Our recourse is simple—reduce energy use to make energy more available for critical uses. This means both increased efficiency of energy use (conservation) and increased development of all domestic energy sources," he said.

In his report, President Robert W.

Rippelmeyer, Valmeyer, outlined capital credits, or margin allocations, and how they affect members of Monroe County Electric Co-Operative. He said the management and board has discussed the establishment of a 20-year revolving repayment of capital credits but a final decision has not been made.

Expenses for 1976 totaled \$1,314,542, Secretary-Treasurer Gilbert Fischer, Freeburg, reported. That was compared to 1975 expenses of \$1,227,479. Included in the increased expenses were taxes of over \$88,000, up almost \$18,000 over the previous year. The largest single expense was for purchased power \$663,262, up over \$77,000 from 1975.

Total margins for 1976 were \$187,008.

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# Home weatherization loans

(continued from page 5)

Shuman, a member of Coles-Moultrie Electric Cooperative, Mattoon, told Illinois cooperative leaders, "We in the FmHA are very enthusiastic about this new loan program. We have had a weatherization loan program, but to be frank, we have not been effective." He said FmHA expects the new system, working through the electric cooperatives, to effectively reach rural residents who need help to finance weatherization of their homes.

"This will cost the cooperative time and money," Shuman said, "but it will make for a better living standard in rural America." He urged cooperative personnel to contact his office or any one of the 42 county FmHA offices in Illinois if additional information is needed by local boards of directors who must decide on program participation.

Jim Tucker, FmHA housing chief in Illinois, cautioned that not all cooperative members would be eligible to participate in the loan program even if they meet FmHA ownership and income standards. Under federal law, FmHA loan funds cannot be used for improvements on property located within metropolitan areas or in certain other densely populated areas. Tucker said each participating cooperative would be given a map outlining areas outside the FmHA loan-making authority.

In order to qualify for a home weatherization loan of up to a maximum of \$1,500, a borrower must be a member of a participating electric cooperative and must certify that he owns the property to be improved and that he has an adjusted family income of no more than \$15,600. The cooperative will process the one-page loan application, assist its members in contracting for the weatherization work to be performed and obtain the loan funds from the FmHA for disbursement to the member. The member will repay the loan plus interest over a period of up to five

ILLINOIS RURAL ELECTRIC NEWS

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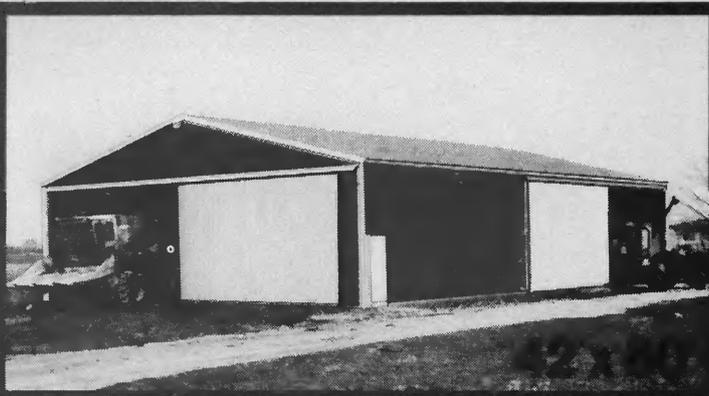
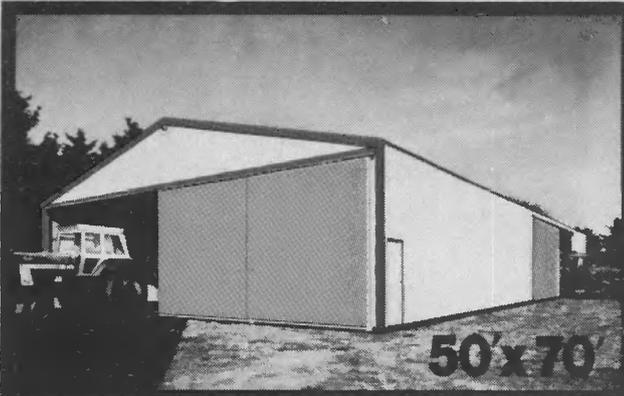
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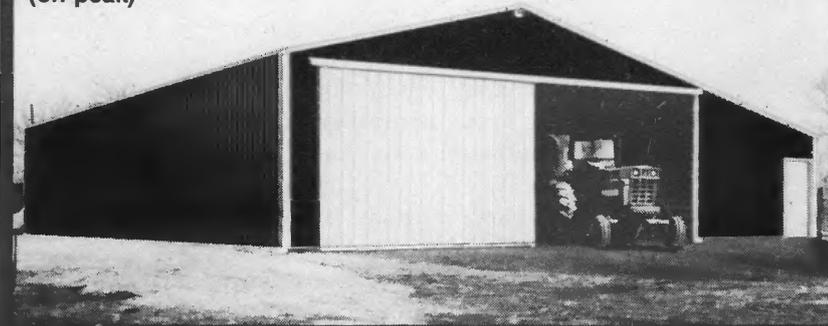
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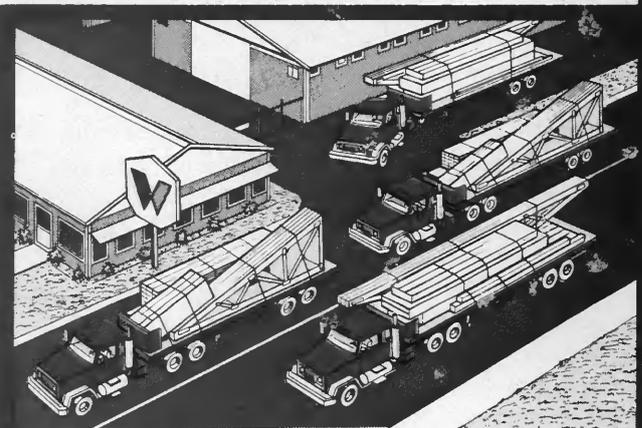
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# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

The board of directors and management of Monroe County Electric Co-Operative have reviewed and given much consideration to President Jimmy Carter's message and proposed energy program. We share the comments of Robert D. Partridge, Executive Vice President of the National Rural Electric Cooperative Association, as stated below:

NRECA Executive Vice President Robert D. Partridge yesterday praised the President for his leadership in trying to solve the nation's energy problems. While praising Carter's conservation goals, Partridge asked the President to give greater attention to energy development. Partridge commented:

"President Carter deserves great credit for his leadership in alerting the public to the energy crisis and for his call for a comprehensive national energy policy.

"NRECA began calling for a national energy policy 16 years ago, when the evidence that we were heading for serious energy shortages in the near future was clear and incontrovertible.

"Other Presidents have talked about our energy problems and needs. President Carter is the first to 'bite the bullet' and spell out the urgency of the problem and lay out a specific program to deal with it.

"While we find much that is praiseworthy in Mr. Carter's proposals, we also have deep reservations about some aspects of his program.

"However, in the months ahead we pledge our all-out support and effort in working expeditiously toward a workable, comprehensive national energy policy that will meet the nation's needs.

"We strongly support the President's proposal for energy conservation through home weatherization measures. Energy conservation programs offer the quickest payoff in energy savings.

"The President is right in calling for expansion of nuclear power facilities and in cutting the ridiculous amount of time it now takes to license nuclear plants.

"We applaud his call for increasing our enriched

uranium output for light water nuclear power plants; the stricter monitoring of big energy company operations and pricing systems; his emphasis on coal gasification and liquefaction and development of the other fuels; and his call for fairness in shouldering the impact of energy programs.

"But it is our considered judgment that there are flaws in President Carter's proposals, the most obvious of which is that too little attention has been given to the question of energy supply.

"We believe it is unrealistic to think that we can increase coal production to 1,100-million tons in the time frame set forth in the face of declining production from existing mines, the stringent conditions imposed in surface mining regulations and the inadequacy of our transportation system.

"In the area of nuclear power, we hope the President hasn't been misinformed on the amount of uranium that exists. This question needs to be settled immediately since the estimates of ERDA as well as the industry indicate uranium supplies are not sufficient to support the 63 existing nuclear plants and the additional 70 plants the President said needed to be licensed.

"Additionally, this total of 133 falls well below the number of nuclear plants which we believe will be needed by the year 2000 to close the energy gap.

"Moreover, it is unwise in our view to eliminate the breeder reactor from our energy planning, since at the moment it offers the only proven avenue through which we can achieve energy sufficiency and a reduction in energy costs.

"We believe that if this country is going to meet its energy needs, we cannot deny ourselves the promise of the breeder reactor nor the benefits of a Richard B. Russell Dam with its 300,000 kws of firm power and 300,000 kws of peaking power.

"If we do not take advantage of the energy resources available, the cost of power now steadily increasing with rising fuel costs will rise at an even sharper rate in the years ahead."

**Everyone needs  
electricity...**

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# NOTICE

## Estimated Billing

The following Policy on Estimated Billing has been in effect since January 1976. After nearly 18 months we are still experiencing some difficulty with estimated bills caused by late payment.

We are not trying to create a hardship on anyone with this policy. The program was inaugurated to improve the efficiency of the accounting department allowing the cooperative to improve its service to the membership.

