

## Bache Chapel

66He who leaves the world better by his having lived, has not lived in vain."

This was a favorite phrase of Joseph Lloyd Bache (Bay-che), a schoolmaster who compiled a modest fortune through shrewd investments and conservative living.

Bache, a Chicago resident, died October 1, 1965. Having no children, he left two-thirds of his \$1.7 million estate to the trustees of Garrett Township (Cartwright) Cemetery of Tuscola. It was here he grew up and it was here his will directed a fitting memorial be built.

Planning for the memorial began in 1970, keeping in mind the building was to be used for weddings, community activities, funerals and interdenominational worship.

He wanted the memorial to be constructed of lasting material, designed to provide modern comfort and to have a restful and attractive atmosphere for any gatherings.

The memorial was fashioned in the tradition of English country churches, "bearing in mind modern design."

To accomplish this, Joseph E. Coble, an architect from nearby Urbana, spent a week in England studying architectural designs of churches.

As a result of the study, a unique structure, which would later bear the name Bache Memorial Chapel, began to rise from the flat Illinois plains.

The memorial was literally poured out of 12 million pounds of concrete, enough to pave a two-lane highway a mile and a quarter long. Its 18-inch thick walls were left bare to resemble stone.

The sheer, rising walls of the building are severed by a steep roof and a 100-foot high clock tower. The tower has an observation platform accessible by 92 steps, from which visitors can view the surrounding countryside. Its roof is formed out of stainless steel terne and the doors are handmade from heavy oak timber.

(continued on page 21)



## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.



#### CO-OP COMMENTS

by Lester Aeilts

The question has frequently been asked in recent months, "Why do you continue to promote the use of electricity when you know there is an energy crisis?" It is a fair question and one that can be answered logically and truthfully.

First of all, modern civilization would not be possible without electric energy. Electricity turns the wheels of industry, and makes modern farming and living possible. And electric power is the cleanest, most efficient and economical way to accomplish almost all tasks adaptable to its use.

Secondly, electric cooperatives and other electric power suppliers have invested great sums of money in facilities to adequately serve all consumers with all of their electrical needs; they must sell enough electricity to amortize these huge investments to stay in business. If they cannot sell enough power to make a go of it financially, then they no longer will stay in business. If that should happen there would not be enough electricity available for even the basic needs of the nation.

The electric cooperatives and other power suppliers are well aware the economic availability of natural

resources is dwindling and power REC'S ATTRACT PEOPLE suppliers have the responsibility to see these resources are used wisely. Therefore, while the use of electricity is promoted, the emphasis is on its wise use.

Many of those who urge the conservation of energy (the arbitrary curtailment of our society's use of electricity) tend to foster an attitude that the use of electric power is an "evil" in itself, when in fact, the use of electricity is a godsend to mankind. What must be emphasized, and what is being emphasized by rural electric cooperatives, is the waste of inefficient use of our natural resources and electricity is what must be avoided. This is a fine but important distinction.

So, we will continue to promote the wise use of electric power; we will continue to emphasize the waste or inefficient use of electricity and other natural resources must be avoided. We will continue to participate in programs designed to assure future supplies of electric energy, and will continue to urge government, industry and science to develop new ways to produce electricity which are less harmful to our environment and less wasteful of our natural resources.

Electricity is essential to our modern civilization and because this is so, the continued promotion of its wise use is both justified and necessary if mankind is not to move backward.

I see from the Alabama State Newsletter that General Motors, the largest corporation in the world, only had about 700 stockholders at its annual meeting last year. According to this, many rural electric cooperatives in this country have larger annual meetings than General Motors. In fact, suppose, most rural electric cooperatives have larger annual meetings than General Motors.

One reason for this is the fact most corporations conduct their annual meetings by proxy, so the president or chairman of the board has enough proxies in his pocket to control almost any meeting.

When I met with the editorial staff of the Louisville Courier-Journal recently, they were critical of the rural electric cooperatives because we didn't have a larger percent of our membership attending an annual meeting. I pointed out most organizations have problems with annual meeting attendance and that, overall, rural electric cooperatives probably did as well as any organizations in the country in getting members to attend.

I continue to be alarmed at the tendency in the rural electric cooperative program for many managers and directors to downplay their annual meeting and make no real effort to have a good attendance. I think it's important we not bore our memberships with dry statistics and speeches that no one cares to hear, but we should strive to keep annual meetings attractive to our people and something they look forward to attending.