The Policy on Estimated Billing is:

*"In the event the cooperative does not receive a remittance including meter readings from a member by the 26th day of each month, the consumption for the period will thereafter be estimated by cooperative office personnel.*

*Estimated bills shall be based on the average of the three previous months kwh usage. The member will be requested through notice to adjust his billing booklet to conform to the cooperative's calculated accounting records. If after a period of three months, the cooperative has not received a correct reading from the individual member, the meter will be read by cooperative service personnel and an appropriate trip charge will be assessed for such service."*

*In the event your meter reading along with payment is received after the estimated bill has been determined and recorded by the cooperative, it will be necessary for you to adjust your billing booklet to agree with the cooperative records.*

*Should the amount of remittance differ, a correction card will be mailed to you.*

We respect your cooperation and understanding on this matter.

# Highlights of Energy Plan

We have all read and heard comments about the recent energy proposals of President Carter. Listed are the highlights of the energy plan. We hope by digesting the key proposal you will have a better understanding of the energy crisis we are facing.

Reduce the annual growth rate in energy to less than two percent (it is now four percent).

Reduce gasoline use 10 percent.

Cut imports of foreign oil in half.

Establish a strategic petroleum reserve of a ten months supply.

Increase coal production by more than two-thirds.

Insulate 90 percent of American homes and all new buildings.

Install solar energy in 2½-million homes.

Highlights of his program, as described Wednesday in a speech to Congress:

A standby gasoline tax increase of five cents a gallon to take effect January 15, 1979 if gasoline consumption in 1978 exceeds by one percent a target to be set. The tax could go up five cents a year until it reaches 50 cents if conservation goals aren't reached.

A maximum \$450 tax in 1978 on cars that get less than 11 miles per gallon, and a maximum rebate of \$473 for cars that get 39 miles per gallon or more. By 1985, maximum tax would rise to \$2,488.

The administration doesn't plan to use new energy-related taxes for revenue purposes but will turn them back to the taxpayers.

A heavy wellhead tax on domestically produced crude oil to bring it to the world price of \$13.50 a barrel.

Ceiling price (on both "new" interstate and intrastate natural gas) to be allowed to rise from present \$1.45 a thousand cubic feet to \$1.75.

No utility could burn natural gas after 1990. Utilities with ability to burn coal in existing facilities will be prohibited from using gas and oil. Environmental standards would require utilities and industries to use the "best available" technology to control pollution from coal-burning plants.

Utilities using natural gas or oil would be taxed beginning in 1983 at a level that would encourage them to switch to other fuels.

Tax credits will be offered to owners who weatherize their homes. The President also would require regulated utilities to offer homeowners a weatherization service.

Phasing out of promotional rates and "other pricing systems that make natural gas and electricity artificially cheap for high-volume users and which do not accurately reflect costs." Utilities would be required to adopt peak-load pricing.

Suspension of construction of Clinch River fast breeder reactor demonstration plant but continuation of engineering design.

Expansion of U.S. uranium enrichment program and a new enrichment facility using the centrifuge technique.

Resumption of taking orders for enriched uranium. Because enrichment capacity (provided solely by the federal government) was fully committed, U.S. stopped taking new orders 2½ years ago.

Shortening the time required for licensing nuclear power plants and stricter safety measures at plants.

Encouragement of industries to use heat created in their plants to generate electricity by offering them a 10 percent tax credit to install generating equipment.

Tax credit (maximum \$2,000) for homeowners installing solar equipment.



# Going solar

Among the several facets of President Carter's energy program is his emphasis on conservation as a means of meeting the nation's energy demands. The President has included increased use of solar energy as an integral part of this conservation effort.

There is a provision in his program for tax credits to homeowners who install solar equipment, an incentive which should lead to increased demand for solar energy systems.

But, the increase in the demand for solar energy may also bring the charlatan and the fly-by-night installer. While most of the installers are honest and competent, many still do not know exactly what may be needed for your particular situation. The field is new and there are no really firm standards as yet.

However, there are some things you can do to protect yourself if you do decide to go solar shopping.

First, check with your electric cooperative or your state homebuilders association to assist in locating a reputable, knowledgeable contractor, and get in touch with your county extension office, which also may be a source of useful data.

Then, know what you can expect from your solar apparatus. One Illinois resident installed 60 square feet of flat plate collectors in his yard and was disappointed that the unit would not heat his entire house. Actually, such a solar array could be reasonably expected to heat a 180- to 240-square-foot area, provided the space was well insulated and the collectors are fairly efficient.

Flat plate collectors—the most common, least expensive kind—collect low-yield heat. To make them work

for you, you will need a large volume, and to get a large volume, you will need a large collection area.

If you expect to heat your entire home on sunny winter days, you will need a collector array about one-fourth to one-third as large as the floor area of your house. In other words, to heat a 1,500-square-foot home, you will need 375 to 500 square feet of collector panels. If a contractor tries to sell you a small array, ask him how big a percentage of your heating needs it can fill.

Solar's low-yield heat brings on another problem: insulation. Electrically heated homes need a lot of insulation, but solar-heated homes need more yet. Before a builder can tell you how much collector area you need for an existing home, he will need to know how much insulation you have in your home. Chances are it will not be enough. Solar-heated homes need to be heavily insulated and tightly-sealed. Some authorities are recommending 18 inches of insulation in the attic of a solar-heated home, with proportionate amounts in the walls and floor.

The gist of all this is that if a contractor tells you what to expect from a solar furnace without doing a thorough heat loss study of your home, be wary. He will need a lot of data before he can make any predictions.

If he tells you he can heat your home with a tiny flat plate collector,

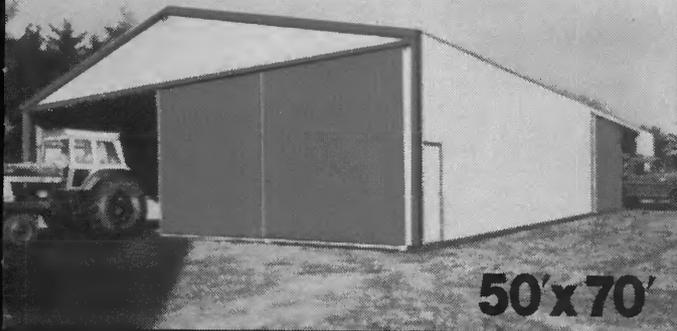
take his promise with a grain of salt. It cannot be done.

A small collector can, however, do part of the job. Still, you will need to know exactly what you want, and realize that a system that will provide all your winter heat would cost a lot of money, both for collectors, and for storage, which is necessary for sunless days. A solar collection system which is usable only for space heating, will probably cost you in the neighborhood of \$20 per square foot of collector area, including installation, controls, and a storage system. Prices are expected to come down gradually in the future.

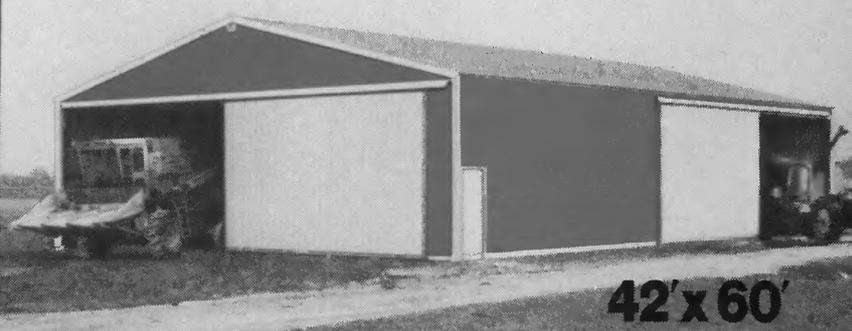
Most systems are built around a water or air heat transfer system. For an air system, hot air is blown over gravel, which absorbs the heat from the collector panels and stores it for later use. For a couple of days of heating, in the event the sun refuses to shine, you will need about one cubic foot of rock for each two square feet of collector area. A water storage unit needs a smaller amount of storage than a gravel bed. A cubic foot of water will usually do the same job as two and a half cubic feet of gravel. Storage tanks must be very heavily insulated to be really useful. Check with your contractor to determine how much insulation he installs around the storage medium. A poor job here may indicate a lack of good engineering.

Still, how well your storage medium holds usable heat will depend on many

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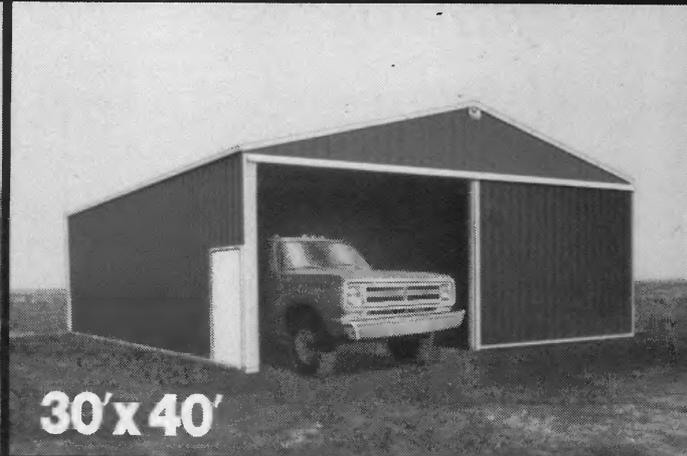
**50'x70'**



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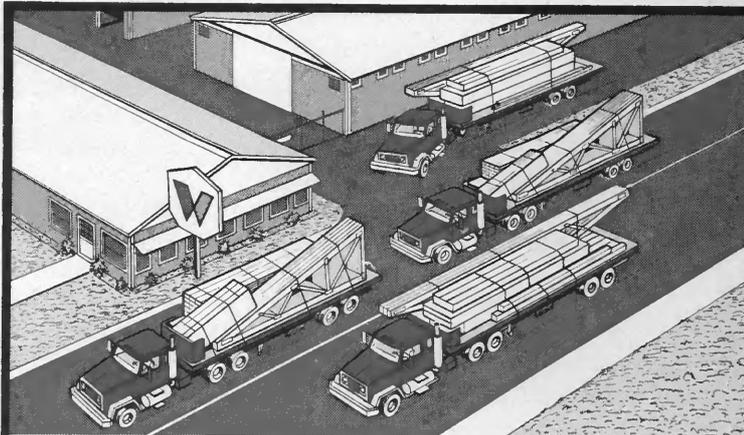


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# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

Depression, revolution and even another world war might result if the nation fails to deal successfully with the energy crisis, the head of a congressional study group claims. The gloomy analysis was recently made by Skip Johns, director of an Office of Technology Assessment energy study team to staff members of the House Ad Hoc Energy Committee.

These are sobering remarks. Although concerned, we do not believe the energy crisis to be that grave; however, it does point out the need for our nation to develop a workable energy policy.

The energy crisis illustrates the need for a shift in the reliance on the use of energy sources from oil and gas to coal and uranium. Nuclear fuel and coal offer the only reliable means to meet domestic energy needs, while, at the same time, lessening our dependence on foreign oil imports for the remainder of this century.

In Illinois this desirable shift is illustrated by the fact that Southern Illinois Power Co-operative has under construction facilities to greatly expand its coal-fired generating capabilities and that Soyland Power Cooperative, Inc., and Western Illinois Power Cooperative, Inc., are negotiating to purchase joint ownership shares in the Illinois Power Company nuclear Clinton Power Station.

The necessity for future reliance on coal and nuclear energy is evident. Oil and gas resources are being depleted rapidly and their use should be reserved for those economic areas which contribute to the greatest national good, i.e., food production and petrochemical conversion. United States coal resources are far greater than our petroleum and natural gas resources. Uranium, as used in present day reactors, can produce approximately 48 percent of the energy represented by coal and oil resources.

However, if uranium is used in the developing technology of fast breeder reactors, such as the Clinch River liquid metal fast breeder reactor (LMFBR), a seventyfold increase in nuclear energy reserves would result. The fast breeder reactor creates more nuclear fuel than it consumes while producing electric power.

In addition, nuclear plants are safe. No one has ever been

killed or injured by a nuclear accident at a nuclear power plant. The nuclear material in the core of a nuclear power reactor is physically incapable of exploding.

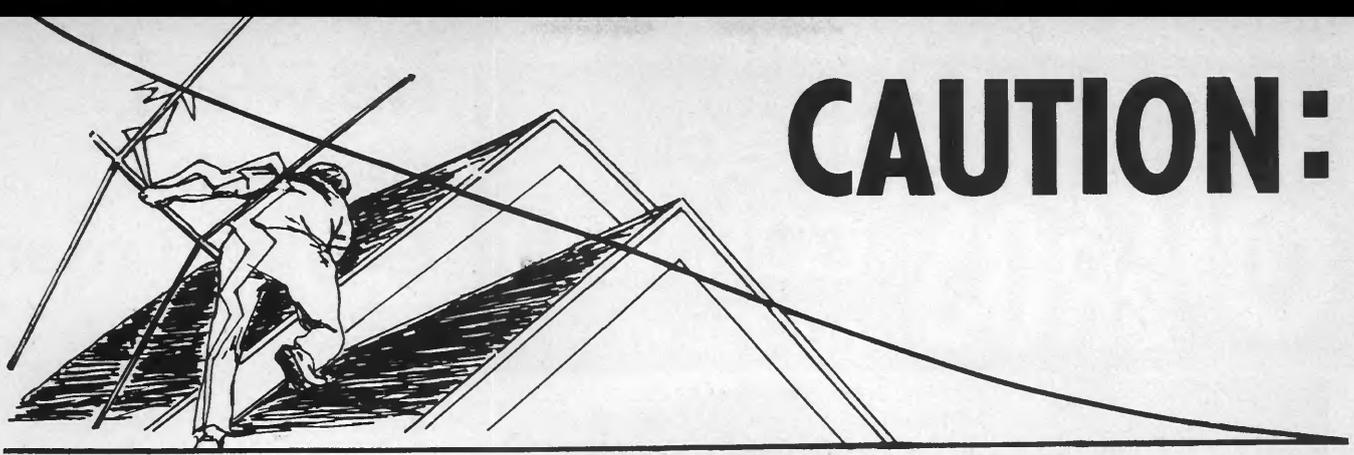
Only coal and nuclear energy can provide sufficient or reasonably priced energy in quantities needed through the end of this century. The nation must proceed now to develop nuclear electric power and the fast breeder reactor technology to ensure that energy to be derived from it will be available when needed.

The Monroe County Electric Co-operative, Inc., believes that the key elements of an energy policy which will provide abundant and reliable electric energy at a reasonable cost is a transfer to nuclear-based generation and the rapid development and utilization of the fast breeder reactor and urges that this transfer be made.

## New Digger Truck



*Lineman Edward Esker and Groundman-Truck Driver Steve Candler inspect the new digger truck recently purchased by the cooperative. The new truck will enable the cooperative to provide more efficient and faster service to new members as well as aid in maintenance of our existing system.*



# CAUTION:

## Installing a CB Radio Antenna Can Be Hazardous to Your Health

Not all CB (citizen band) radios are going into trucks and cars these days. Many are being installed and operated in homes across the country. And as a result a serious problem has surfaced.

A nationwide insurance company recently found that careless installation of base station CB radio antennas is causing shocks, severe electrical burns and in some cases death.

This insurance company alone has received reports over the last 16 months of 26 accidents in which do-it-yourself installers have let metal CB radio or television antennas touch uninsulated 7,200-volt power lines above or next to their properties.

Fifteen of 31 people involved in the 19 most serious accidents were electrocuted and most of the 16 survivors suffered severe burns. More recently, in a one-week period, five persons were killed while installing CB antennas in North and South Carolina.

During the early part of the 16-month period, most accidents resulted from the installation of television antennas. But with the growing number of CB radio installations in the home, the most recent mishaps (11 of the last 13) involved CB antennas.

Home installation of base station CB radios requires an antenna, usually mounted atop a metal mast standing

upright on the ground and rising 50 feet or more in height. It's easiest for installers to "walk" their antenna/mast into an upright position, supporting it from above with guy wires or the eave of a house.

Unfortunately, the antenna/mast is so long that unwary installers often walk them into contact with overhead power lines. Most people only get one chance at this type of mistake. The tragic lesson is not easily forgotten by the survivors. All but one of the 15 fatalities reported to the insurance company involved people standing on the ground, holding antenna/masts, when electrocuted.

A case in a small Florida town last June is typical. A 28-year-old woman and her brother, age 21, were putting up a CB antenna alongside her home. The antenna was over 17 feet long and was connected to a 20-foot mast. The antenna/mast combination was being walked up into an upright position by the brother, with the sister holding the base to the ground, when its tip touched a power line. Both installers were killed instantly.

The lethal situation has been found to be most prevalent with the lightweight, vertical, omni-directional CB antennas that measure 17 to 18 feet before being mounted atop long, metal masts.

Some antenna manufacturers

provide general instructions with their products that call for installation to be made in clear areas away from wires, other antennas, etc., in order to maintain proper efficiency of CB antennas. Few antenna manufacturers enclose specific warnings to avoid overhead power lines or give a description of the potential hazards. Printed warnings are a step in the right direction toward preventing some tragedies, but what about the manufacturer who refuses to accept moral and legal obligation to warn consumers of the hazards of installing such antennas?

Because most electrocutions result from carelessness or ignorance of existing danger, awareness is a strong preventative. CB radio enthusiasts are advised to be aware that primary power lines are not insulated and that contact with those lines by home-installed antennas may be fatal.

All antennas, regardless of type, should be kept far away from power lines. If there is any doubt about the safety of making an antenna installation, professional help should be called in to do the job. If existing antennas need to be moved and there is danger of contact with nearby power lines, your electric cooperative should be notified before antenna removal is attempted. No amount of time or money saved is worth the risk of losing a human life.

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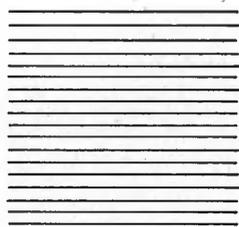
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## Newman named Soyland manager

Royal B. Newman, former executive director of the Florida Keys Aqueduct Authority, Key West, Florida, is the new general manager of Soyland Power Cooperative, Inc. Announcement of the appointment was made by Soyland President Walter R. Smith of Champaign, manager of Illini Electric Cooperative.

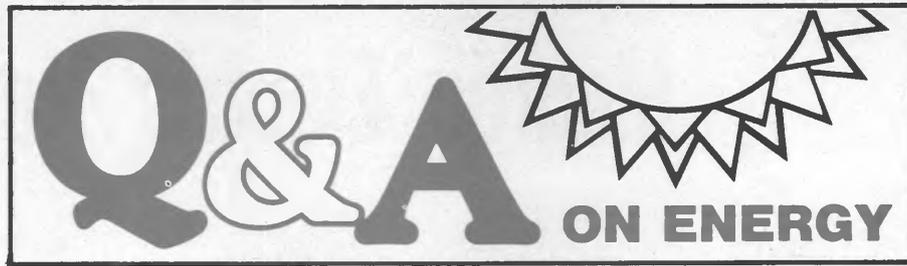
The cooperative, which will be headquartered at Decatur, was reorganized in 1974 to provide the bulk power requirements for 15 central and south central Illinois electric distribution cooperatives. The power cooperative has entered into an agreement with Illinois Power Company to purchase and acquire 10.5 percent ownership of IP's Nuclear Clinton Power Station, now under construction near Clinton, Illinois. Soyland's cost is estimated at \$190-million.