#### FEA'S BLUEPRINT FOR "PROJECT INDEPENDENCE"

The Federal Energy Office's six-month study to provide a blueprint for Project Independence has concluded all new buildings should be heated and cooled by electricity. While it laid out no definitive energy policy as such, it did recommend a mandatory conservation program that would also require new cars to get 20

miles per gallon of gas, give tax credits for better insulation and create national lighting and thermal standards. Any proposal for gasoline rationing was excluded.

Capsule Comments Published by Kentucky Association of Electric Cooperatives

Capsule Comments Published by Kentucky Association of Electric Cooperatives ILLINOIS RURAL ELECTRIC NEWS

### Announcing New Youth Tour Program

### THREE WILL WIN TRIPS TO WASHINGTON, D.C. SIX WILL WIN TRIPS TO SPRINGFIELD

The Board of Directors of Western Illinois Electrical Coop. voted to continue the "Youth-to-Washington" program in 1975. Two students from Hancock County and one student from Henderson County will win a week long, all-expense paid trip to Washington, D.C. In addition, six runners-up will win a one day, all-expense paid trip to Springfield.

Winners of the Washington trip will join more than 50 other Illinois winners in Springfield June 7-14, 1975, to board an air-conditioned bus for Washington, D. C.

The tour includes a scenic bus ride across mid-America with stops at various points of interest, including Gettysburg. In Washington, the program will include guided tours of the U.S. Capitol, the Library of Congress, the Bureau of Engraving & Printing, Arlington National Cemetery, Lincoln Memorial, the Wax Museum and other points of interest.

The well-planned, chaperoned tour will enable youth tour winners to see the nation's capitol far better than the average tourist. They will also have a chance to talk with Illinois Congressmen during the tour.

Winners of the Springfield trip will join about 100 other Illinois students in Springfield sometime in May.

This trip includes guided tours of the Association of Illinois Electric Cooperatives (AIEC), the State Capital, Lincoln Shrines and other points of interest. An evening banquet hosted by the AIEC and WIEC will give students a chance to ask questions of state legislators from our area.

The contest is open to sophomore and junior students enrolled in a high school district serving or substantially serving within the same area as WIEC. Applicants may reside on or off the service lines of WIEC, as long as it is

within our service area. The above applies to the following schools or school districts:

Carthage Christian Dallas City High Hamilton High Hancock Central

(Carthage) LaHarpe High Nauvoo-Colusa St. Mary's Academy Southern High Union High Warsaw High Plymouth \*

\*Please note Plymouth High School District will be included this year previously it was in Adams Electric's A new and revised format has been designed for the contest which should make it more interesting and informative. It will not require writing a multi-page essay as in the past.

Complete information will be given to all area high schools. Interested students may also call the cooperative office in Carthage (217/357-3125) for information.





We were looking for a story at Edgar Electric Co-operative Association in Paris. As I stood out in a farmer's field on a cold, windy and dark November night, I kept thinking, "surely there must have been some OTHER story!"

When I got the invitation to go on a raccoon hunt with Ed Adams, a lineman with the cooperative and raccoon hunting aficionado, my first reaction was "you can't fool this kid." Having been a veteran of several snipe hunts when I was younger, I thought I was in for something similar.

Little did I realize I could have offended thousands of hunters who actually do go after the furry little bandit-faced fellows. Any day I expect a seething editorial from one of the many (I found out there were such things) coon hunting magazines. I guess I could always plead ignorance—it has gotten me through before.

Two days before I ventured to Paris, it was probably one of the most pleasant days of the year. And, as luck would not have it, the night I did go was the night after the first snow storm of the year. It was cold.

It was cold enough for John Robinson, member public relations director for Edgar Electric, to first wonder if I was coming, then shake his head. It was also cold enough for three other Edgar members who were going out to remember previous engagements. Probably the only person it wasn't too cold for was Ed—he seems to thrive on it.

We packed up two coon hounds in Ed's combination pickup and mobile kennel and drove off into the night.

"It all depends on whether the coons are going to go out to feed early or late," Ed said. "You have to be right when you pick for the best hunting."

I was by now feeling a slight chill; I was hoping the coons wouldn't come out, see their shadow and go back up a tree. Or is that groundhogs?

"I have been doing this since I was in my teens," Ed said. "A lot







## youth to washington

Some 50 outstanding Illinoisans will converge on Washington, D.C., June 7-14 for a VIP tour, courtesy of 19 Illinois electric cooperatives.