As general manager of Soyland, Newman will be responsible for the cooperative's overall operations, negotiations and for assisting the 15 member-systems in securing, through purchase or self-generation, an adequate supply of power to meet the needs of the nearly 100,000 member-consumers served by the cooperatives. Consumers of the 15 member-cooperatives are currently using 1.5 billion kilowatt-hours (kwh) annually. Power costs for the 15 cooperatives last year exceeded \$16.8-million.

An electrical engineer with degrees from Auburn Community College and Syracuse University, Newman's professional experience includes serving as executive director/chief engineer for the Virgin Islands Water and Power Authority from 1971 to 1975 and five years as utility director/project manager for the City of Lodi, California.

In addition to his 20 years experience in power and water administration, operation, engineering,

ILLINOIS RURAL ELECTRIC NEWS



# Geothermal Energy

*This is another in a series of questions and answers about specific energy problems and opportunities. They were prepared by the Electric Power Research Institute in cooperation with the National Rural Electric Cooperative Association.*

**Q:** What is geothermal energy?

**A:** It's the natural steam, hot water and very hot rock inside the earth that is shallow enough to be tapped for generating electricity and other uses, such as heating buildings.

**Q:** How much geothermal energy do we have in the United States?

**A:** The U.S. Geological Survey estimates there is enough geothermal energy at practical depths beneath the earth's surface to generate electricity at present rates of use for the next hundred years. But we won't get even a fraction of that potential unless we solve some very tricky economic and technological problems.

**Q:** How much electric power are we generating from geothermal sources today?

**A:** About one-tenth of one percent of U.S. capacity is from geothermal sources, all of which comes from a stream field at the Geysers in northern California.

**Q:** Why haven't we exploited more of the potential?

**A:** The Geysers is the only place in America where we've found dry steam that can be commercially developed. Geothermal steam is

very economical because it is just piped from the ground into turbines. Geothermal hot water systems are more complex and maintenance is costly because the water is so full of dissolved minerals.

**Q:** How important are the various forms of geothermal energy?

**A:** Natural steam, which is so easy to use, represents less than one percent of the potential. Hot water accounts for another 10 percent. Geopressured water, which contains dissolved methane gas as well as hot water, represents 20 percent. Hot rock represents about 70 percent of total geothermal potential.

**Q:** Why aren't we getting more energy from hot water, geopressure and hot rock?

**A:** We're not sure of the economics of extracting energy from hot water and geopressure systems, and new technology is required for hot rock systems. The future of these geothermal sources will depend on how successful we are in bringing the cost of producing electricity from them down to compete with other fuels. We also are looking at them as direct sources of heat.

**Q:** How much research is being conducted?

**A:** The U.S. Energy Research and Development Administration (ERDA) is spending about \$400-million over the next five or six years. The electric utilities together are planning to invest

some \$2-billion in commercial geothermal development over the next decade if the basic technical problems are resolved and the economics are competitive. For example, rural electric cooperatives for several years have been involved in the Raft River experimental geothermal project in Idaho, partially funded by ERDA.

**Q:** Are there any other problems besides economics and basic technology?

**A:** Yes, there is a pollution problem with contaminants in some steam and hot water systems, but that can be handled.

**Q:** Is geothermal energy found all over the nation?

**A:** If you go deep enough, there's hot rock all over the world. But within reach of present drilling methods and within the bounds of anticipated economics, usable geothermal areas are concentrated in the western states, Alaska, Hawaii and along the Gulf Coast.

**Q:** Given all the problems that still must be solved, how much of our electric power is likely to come from geothermal sources in the year 2000?

**A:** It could be as high as five percent or less than one percent. The actual amount will depend on how rapidly existing hot water fields can be developed and how successful we are in developing new technology that makes geothermal energy forms economically competitive with other fuels.



# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

### LAPP: "CARTER PLAN LEAVES SUPPLY GAP"

Dr. Ralph Lapp, noted physicist and author, in an analysis of the Carter energy package, says; "In addition to some questionable assumptions as to energy growth, coal mining capabilities, uranium supply, etc., the Carter plan will leave a supply shortage below their projected demand of approximately 13 percent by 1985.

This shortage can only be filled by additional oil imports if available, at an uncertain price, or a drop in our energy growth rate to approximately zero, which is just what some of Carter's advisers would like to see." Looking beyond 1985, the energy supply outlook would become increasingly pessimistic.

Lapp feels the Administration has underestimated the problems associated with moving from the liquid and gaseous energy source, that now supplies three-fourths of our energy requirements, to a solid fuel, such as coal. Without the breeder reactor, the U.S. automatically limits its options and creates an inevitable energy gap that will continue to grow with each passing decade. He pointed out that the President tells the people that coal represents 90 percent of the energy reserves of this country but failed to mention that, with the breeder reactor, we have uranium reserves ten times greater than our coal reserves.

### PRESTIGIOUS STUDY SAYS FREE WORLD ENERGY OUTLOOK NOT GOOD

A pessimistic report by the Central Intelligence Agency on free world energy supplies received strong support from a prestigious group of 35 eminent government, academic and business figures from 15 nations, through a study sponsored by the Massachusetts Institute of Technology. The report made these significant observations: 1. Even with extensive conservation efforts, energy demand in the non-Communist world will at least double by the year 2000. 2. Depending on what Saudi Arabia does about oil production, free world energy shortages are going to develop in the next four to fifteen years. If Saudi Arabia holds production to its present levels, as they are threatening to do, supply shortages will develop in four years. 3. Even these projections assume the

following optimistic developments in energy supply between now and the year 2000:

- World coal production will more than double.
- Nuclear power will increase fifteen to twenty-five times.
- We will achieve a 50 percent reduction in the historic growth of world energy demand.
- Oil prices will jump 50 percent.
- Average miles per gallon for U.S. automobiles will double.
- The U.S. will achieve a 40 percent reduction in energy demand for heating and cooling of buildings.

One participant describes the report as a "time-bomb that's ticking away and we're running out of time. There is no choice, the free world must drastically curtail its growth of energy use and move massively out of oil into other fuels with wartime urgency. The free world nations can only look to coal, nuclear and to using less." While the report calls for a drastic increase in nuclear energy, it offers no opinion on whether this increase can in fact, be realized. Without nuclear, the energy shortages will come much quicker and be much more severe.

### IT MAY TAKE SHORTAGES FOR PUBLIC TO UNDERSTAND NEED FOR NUCLEAR POWER

Sigvard Eklund, Director-General of the International Atomic Energy Agency, and a former official of the Swedish Atomic Energy Commission, says one of his great disappointments is that it has been so difficult to enlighten the general public with regard to nuclear power. He says the general public may just have to learn the hard way, and only come to appreciate the importance of nuclear power when they find themselves without electricity they are so accustomed to. Eklund says he is very worried at the bitterness some nations show toward U.S. nuclear policy.

### TVA PROMOTES SUPER-INSULATED HOMES

Approximately 300 super-insulated homes either have been built or are under construction in the Tennessee Valley area. These homes are built to special standards recommended by TVA for maximum energy savings. These super-insulated homes have insulation values of R-30 in the ceilings, and R-19 under the floors and outside wall. The homes are heated and cooled with electric heat pumps. Windows are double- or triple-glazed and do not exceed 10 percent of the floor spread. These 1,800 square foot homes cost approximately \$1,000 more to construct than a conventional home of the same size. But during this last winter's heating season, the number of kilowatt-hours required to heat was reduced as much as 70 to 75 percent, according to a TVA spokesman.

# Weatherize to Conserve Energy... And Save \$\$\$ Heating & Cooling

With the memory of last winter's extremely low temperatures and cold, blowing winds still fresh in our minds, now is a good time to think about trying to reduce our heating costs for the future. With fuel costs continuing to increase, proper home weatherization is an investment that will pay for itself many times over during the life of a home.

## Why Insulate at All?

Insulation controls the flow of heat. It keeps heat INSIDE your home in winter and OUTSIDE your home in summer. This helps to reduce your heating bills in winter and your cooling bills in summer. It saves you money year-round and it helps conserve our nation's dwindling energy reserves.

But, insulation is more than good economics. It also increases the comfort of your home. Uninsulated walls, ceilings and floors are cold. They actually draw heat away from your body. Proper insulation will increase the relative humidity and reduce heat loss from your body resulting in a more comfortable feeling, even with the thermostat at a lower setting.

## How Insulation Works

Insulation is any material that

provides a high resistance to the flow of heat from one area to another. Most commonly used in homes are the fibrous insulations (mineral wool, glass wool, or cellulose fiber), which are light and very porous. Containing millions of tiny air pockets, they are highly effective in slowing heat flow. Loose-fill insulation is often used for blowing or pouring over the ceiling and batts are used in the walls and under the floors.

## Where the Heat Goes

In a completely uninsulated frame house, the following table gives the typical heat loss through various portions of the building. The table assumes that 15 percent of the outside wall area is made up of windows and doors, and that the infiltration rate is one air-change each hour. (Infiltration is unavoidable air leakage in a normal house, coming through cracks in walls, from around doors and windows, and through open doors and windows.)

	Heat Loss
Ceiling Area	45%
Floor Area	20%
Windows and Doors	12%
Outside Walls	12%
Infiltration	11%
Total	100%

Although these percentages will vary with the amount of window area, floor plan, number of people in the family, age of the home, and other factors, they are average for the typical noninsulated 1,500 square foot house.

## Other Ways to Weatherize

While proper insulation results in the most energy savings per dollar invested, consumers can achieve additional savings throughout their homes. Installation of storm doors and windows and caulking around doors and windows will plug up costly "heat leaks." Installation of attic vents or a thermostatically-controlled attic fan will remove high-temperature air from above the living space and reduce the load on your air conditioner. For other ideas on home weatherization or help planning your weatherization program, contact your cooperative member service department.

Remember, now is the time to insulate before summer is over and cold winter winds have begun to blow again. The insulation that could have conserved energy and saved you money on last winter's heating bill can still save you money cooling your home this long, hot summer. Weatherization will pay you dividends all year long.

CONSTRUCTION	HEAT LOSS IN B.T.U. PER SQ. FT. PER HOUR							
	10	20	30	40	50	60	70	80
SINGLE GLASS	[Bar extending to 80]							
DOUBLE GLASS	[Bar extending to 17]							
8" CEMENT BLOCK	[Bar extending to 40]							
8" BLOCK, INSULATED 2"	[Bar extending to 10]							
4" FRAME WALL, NO INS.	[Bar extending to 20]							
4" FRAME WALL, 3½" INS.	[Bar extending to 10]							
CEILING, NO INS.	[Bar extending to 45]							
CEILING, 6" INS.	[Bar extending to 10]							
WOOD FLOOR, NO INS.	[Bar extending to 20]							
WOOD FLOOR, 2" INS.	[Bar extending to 10]							

This bar graph shows transfer of heat through common types of material. Next to glass, the big losers are concrete and uninsulated frame construction. Adequate insulation and double glass lower heat loss from 17 per cent to 70 per cent depending upon materials and location.



# Energy Conservation Now

## Save in the kitchen

*This is another in a series of articles designed to help you save money through the wise and careful use of electricity.*

Most of your utility bills will go for comfort conditioning, and that's where you can effect your greatest savings. If you've weather-stripped your home and insulated it, you'll have taken a big step in keeping your bills down.

Water heating is next, and after that your savings will come in grudging little nibbles, but there are still many ways you can save energy around the house as you cook, wash clothes and do the dishes.

Of course, food preparation takes energy, and you can save by making sure your refrigerator and freezer are in good condition, especially the door gaskets. Close a piece of paper in the door and try to pull it out. If it slips out easily, your gaskets need replacement. You can save a little, too, by opening the doors as few times as possible, and a little more by defrosting regularly. It is wise to vacuum your refrigerator/freezer coils occasionally, making sure to unplug the appliance before poking around with the crevice cleaner. The coils are usually attached to the back of a refrigerator, or in the bottom section.

The kitchen range is another place where small savings can add up to big annual savings. Be sure to cook on elements that are about the same size as the pan, and certainly no larger. Incidentally, glass or ceramic cookware is a little more efficient than metal. Use a tight-fitting lid, unless the

recipe calls for cooking uncovered, and shut the unit off a few minutes before the food is completely cooked. Residual heat will do the rest.

Ovens take a lot of current. For that reason, you'll be wise to use your oven efficiently, and bake an entire oven full of food at a time. You can store the rest for later use, being sure to cool it to room temperature before placing it in a freezer or refrigerator. Or, if you have a small countertop oven, it is more efficient—if you can only bake one item anyway—to bake it in the smaller unit.

Probably one of the biggest mistakes people make in baking is peeking. When you open the oven door, as much as a quarter of the heat is lost, the thermostat signals for more, and the oven's heating element pulls additional current. Cook by time and



temperature! Be sure to preheat only a few minutes, and you can turn the oven off a few minutes before the cooking time is up. With a large roast, you can shut the oven off as much as 30 minutes before cooking time is up, if you can resist the temptation to peek.

These energy conservation measures won't spell the difference between wealth and poverty, but they will save you a few dollars a year, and they'll help conserve valuable natural resources, too.

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**Joint NRECA-CFC  
committee**

*(continued from page 11)*

award for its work with foreign participants during visits to the cooperative. Wayne Laning, Mt. Sterling, Adams president, accepted the award on behalf of the cooperative.

Searls also was a panelist during a general session discussion, "Coping with Conservation." The Illinois NRECA Director, Raymond Rusteberg, Valmeyer, presided during the panel discussion. Robert Wagner, Burnside, District 5 CFC Director, presided during the CFC annual meeting. Wagner is a director of Western Illinois Electrical Coop., Carthage.

Stanley Greathouse, Johnsonville, past president of the Association of Illinois Electric Cooperatives and Illinois NRECA Director-elect, was named Region V Executive Committeeman. Greathouse is a director and vice president of Wayne-White Counties Electric Cooperative, Fairfield.

Three Illinois women were active. Mrs. Iona Greathouse, Johnsonville, was introduced as the Region V Chairwoman. Mrs. Adeline Rusteberg, Valmeyer, was a member of the woman's nominating committee. Mrs. Margie Mohrman, Camp Point, was reelected Region V Committeewoman on the NRECA Women's Action Committee.

The need for developing power supply capability to meet the requirements of electric cooperatives was illustrated by David A. Hamil, Administrator of the Rural Electrification Administration (REA). Hamil said a recent survey indicated that kilowatt-hour sales of electricity by electric cooperatives are rising at rates ranging from eight to 12 percent, compared to six to nine percent for commercial power companies.

While urging electric cooperatives to continue their practice of energy conservation, Hamil went on to say, "Intensified conservation efforts alone are not enough to meet our electric energy needs." He said electric cooperatives should use all possible

*(continued on page 20)*

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IRA 10



# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## *Across the manager's desk*



LeRoy V. Hard  
Manager

"Cooperatives—Good for America," the 1977 theme for Cooperative Month, observed every October, carries a very special meaning for those of us who are involved in the rural electrification program. Rural electric leaders and consumers can proudly look back over the past 40 years and count the many ways America has benefited from the establishment of rural electric cooperatives. Rising young rural leaders should gain confidence in this tremendous record as their generation prepares to meet the challenges of the future.

Many people who have become involved with cooperatives—through food and housing co-ops, health care or credit unions—may not realize that the cooperative philosophy and way of doing business have been around for as long as they have. While most people live in or near urban areas, an increasing number are returning to the countryside. Many are becoming consumer-members of rural electric cooperatives and finding that this is yet another way to obtain essential services.

When rural electrification got its start in the 1930s, America's farmers and rural citizens lived a life vastly different from today. Farming, running a household and doing all the chores that go with raising a family—all without electricity—made for a very rugged existence, a way of life almost impossible for Americans now to comprehend.

Rural electrification not only dramatically changed people's lives for the better but helped American agriculture's productive capacity become the envy of the world.

But modernizing a whole way of life does not end the rural electric story, by any means. Rural electric cooperatives, like other kinds of cooperatives, must keep pace with the growing needs of their consumer-members. And because they are consumer-owned, they are consumer-oriented.

Rural electric cooperatives have been in the forefront in alerting the nation to the seriousness of the energy supply problem and working for national policies in the

## COOPERATIVE MONTH: OCTOBER 1977

consumer interest. Their local, regional and national meetings provide open forums through which consumer-members discuss various ideas and concepts and participate in the formulation of policies their cooperative entities lay down. Member involvement on a one-vote, one-person basis is an important element that contributes to the success of cooperatives.

Today, we are proud of the fact that nearly 1,000 rural electric systems—mostly cooperatives—serve more than 25-million consumers in 46 states. These systems have created thousands of new job opportunities, contributed to the economic well-being of their communities and have provided leadership to improve health care for rural development programs, water resources development and energy conservation.

Without a doubt rural electric cooperatives are good for their communities—"Good for America."

Statement by Robert D. Partridge, Executive Vice President and General Manager, National Rural Electric Cooperative Association.



# When Safety Is Neglected, Electricity Can Be Deadly

Electric energy is the safest energy source, but it can be deadly when a person contacts it. Few people realize how little flow of electricity it takes to kill a person. This table, taken from a publication of the National Safety Council and given in milliamperes, shows that small amounts are dangerous.

Milliampere is 1/1000th ampere. It takes about 830 milliamperes to light a 100-watt bulb.

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## CURRENT VALUES AFFECTING HUMANS

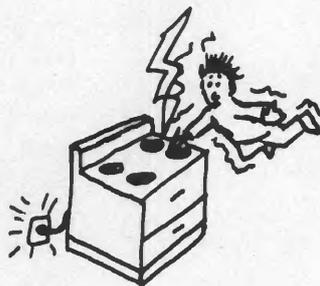
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Readings	Effect
1 milliampere or less	Cannot be felt.
1 to 8 milliamperes	Sensation of shock, no danger or pain.
8-15 milliamperes	Painful shock, no real hazard.
15-50 milliamperes	Painful shock. Muscle control can be lost. Victim can't let go. Breathing might be difficult. Possibly a lethal current level.
15-200 milliamperes	Probable death.
200 and above	Severe burns. Probably death.