These young adults will join

nearly 1,000 other high school students from 23 states and several foreign countries for the annual all-expense-paid "Youth to Washington" tour.

Selected as contest winners from

among hundreds of entrants throughout Illinois, the students will experience a whirlwind holiday and at the same time secure a wealth of knowledge about our government in action.

And, in May, more than 100 contest finalists will meet in Springfield to participate in the annual "Illinois Rural Electric Youth Day" activities.

This will be the third year where finalists from several cooperatives have been honored for their participation with an all-expensepaid trip to the state capital.

If you are interested in winning either tour, the thing to do first is to contact your own cooperative, or perhaps your high school principal, and find out if you're eligible to compete. Do it right away. Deadlines vary from cooperative to cooperative, but not much time is left.

Most cooperatives are determining their winners through essay contests. Most limit participation to high school sophomores and juniors. But find out about your own cooperative.

If you win your local contest, you'll travel to Washington in air-conditioned buses, stay at a fine motel on the bank of the Potomac River close to downtown D.C., dine at distinctive restaurants, meet notable government officials and Illinois congressmen.

It will, in short, be a week you'll never forget. Better get going on those essays . . . NOW!



## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

### CO-OP COMMENTS

by Lester Aeilts

How times have changed.

It was just a decade ago that the Illinois Rural Electric News reported to cooperative members throughout



Lester Aeilts Manager

Illinois that one of our sister cooperatives was planning a seven percent rate reduction.

"With a reduced rate you can economically use more power for the

equipment you have considered but have not yet acquired. ..Volume sales will make up the difference and everyone will benefit. Our basic function is to render electric service to you in the best quality possible and at as low a cost as possible...," an officer told members of that cooperative gathered at their annual meeting (in the days before the term "double-digit inflation" was known).

Contract those heady words with the stern warning given by another Illinois cooperative's president a short time ago. "The question is not if rates will go up as our costs go up, but how much our rates will have to go up to meet rising costs...Perhaps a more important question we should be asking is whether or not we will have the power our members need at any price!"

Power at any price?

WIEC and its members have been fortunate that we have not faced any power shortages or the brownouts and blackouts in our area like those which have become commonplace in the

eastern U.S. But we have been paying a price and so have our members.

As fuel costs have gone up over the past months, our cost of wholesale power has gone up. Our energy suppliers, Central Illinois Public Service Company (CIPS) and Illinois Power Company, have passed this increased fuel cost on to us in the form of a fuel adjustment through our power supplier, Western Illinois Power Cooperative (WIPCO).

You are well aware of the effects of the fuel cost adjustment on your monthly energy bills. No longer able to absorb the fuel cost adjustment, WIEC began passing this cost through to our members in 1971. It's a painful process but it is necessary to keep your cooperative financially sound and ensure our ability to provide you with reliable electric power in the future.

Coal is the most abundant natural resource in Illinois, yet it is at the heart of our problems. Coal accounts for about 80 percent of the cost of generating electric power and the price of coal has gone up more than 130 percent in the past five years.

While we cannot know yet what effect the recent coal strike and the new mine workers' labor contract will have on future coal prices, we can be assured we face still higher coal prices which will mean further increases in the fuel cost adjustment for the cooperative and our members.

For many years electric cooperatives hoped to provide their members with one-cent electricity. Many of us came surprisingly close to attaining that goal before the skyrocketing cost of materials, fuel, labor and capital stopped completely the downward trend in electric rates.

If inflation and the cost adjustment had not killed all hopes of ever attaining the goal of one-cent electricity, the final death blow was struck in December with the signing of a new wholesale power contract between WIPCO and CIPS. The five-year contract among 10 electric cooperatives and CIPS calls for an average increase of 35.7 percent in the rate the cooperatives pay for bulk power for distribution to members.

Negotiations on the new CIPS contract have been going on since early 1972 between the investor-owned utility and the Power Supply Negotiating Subcommittee of the Association of Illinois Electric Cooperatives. D. B. Bringman, manager of WIPCO, represented Western Illinois Electrical Coop. on that negotiating subcommittee. CIPS originally asked us for a 41 percent increase in the basic wholesale power rate, an increase that we considered completely unreasonable.

Months of hard bargaining followed as we tried to arrive at a new contract to replace the seven-year-old agreement that was terminated by CIPS on December 31, 1974. The negotiating subcommittee tried to be reasonable in our discussions with CIPS and appreciated their problems, but we also had to protect the interests of the members of electric cooperatives.

The final contract, which went into effect January 1, 1975, is the best we could hope for under existing inflationary conditions. The pact will guarantee our wholesale power rate for one year and will guarantee us a source of wholesale power for an indefinite period. Either CIPS or the cooperatives may cancel the agreement on a five years' notice. Fuel costs higher or lower than those established in the rate will be added or subtracted as the case may be.

Now that the CIPS contract is a reality, each of the affected cooperatives is analyzing the effect the

ILLINOIS RURAL ELECTRIC NEWS

contract will have on its own cost structure. We have estimated the amount of power we expect to purchase for our members under the new rates developed by WIPCO, added to that our estimated costs for labor, materials and debt retirement. Then we estimated how much revenue we can expect under our existing rates to members.

Unfortunately, we already know our revenues will not be sufficient to cover our increased costs. This means a general increase of approximately six percent in assessments to our members will be necessary in April of this year.

Because a cooperative does not operate for profit it is particularly

vulnerable to inflationary pressures. In the "good old days" we passed our cost savings on to our members through lower assessments when economics of scale made the cost per kilowatt-hour decrease. Now, however, we find rate increases our last line of defense in the battle with inflation.

The members of WIEC can be assured that our board of directors and the management of your cooperative are doing everything possible to hold future electric rates as low as possible. While we know the days of declining electric rates are over, we at WIEC are not ready to say, "power at any price."

We will continue our goal of

providing our members reliable electric power at the lowest possible cost and we are also working with other cooperatives through our state association to seek long-range solutions to our energy and inflation problems. No definite solution is yet in sight but in the meantime, our members can help their cooperative and themselves through increased efforts at "energy management."

As we work to hold the line on costs in every manner possible, we urge every consumer-member to become more aware of his own energy consumption habits. As a way of life, energy management offers one of our most promising hopes for the short-run fight against inflation.

## Electric Heat is Not Wasteful

The success of the drive to conserve energy is clearly reflected in the financial enfeeblement of those utilities where it was most successful. Draconian measures were possibly justifiable to counter the sudden embargo on imported oil before longer-term adjustments in patterns of total energy use could be made. But to sustain a course of action that debilitates those to whom the supply of an essential service has been entrusted is both shortsighted and unwise.

Utilities must continue to pursue policies that ensure their ability to serve, while optimizing use of resources. We have already said editorially that the price of all forms of energy should reflect all costs, material and social, and that they should be able to compete freely for the total energy market. In our opinion, this is the only way to avoid the gross distortions that selective price regulation produces in assessing the real worth of energy forms to the public.

But until this free-enterprise utopia comes into being—and we seem to be moving farther from it everyday—we must improve profitability in ways compatible with the expressed public will. One way to do this is to promote electric heat. This seems to fly in the face of

previous statements, because it is electric heating that has been most vigorously attacked as being inefficient.

We are convinced careful study of the facts disproves the apparent advantage of direct combustion. Comparative figures most often quoted are that direct combustion gives an efficiency of about 70 percent, compared to only 30 percent for electric-resistance heating. But this comparison is really specious when operating in the real world. These figures are, of course, theoretical. Those for electric-resistance heating are fairly accurate, but those for direct combustion represent the efficiency of a carefully designed and maintained gas furnace-essentially, a laboratory figure.

For an oil furnace, even the best theoretical performance is not that good. And surveys of actual home installations tell a completely different story. Randomly chosen oil-fired furnaces have shown efficiencies in the range of 20 percent to 40 percent. And these figures do not consider the decreement for the energy used in oil refining, in bulk and retail transport, and in piping or duct losses in the house itself, which can amount to an additional 10 percent. Nor do they reflect the penalty for having to heat

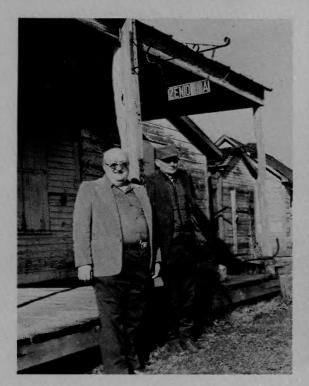
the entire house, or at least large zones, in contrast to electricity's room-to-room control.

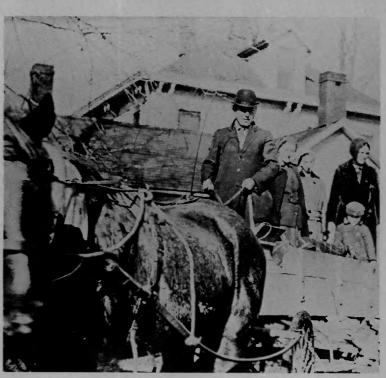
Carefully documented studies make it clear that electric-resistance heating is far from the wasteful process it is accused of being in comparison to oil-burning installations. And if we consider the heat-pump, overall efficiency is superior even to that of the best gas-fired furnaces.