---

Only an actual flow of electricity can kill and fortunately the human body has a rather high resistance to the flow of current. Conditions such as wet feet, wet hands, moist skin, wet clothing, massive contact to ground, weak heart or others can make the values and the effects change, making the victim more susceptible to death or injury. Another factor affecting the hazard is the part of the body through which the current flows. If it flows through the heart, lungs or brain, death could be more likely than if it flowed through some other part of the body.

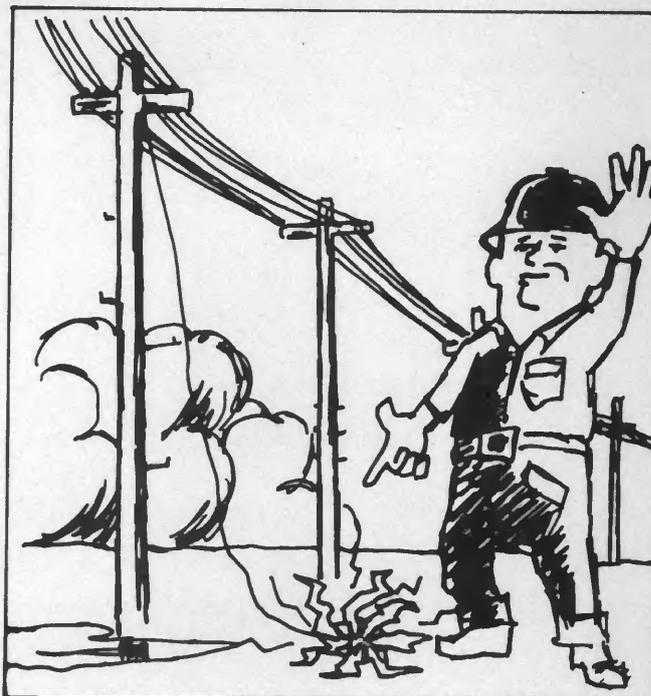
Very few people are killed by electricity because we are in most cases adequately protected. Careless use of equipment or faulty appliances should certainly be avoided.



*Make sure the power is off before you tinker.*



*Wet limbs, loose wire or anything hanging or leaning against an energized power line could be dangerous. Situations like this should be reported to the power supplier so they can be repaired. Just because a loose wire appears to be dead is no reason for one to believe it is safe to touch. It can come alive by some contact miles away or by some switch being thrown.*



# Despite ups and downs, he

Tom Marckese has one of those hobbies that has its ups and downs. He goes up in airplanes and jumps out of them, for fun and profit, as they say. He has jumped from as high as 13,500 feet.

Marckese, who is a member of the Trackers, Inc., of Annawan, has been in the sport parachuting game since about 1970, or thereabouts. He and his wife Mary Lynne, are members of Farmers Mutual Electric Company, Geneseo.

Actually, his involvement in the sport came about as a combination of business and pleasure. He was in the Marine Corps, a member of an air and

naval liaison gunfire team; members of such teams are required to be qualified parachutists.

"I found that I liked parachuting," Marckese says with a grin, "so I joined the Camp Pendleton Sport Parachute Club. All told, I've made about 1,100 jumps since then," he says. The Marine Corps required qualified parachutists to make two water landings, and a night jump, too, but Marckese's activities are not quite so lively now, even though they certainly cannot be considered mundane.

Sport parachuting today generally centers around two activities—performing acrobatics after the

'chutist jumps and before he opens his parachute, and attempting to hit—or come very close to—a tiny target.

"The target's four inches in diameter," Marckese says, "or perhaps I should say 9.84 centimeters, since sport parachuting is an international activity. Measurements are metric because of that."

The Trackers operate out of the Harold Thompson farm at Annawan, and they occasionally perform exhibitions for shopping center promotions and such activities. "Actually, we could do more jumping just at the farm," Tom says, "but the exhibitions help pay for the airplane and publicize the club."

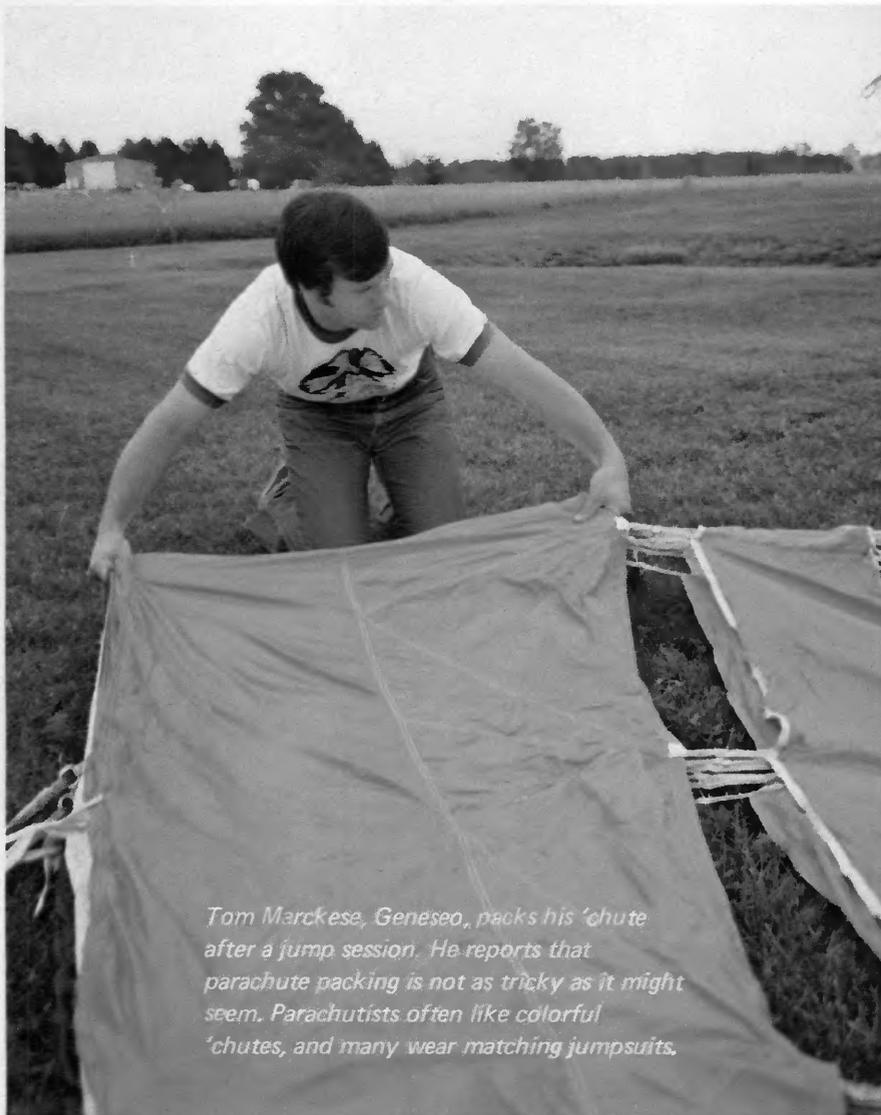
Members, he notes, can join the club by paying a \$1,000 fee and then jump all they want after paying a \$30 monthly fee. Members who choose this plan hold part ownership in the airplane. "I've been a member since September, 1972, and I've gotten my money back several times over," he says.

The club owns a Cessna 205 Skyvan.

Members with less-expensive tastes can pay \$200 a year and pay the \$30 monthly fee and jump all they want, too, he says, but they hold no ownership interest in the airplane, and have no say in how the club is run.

"We keep track of how many jumps we make," he notes, "and we write each jump down in a log book. Each book has enough spaces for 150 jumps, and I'm working on my seventh book now. Another thing we keep track of is the amount of free-fall time we build up. Free-fall is that time after you leave the aircraft and before you open your parachute, and I have almost four hours of free fall time," Marckese says.

Marckese uses a square parachute as a main chute and has a round reserve chute. "This is my fifth main chute," he says, "and this one and my last one were square. I like them better because you can pack them smaller and



*Tom Marckese, Geneseo, packs his 'chute after a jump session. He reports that parachute packing is not as tricky as it might seem. Parachutists often like colorful 'chutes, and many wear matching jumpsuits.*

# Where are you going to put everything this Winter?

- Trucks
- Cars
- Boats
- Bikes
- Campers
- Trailers
- Outdoor Furniture
- Lawn and Garden Equipment
- Snowmobiles
- (A Handy Hideaway)



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# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

## How Safe Is Safe, and How Much Is It Worth?

Much depends on who is setting the standards. We generally are willing to accept far higher risks if we have an individual choice than if it's something society imposes upon us.

For example, we generally say, "Leave us and our automobiles alone, we don't want society forcing us to wear seat belts, although it's apparent they would save thousands of lives each year." If the speed limit were set at 30 miles an hour, instead of 55, we would undoubtedly save many thousands more, but we didn't reduce the speed limit from 65 or 70 miles an hour to save lives, we did it to save gasoline. But, in the areas where individual choice is limited, we demand safety standards thousands of times greater, as witness the standards for clean air and nuclear safety.

### There Is No Such Thing As Complete Safety

There is no way that we can live on this earth and guarantee complete safety and total cleanliness, so we have come to terms with this in most areas of our lives. Any of you who saw the recent television portrayal of the life of Howard Hughes saw the absurd, ridiculous lengths to which he eventually went to maintain cleanliness and safety. If we are willing to spend enough money and endure sufficient restrictions on our choices and our way of life, we can unquestionably save many thousands of lives and create a much cleaner environment. But, we should not forget that all of these things have their price.