Successful promotion of electric heating, whether the resistance-type or the heat pump, will appreciably improve the load factor of most utilities. Assuming that the public will accept the truth when it is properly communicated, this improvement in load factor—and profitability—can be attained without public opprobrium.

There are many arguments for electric heat. Public acceptance, as expressed in the over one-million installations made last year, is probably the best. The only real argument against it, that it is wasteful of resources, is untrue. We should, therefore, exert every effort to promote what is not only environmentally defensible, but also a sound and practical way to increase revenues.

(Reprinted from Electrical World, July 1, 1974)







zenobia:



BOTTOM: Six of the Hammann's 11 deer graze on the lakeshore. LEFT: Tinsel, the family favorite, takes a cracker from the youngest Hammann, Chris. BELOW: Leonard and Roberta pose by the fireplace at Deer Run Inn.





25 Years of Dreaming



## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

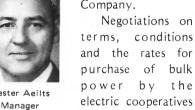
CARTHAGE, ILL.

#### CO-OP COMMENTS

by Lester Aeilts

Electric rate increases are spreading like wildfire across much of Illinois this winter consumers feel the effects of a new power supply contract between 10 Illinois electric cooperatives and

> Central Illinois Public Service Company.





Lester Aeilts Manager

were underway since early 1972. The new five year contract calls for an average boost of 35.7 percent in the wholesale rate cooperatives pay the investor-owned utility for electricity they distribute to their member-owners.

While it will be difficult to adjust to the increased costs of electricity brought about by the new CIPS wholesale power contract, it could

have been worse. When we first began negotiations on new contracts, CIPS proposed a 41 percent rate increase and other technical contract changes that would have still further raised our cost of wholesale electricity. In light of this CIPS contract and the devastating effects inflation has already had on our cooperative, we will be facing a basic rate increase to our consumer-members in April

For some Illinois electric cooperatives, this will be only the first or second basic rate increase in over 30 years of operation. Cooperatives. tax-paying businesses owned by those they serve, have managed to absorb many cost increases over the years by improving operating efficiencies and through sound financial management.

The new contract between CIPS and the electric cooperatives is the first change in the basic wholesale charge for electricity since 1967. Some fuel cost increases have been passed on to their members by some cooperatives this year.

Most electric utility officials agree that unreasonable increases in the cost of fossil fuels and high interest rates are behind the higher costs for generating electricity. Two years ago coal was selling for \$7.44 per ton, up from \$4.39 in 1969. It increased to approximately \$17.00 per ton this October. The new coal industry labor contract will mean still higher coal prices.

Oil companies, which own three-fourths of the nation's coal fields, received similar increases for No. 6 fuel oil. This oil sold for \$4.04 a barrel a year ago, went to \$11.23 last July and recently was quoted at \$12.75 a barrel.

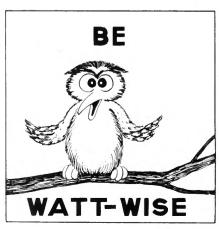
While I doubt the cost increases for fuel can be justified by any economic standard, the plants that generate electricity have to have fuel to operate and pay the fuel cost demanded. They pass that fuel cost on to us and we have to pass it on to our members.

Energy management may be one way consumers can soften the blow of increased electrical rates. While we work to hold the line on costs in every manner possible, we urge every consumer-member to become more aware of his own energy consumption habits. As a way of life, energy management offers one of our most promising hopes in the fight against inflation.

#### Notice—\$2.00 Extra Charge to Read Your Meter

When some of you leave on vacation, you stop by the office and notify us of your intentions. In the past we would read your meter while you were gone-free of charge. Effective January 1, 1975, we will have to charge \$2.00 for this service. This charge is to help recover some of

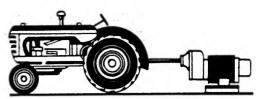
the costs of securing these readings. We do not like having to do this, but labor costs, transportation costs, etc. are steadily increasing. We suggest that if you can get a neighbor, relative or friend to read your meter and send, call, or bring us the reading, it would be to your benefit.



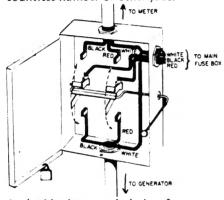
#### STANDBY ELECTRIC POWER



Tractor-driven standby generators are easy to hook up and can be put to work quickly in the event of a power failure.



In the early days of rural electrification, electric service was looked upon by many as a luxury. Today, electric service is a necessity. Modern farming operators are dependent on electricity to power milk coolers, water pumps, heating systems, ventilating fans and a countless number of other jobs.



A double-throw switch is of utmost importance when installing a standby unit.

Unfortunately, the power lines which serve rural homes and farmsteads are exposed to the whims of nature. This type of exposure can result in a power outage.

Be prepared by installing a standby power plant to keep your critical electrical equipment going during a power failure. A standby generator will insure you against lost time, inconvenience and the possibility of financial loss.

There are various kinds ranging from complete electric plants with automatic control to smaller self-contained engine units with manual controls to the most commonly used plant on the farm, the tractor driven power take-off unit.

The unit size required for your operation depends on the size of equipment you essentially need to operate.

Generators are rated as to power output, generally in watts. In most cases, an average farm requires a 15,000 watt generator to adequately satisfy critical electrical needs.

As a general rule, a tractor used to power a tractor driven PTO type generator should be large enough to provide at least 2 to 21/2 horsepower for each 1,000 watts of generating capacity.

The standby unit must be correctly installed to guarantee safe and convenient service. It is very important that the generator be connected to your existing secondary wiring by means of a double-throw switch. Why is this switch so important? If a double-throw switch is not used:

1. Your generator would not be isolated from the rest of the REC system, A lineman working on the lines which he thought were dead, could be electrocuted.

- Your generator would possibly burn out from overload.
- 3. When electric service is restored, your generator would experience a reverse power surge which would possibly burn it out.

There are some electrical appliances which should not be operated with a tractor driven generator. It is not advisable to operate television sets, radios or any electronic equipment with this type of generator.

Do you have a real need for standby power? Picture yourself without power for an extended length of time. Now is the time to prepare for that situation. Your rural electric member services department will be glad to help you plan for emergency power.

#### Map your underground utilities

Today, the trend is to bury wires and other utilities underground. This makes the farmstead neater and lessens danger of damage by natural elements or man-made equipment. But when these utilities need maintenance, or when new construction digging is required, it is important to know exactly where every wire, pipe, tile or tank is located.

Use a sheet of graph or grid paper to record the location of underground utilities. Keep this record with other property ownership papers where it can be found quckly when needed.

Here are some suggestions for

preparing such a record:

Label sheet as "Record of Underground Utilities."

Use one sheet and scale for farmstead or building area; another for field areas.

List property owner's name(s).

List legal description of property.

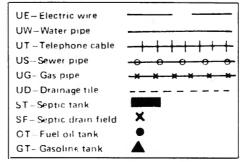
Establish scale for drawing-number of feet per square or

Locate and sketch in, approximately to scale, all buildings, driveways and other permanent farmstead fixtures.

Draw path or location of each underground utility using the accompanying codes lines and symbols. Identify all utilities owned by city, county, community or commercial interests with a large "C."

Make and mark measurements from fixed reference points to pinpoint exact locations as needed.

Indicate date of installation and type, size and depth of each utility.



### Flints, Frizzens and Flashpans

(continued from page 13)

"Usually, in foreign-made flint-locks, the grooves in the rifle aren't cut well . . . the rifling isn't always properly done. They just aren't as good," Lilly explained.

Lilly is as knowledgeable about the history of the muzzleloaders as he is about the ones he makes. Each one of the rifles he has made has at

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least one story he can tell about the original weapon.

"This is a .38-calibre slug rifle," Lilly said as he held up a 40-pound monstrosity outfitted with a telescopic lens. "It was used first during the Civil War and today is used as a match rifle.

"A group of Union Army sharpshooters called Burden's Riflemen used a similar gun during the Civil War to pick off Confederate officers from about a half-mile away.

"As the story goes, one of the sharpshooters was trying to hit a Confederate general who was sitting at a desk. Another officer came out of a tent. The Union rifleman fired. By the time the slug got to the Con-

(continued on page 22)



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100 plants \$17.95 plus 95¢ postage	3

City \_\_\_\_\_State \_\_\_\_\_Zip\_\_

A place named the Garden of the Gods should have at least a little trouble living up to its billing.