They affect both the family budget and the national budget. They affect our freedom of choice and way of life.

They affect the family budget in higher costs for electricity, in higher food prices, and higher costs for almost everything that we use or touch. In society as a whole, if we spend \$100-billion to get a certain percent

cleaner air, they we are going to have less money to spend on education, on reducing poverty, on providing better medical care, on reducing crime, etc.

So, in effect, we are letting the environmentalists do in the areas of clean air and water, and in the general ecological areas, what we would not let them do in many other areas where we were more readily aware of the effect on our freedom of choices, our comforts and our pocket-books.

### Just Living Involves A Certain Degree of Risk

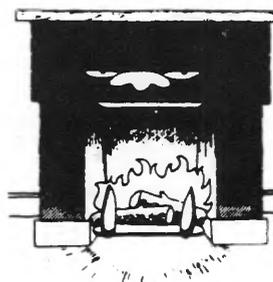
It's rather interesting to back off and look at our society and consider how we have learned to come to terms with risk. I know some people who would never ride in an airplane, but I don't believe I know a single person who will not ride in a car. Yet any time you are riding in a car, the odds are one in 4,000 that you will be killed, but when riding in an airplane, the odds are only one in 100,000 that you will be killed.

When electricity for electric lights in the home first became a possibility, it was strongly opposed by some groups because they said many people would be killed by it, and they were right. A considerable number of people are killed each year with electricity. But, the benefits from automobiles and airplanes and electricity far outweigh the risks.

It has been suggested that we ought to find some way to price energy to reflect the risk to life and health of using that particular energy. If we did this, we would find that electricity produced by burning coal would be far more expensive than electricity generated by using nuclear energy, because of the much greater risk of life and health involved with mining, transporting and burning coal.

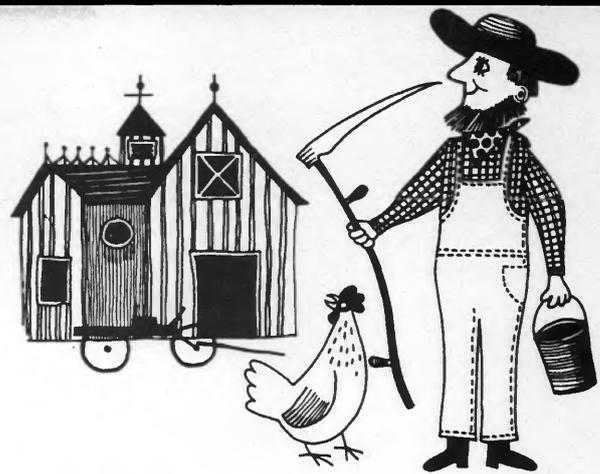
*Taken from "CAPSULE COMMENTS" June 7, 1977  
Kentucky Association of Electric Cooperatives  
Louis B. Strong, President*

## Savings Suggestions



Beauty and the Beast: fireplaces are a thing of beauty, but they can cost you much more than they need to. Make sure you have a tight-fitting damper and keep it closed when the fireplace is not in use. Be sure your thermostat is located away from such heat sources

# Farm Wiring Hits the Dirt!



For some years now, industrial and residential builders have been burying electrical wiring for their subdivisions and other projects underground. Why shouldn't farmers benefit from the advantages of underground cable to achieve the most reliable electric service possible?

Many farmers in electric cooperative service areas throughout the state are doing just that. Illinois electric cooperatives report that a growing segment of the agricultural community is requesting the installation of underground wiring on their farmsteads. New wiring to crop drying and grain handling equipment as well as wiring which increases the capacity of existing electrical facilities to accommodate larger loads — it's all going underground with growing frequency.

## Advantages Are Many

For the farm builder, many electrical wiring problems are solved by laying all circuits underground after running wires down from a main distribution pole at the edge of farm property or at some other desirable location. Cables can then be trenched underground from one central overhead entry location.

Underground electrical circuits to farm buildings, grain dryers, security lights and other outdoor equipment are economically feasible on farms for a number of reasons, according to W. S. Allen, Texas A&M University agricultural extension engineer. Swinemen, poultrymen, dairymen and many other different farming operations achieve particular benefits from underground wiring installations.

## Underground wiring:

- Does away with clearances and restrictions where lines must cross driveways on which high loads and equipment must be moved.

- Eliminates the danger of insulation deteriorating on electrical wires and causing "shorts."
- Eliminates the danger of tall derricks, long grain augers and the like contacting high voltage lines and seriously injuring someone.
- A safety element is introduced in the farm building where underground wires rise above ground and pass through conduit directly into the service entrance.
- Properly installed underground wiring will not be added to haphazardly, as with overhead wiring hanging in the open — overloading of wiring system is averted.
- Wires are not broken by snow and ice or falling trees during a storm.
- The aesthetic value of the farm is improved when sagging overhead wires are eliminated. The skyline is clear except for buildings and trees.
- It improves the appearance of the premises, promoting neatness in other areas around the farm.

## Favorable Relative Costs

Engineers at Idaho State University point out that in addition to these advantages, the relative cost of an underground installation is favorable compared to overhead which takes a great deal more time to install.

The types of wires and cable used for underground installation are very likely to cost more per foot than those used for overhead construction. On the other hand, labor costs can be less because the installation takes less man-hours. Installing overhead poles

and line is more expensive because of the greater amount of labor time required.

## Must Meet Codes

One important fact should be kept in mind at all times when planning an underground installation — the installation must comply with local electrical codes, local electric cooperative standards and the National Electrical Code.

Usually power comes in from outside transmission lines and poles at 7,200 volts and transformers are used to step down the voltage to 120-240. Most underground conductor is of the direct burial type. Conduit is seldom necessary except for physical protection.

Aluminum conductor is more economical than copper — it costs about one-third as much and should be used wherever the electrical code will allow. Each underground connection and terminal must be treated with a special graphite contact compound to prevent oxidation.

Electric cooperative personnel are available to aid members planning to install underground wiring systems. Your member service department has the technical specifications and recommended conductor and conduit sizes, trenching procedure, connections, etc. They are experienced in various phases of underground cable installation.

If you plan to install underground electrical cable, either for a new building addition, for heavying-up or replacement of overhead with underground, contact your cooperative's member service department.



## 'Born farmers' build family grain business

"We got to talking about putting up some grain storage here, and it seemed to be a little short in this vicinity, so we put up more than we needed ourselves," said Mark Marquis, explaining how his family started in the grain storage, trucking and buying business.

The company, which is located just south of Buda on Illinois Valley Electric Cooperative lines, is owned by Donald and Darrell Marquis. Mark is Darrell's son.

"We're set up to store about half a million bushels," Mark says, "but we'll buy and sell about a million and a half bushels this year, the way it looks now.

"We were doing our own drying," he continues, "and using a portable dryer that we had to move around. We used about four different locations and each move took most of a day, so we decided to build a centrally located setup. It's really handy here. We used to have grain wagons going all over the roads like crazy, and now it's not bad.

"Here we have a good location, a good road, and high ground, so we set up our storage and drying facilities. Of course, we set up a larger grain drying operation than we needed for just our crops, too."

Mark, who is 21, thinks of time in terms of crops. "Let's see," he muses,



*Top photo: M. M. "Bud" Jontz, left, manager of the Illinois Valley Electric Cooperative, visits with Darrell Marquis in front of one of the huge grain bins that make up part of the Marquis Brothers' grain operation. Above: Wilbur Nordstrom, a director at Illinois Valley, talks with Mark Marquis. Nordstrom is employed as a truck driver and mechanic, and Mark is the son of one of the owners.*

"this is our third crop since I got out of high school. We've had two good ones and this year's a break-even year. It's a good crop year, but prices are bad and it's a bad year for foreign matter, too." He is a graduate of Western High School in Buda.

The Marquis operation is designed to dry 1,500 bushels an hour at ten-points removal, and their three

trucks can take a good-sized crop to the river for shipment. They have two bobtails and a semi, and when they put all three on the road, they can haul 1,665 bushels at a time.

Trucking grain to the terminal is an important part of the business, and it requires a well-maintained set of trucks. That's where Wilbur Nordstrom fits in. Nordstrom, an Illinois Valley director, is employed by the Marquis Brothers as a truck driver and mechanic.

The family has been farming in the area for a long time.

"We were born farmers," Darrell laughs, "our mother was born more than 85 years ago in the house Donald's living in now, and we don't know how long her folks lived here before she was born, so the family's been here quite a while, all right."

They farm 1,500 acres, two-thirds of which was in corn this year. The rest was in soybeans.

Denny Thromburg is the book-keeper for the operation, and has been working full time since June. A former junior high school math teacher, the sandy-haired Thromburg takes care of the truck scales, does the moisture testing, checks for foreign matter in grains, keeps in radio contact with the trucks, and handles the office side of the operation.



threatened our plant in Savanna. We made a hasty decision to move our valve and thermostat line to Hanover, even though the building was far from being ready, and we moved in the last week in April with two supervisors and six employees."

The plant is but one of several Controls Division plants across northern Illinois. "We have two plants in Havana," Kubicki says, "and a fabrication plant in Rochelle. There's also a molding plant in Batavia, where they make the molded plastic parts. We don't do any actual fabrication here. We receive parts from other plants by truck, assemble them and ship them out."

The products made by the division are used in virtually every kind of motor vehicle, and in appliances manufactured by several companies. We sell to Maytag, Speed Queen, Hobart, D and M, White Consolidated and Whirlpool."