It should, but it doesn't. In fact, having once walked around the recreation area and feasted on this particular example of nature's majesty, one might well imagine it as a place where the Gods would establish a latter-day Eden.

The Garden of the Gods recreation area is located in the northern part of the Shawnee National Forest approximately 15 miles southeast of Harrisburg in Saline County. Power for the area is provided by Southeastern Electric Cooperative, Inc., Eldorado.

Although the history of the Garden as a recreation area is only a little more than 12 years old, its history as a spectacular and beautiful area far predates the advent of man. The unique, picturesque rock formations the area is noted for were formed about 200-million years ago as the land underwent a geological uplifting and went through subsequent wind and water erosion.

Even man, a late arrival, has been able to partake of the Garden's beauty for the past few thousand years. Garden of the Gods and the Shawnee National Forest have also been his home for 10-thousand years.

But man also gradually let the area fall in disrepair. The vegetation became overgrown, the rich soil was washed away and the streams were clogged with sediment.

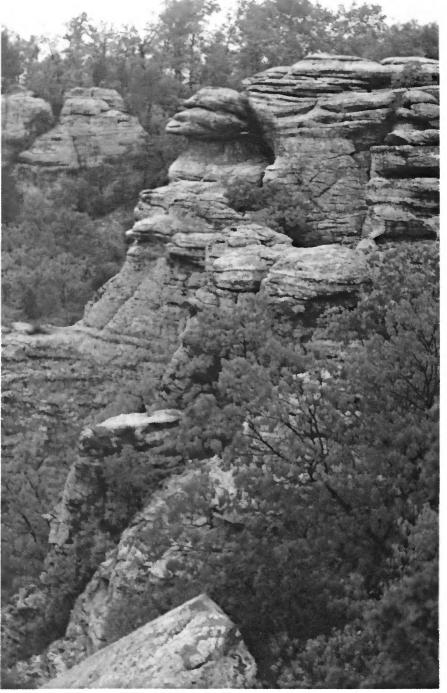
In 1963 the recreation area was revitalized by the Elizabethtown District of the Shawnee National Forest with help from the Job Corps.

The stars of the Garden of the Gods are the rock formations. But you have to have imagination and take the time to study them.

Some of the more picturesque and interesting formations are Cathedral Rock, Woman's Cave, Fat Man's Squeeze, Anvil Rock, Mushroom Rock and Camel Rock, one of the most impressive.

Without man, the Garden of the Gods became a beautiful place. And now, with his help, it should remain a beautiful place for many years to come.







## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

### CO-OP COMMENTS

By Lester Aeilts

In our March-April issue of WIEC News we discussed a few of the services provided without charge to WIEC members. We would like to

continue on.



Lester Aeilts Manager

Occasionally, we have a member who reports voltage conditions which are lower than he feels they should be. On several occasions when we have checked out these

conditions we have found our voltage regulators on the line are not working correctly. In this case we can correct the operation of the voltage regulator and improve the voltage regulator condition at a number of locations at the same time. Sometimes the condition is at only one location and we find some of the equipment such as meter loop, service wires or transformer are too small. In these instances we try to increase the capacity of the equipment supplied by WIEC and make recommendations to the member to increase whatever equipment he provides.

Effective March 1, 1975, WIEC will replace meter pole breakers without a charge for labor during regular working hours. If this service is required at any other time, a charge for labor and mileage must be made. The meter loop including the circuit breaker belong to the property owner and, therefore, the replacement breakers will be charged to the person requesting the service.

Many of you realize that WIEC sells mercury-vapor security lights as

well as renting them. For those people who purchase mercury vapor lights, WIEC will replace the bulbs and the electric eyes for only the cost of the parts during regular working hours. This particular service is becoming more and more popular as more lights are being purchased throughout the territory.

Emergency service for members who have buildings burned, or other emergencies, is provided to restore service to the other parts of the premises. This service is not needed very frequently for which we are thankful, but WIEC stands ready to provide for its members when such an emergency arises.

#### WHAT IS A COOPERATIVE

To consumers who have been on Western Illinois Electrical Coop's electric lines for a long time, this may seem like an elementary question; however, there are many new consumers who may need to understand more about the business they own.

In actual operation, your electric cooperative conducts its business much the same as any other electrical utility. Its difference lies in the ownership and how the wishes of these owners are carried out.

Electric cooperatives, owned by the people they serve, are controlled through a system of one member, one vote. Cooperative members have a vital interest, not only in their dollar investment, but also in the type, adequacy and cost of service they receive.