"All the automotive companies buy our products, too," he remarks, adding, "Our products are original equipment in cars produced by Ford, General Motors, Chrysler and American Motors, and we supply parts for their aftermarket sales too, for replacement parts and so on."

In a small way, workers in several small Illinois towns affect the lives of others all over America.

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# Monroe Electric News

MONROE COUNTY ELECTRIC CO-OPERATIVE, INC.

618-939-7171

WATERLOO, ILLINOIS

## Across the manager's desk



LeRoy V. Hard  
Manager

Electric costs will go up, not down, in the future. So will other forms of energy that consumers need and rely upon daily to fulfill the necessities of the life-styles.

This is a rather grim fact of life that more and more of us are accepting. Electricity has become an essential element of our lives and none of us want to give up the many benefits we derive from it.

Much has been written and said in the last several years about the ways we as consumers can conserve energy. While all of the conservation methods are important and helpful we will not list any of them now. Instead we are going to discuss intangibles that can directly effect how we, as consumers, use electric power.

One thing that we must deal with is the mental stumbling block that we as Americans have in accepting the fact that our country could actually run short of anything, least of all her vast natural resources.

We have grown up with the phrase "Land of Plenty" and all it connotes, believing it without question. Yet had we really stopped to think about it we would have realized that these resources could not last forever. This fact has become crystal clear in the last few years. If we had continued to use our oil and gas at the same rate, these resources would be depleted, used up, gone, in a few short years. A scary prospect indeed.

Conservation practices by Americans have gained us a little more time. Some oil and gas will be around in the year 2000 but the supply will have long peaked out and will be steadily declining.

We have also learned the hard way how international politics and our dependence on foreign oil for 40 percent of our needs can directly affect our individual pocketbooks. The Alaskan pipeline stands as an example of what it will take and cost us to find, develop and deliver the energy resources in our county.

We have an apparent abundance of coal. But what is it going to cost in both dollars and land use, to get it out of

the ground, then into a usable form compatible with environmental standards, and cost, too, is not infinite.

Alternate sources of energy such as geo-thermal, solar and nuclear, etc, must be developed in order to fulfill our present and future energy requirement. Here again a balance must be struck between energy and environment.

Consumers, as end users, will be the ones to eventually pay these cost. We simply must accept the fact that our "so called" basic necessities and life-style are going to demand a bigger portion of our budget.

Coal, natural gas and fuel oil are the prime sources of fuel to generate electricity. So as the costs of these fuels increase so must the cost of electricity. And this is the prime reason for the increase in electric energy costs.

A word of assurance: we will have electric power in the future. There are those who say the day is coming when our nation will operate an all-electric economy. But we have to say in all honesty that the price will be much higher than it is now.

Electricity will never again be inexpensive as we once knew it, and we just have to learn to live with this fact. We do ask that you compare the benefits derived from the dollars spent for electric energy as to dollars spent for other commodities and services.

## HEATING HINTS

CHECK YOUR THERMOSTAT SETTING... regardless of the type of fuel you use to heat your home, be it gas or electricity, your thermostat can be the key to more economical operation. The lowest comfortable settings naturally mean the greatest in economy.

### TEMPERATURE-COST RELATIONSHIP

Room Temperature	Based on 70 Degrees
68 Degrees . . . . .	Costs 6.2 percent less
69 Degrees . . . . .	Costs 3.1 percent less
70 Degrees . . . . .	Costs 0
71 Degrees . . . . .	Costs 3.1 percent more
72 Degrees . . . . .	Costs 6.2 percent more
73 Degrees . . . . .	Costs 9.4 percent more
74 Degrees . . . . .	Costs 12.5 percent more
75 Degrees . . . . .	Costs 15.6 percent more
76 Degrees . . . . .	Costs 18.7 percent more
77 Degrees . . . . .	Costs 21.9 percent more
78 Degrees . . . . .	Costs 25.0 percent more
79 Degrees . . . . .	Costs 28.0 percent more
80 Degrees . . . . .	Costs 31.0 percent more

# BEWARE

# OF THAT

# CHRISTMAS TREE!



**"Get set. He'll be needing us soon."**

**THINGS YOU SHOULD  
KNOW BEFORE  
YOU PUT IT UP**

North Americans during December will buy and decorate around 45 million natural Christmas trees cut from tree farms and forests. For these trees, they will spend over \$50 million. To decorate them, families will buy around 200 million new ornaments.

**Use Care in Decorating.** The National Board of Fire Underwriters has asked that care be taken in erecting and decorating these trees. A tree contains natural resins which ignite easily and burn readily, the National Board reminded.

**Don't Block Exits.** Trees, in addition, should not be set close to stairways because in case of fire, the stairway as an exit from upper floors would be blocked. With regard to the care of Christmas trees in the home, the Board has these suggestions:

1. Choose a tree which appears freshly cut.
2. Keep the tree out of doors until just before Christmas. And keep it standing in a pail of water so it will remain fresh.
3. When you put up the tree, place it in the coolest part of the room. It should be as far as possible from radiators, heaters, and be as far away as possible from the fireplace. This will reduce the chances of fire, and keep the tree from drying.
4. Use a tree stand which has a water container in which the trunk can rest. Most trees "drink" water fairly fast, so fill the water container daily.
5. Christmas tree decorations should be flameproof. Use only decorations made of glass, metal or fire-resistant material.
6. Electric trains should be set up away from the tree. A spark could ignite dry pine needles.
7. Use only electric lights to decorate your tree . . . never candles. Be sure to check lighting sets before placing them on the tree. Those with frayed wires should be discarded before they can cause real damage. When you buy a new set, be sure to look for the UL tag or label.
8. When you open presents on Christmas morning, put away gift wrappings you intend to keep. Gather up any other wrappings and throw them away immediately after the presents are opened. Taking care of this promptly eliminates a dangerous fire hazard.
9. The lights on Christmas trees should always be turned off when everyone is away from home . . . and always when everyone has retired.
10. Check the tree for dryness from time to time. If needles near lights have started to turn brown, change the position of the lights.
11. When the needles start falling, take the tree down and discard it outdoors.
12. Even if the tree is still fresh, plan to dismantle it the day after New Year's.

# Installing blown-in attic insulation

*This is another in a series of articles designed to help you save money through the wise and careful use of electricity.*



While batts, blankets and pour-in insulation offer their strong points, one of the main advantages they have is that they seem to be reasonably easy to install. One person, with a little preparation, can climb into an attic and do the necessary work.

Blown-in—or pneumatic—insulation is not like that. First of all, you need a formidable-looking machine; then you need someone to pour insulation into it while you're crawling around in the attic hosing the insulation into place.

But blowing insulation into your attic is not a complicated chore. You need some of the same things you'd need to do the job with the other kinds of insulation: a dust mask, goggles and temporary lighting. You'll need some temporary flooring too, since ceilings are not designed to hold your weight.

When you are deciding what kind of insulation you want, you will need to take into consideration what is available. With insulation in short supply, your choices may be limited.

If you decide to use pneumatic insulation, you can get the mineral-wood or cellulose variety. Mineral wool offers the advantage that it is noncombustible. Cellulose is recycled paper which has been treated to make it fire-resistant and rodent-proof.

Cellulose varies in quality, and today's high demand and even higher prices have given rise to many manufacturers, some of which may cut corners; careful treatment is of utmost importance. Buy from a reputable dealer and look for the insulation industry's label of approval or the Underwriters' Laboratories seal.

Poorly treated material may pose a fire hazard.

Before you can determine how much insulation to buy, you will need to know what R factor you need, and how thick your insulation will need to be to achieve that factor (the R factor is the resistance to thermal passage the insulation give you, and varies from material to material).

Then, you need to know how many square feet of space you need to cover. Federal regulations require that each bag of pneumatic insulation be marked to show how great an area it will cover to various depths, and what R value each depth gives. Your supplier can tell you how many bags you will need to achieve the results you want. Many Illinoisans are insulating their attics to R-38, but if you add any insulation at all you will reduce your heating and cooling bills.

The machine is really fairly simple, and may be supplied by the people who sell insulation, a rental business. There is a big hopper you pour the insulation into, and a mixer that fluffs it up, since it is compressed into a bag when you buy it. Then, there is a

blower, which shoves the material down a hose to the operator and the place he wants to place the insulation. The blower features some kind of regulator so you can adjust the flow, and compensate for longer hoses. Normally, the insulation should come from the hose about like toothpaste from a tube, but if you need to spray it into eaves where you cannot reach, you can increase the flow. Too fast a flow, however, will make for a dusty environment.

To make sure you are getting the depth you need, you may want to divide your attic into sections and find out how many bags you will need for each section, then do one section at a time and see if you are using the right amount.

For example, one cellulose supplier packs insulation in 30-lb. bags. Each bag will cover 16 square feet to a depth of 10 inches, and will give an R-value of 37.5. If your house is 1,000 square feet, you will need 63 bags. Dividing your house into five equal sections will mean that you will need to put about 12½ bags in each section.

You should be sure, before you leave your supplier's place of business, that you know how to work the machine. Many have instructions printed on them, but you can check with the salespeople to be absolutely certain that you know what to do. If you rent the machine, they owe it to you to see that you get the job done right, and if they lend you the machine when you purchase your insulation, there must be a service fee built into the price of the insulation, so ask for the service. It will make for a better job and lower energy bills in the future.

To: A.I.E.C. Member Services Department  
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