Boards of directors of cooperatives are elected by the membership on the basis of their knowledge and interest in the organization. They serve generally without pay or for nominal fees to cover their expenses. The board hires a manager to take charge of

operation of the business for the benefit of the member-consumer owner.

Both electric cooperatives and stock corporations are examples of private enterprise. A cooperative type of enterprise, however, because of its nonprofit method of operation, is often able to operate more efficiently in rural areas where the cost of providing electricity is comparatively high.

Those who have followed the history of rural electric cooperatives from its beginning know of the tremendous impact it has made on rural America. Rural electrification has been a main force in modernizing our rural area. Many will tend to take the consumer-owned electric cooperatives for granted, not fully understanding the efforts that have been expended to provide dependable low-cost electricity for all America.

Participate actively in your member-owned private enterprise.

#### POSTAL WARNING

Envelopes received at the post office without postage will not be delivered to the addressee. Such mail will be returned to the sender, if possible, or placed in the DEAD LETTER FILE.

Each month we receive 12 to 15 payments (letters) without any postage. This mail will not be delivered to us in the future.

BE SURE YOUR PAYMENT OR LETTER HAS A WELL-GLUED STAMP ON THE ENVELOPE AT THE TIME OF MAILING.

#### **Tornado Season**

Although a tornado may strike at any time of the year, the worst months in our area are April, May and June. There is no way to predict how many tornadoes we will have this year, but if the recent trend continues as it has in the past, we will have more than we had last year.

Nationwide there were 1,107 sightings compared to 652 in 1970. Illinois with 58 sightings was one of the states with a record number. Even with these statistics the loss of life has decreased from an average of 179 during the 1940's to only 87 in the year of 1973.

#### Farm Heat Unit Harnesses Sun

The emphasis on conserving our national energy supplies has sparked new interest in an innovation adapted for farm use. It uses solar energy as a heat source.

The new system captures heat from the sun and makes it available for drying grain, heating livestock confinement buildings or as supplementary heat for farm workshops.

It consists of a large plastic bag with a black plastic sheet inside. The black surface collects the heat from the sun's rays. A blower unit keeps the bag inflated and passes air over and under the black surface. The heated air exhausts from the unit through a duct on the end opposite the fan and is ducted into a fan or a bin or into a building.

The unit provides heat in a grain drying application similar to electric heaters used for low temperature drying.

There are several advantages to use of the solar unit over other types of heating—reduced power costs through use of sunlight as a heat source, lower wiring costs and reduced fuel costs through use of the unit as supplemental heater for shop or livestock building.

We would suggest that you brief your whole family, including children, in the observation of tornado type weather. Keep a sharp ear out on radio and watch the television for advance warnings. If a tornado watch is on, keep an eye on the sky, even if clear, as a storm can appear suddenly with no official warning. There are many tornado safety rules and we would suggest that each of you familiarize yourself with the proper action to be taken in case you sight a tornado.

Mobile homes are particularly

vulnerable to overturning during strong winds and should be evacuated when strong winds are forecast. We would also suggest that all mobile homes should be secured by cables which are attached to proper anchors and/or concrete footings.

Tornadoes and high winds are only one of nature's killers. The worst killer of all is lightning—stay indoors and away from electrical appliances while the storm is overhead. If you are caught outside, stay away from, and lower than, high-conductive objects.

#### IT'S SPRING PLANTING TIME

PLANT five rows of peas: preparedness, promptness, perseverance, politeness, prayer.

NEXT PLANT three rows of squash: squash gossip, squash criticism, squash indifference.

THEN PLANT five rows of lettuce: let us be faithful, let us be loyal, let us be unselfish, let us love one another, let us be truthful.

NO GARDEN IS complete without turnips: turn up for church, turn up with a smile, turn up with a new idea, turn up with real determination.

#### Leaky Faucets Mean High Bills!

Been thinking about fixing that leaky faucet but haven't found the time? This illustration may motivate you. Time your leaky faucet to determine the number of drops per minute; then find the kilowatt-hours wasted. Multiply the kwh wasted by one and three-quarter cents and you will have the amount of money you wash down the drain each month.







15 DROPS PER MINUTE

48 GALS. PER MONTH

> WASTES 12 KWH

30 DROPS

PER MINUTE

PER MONTH
WASTES

192 GALS. PER MONTH

60 DROPS

PER MINUTE

24 KWH

WASTES 48 KWH

## ILICA



Albert J. Cross



Dale Knuppel

### dedicated to soil and water conservation and improvement of the environment

by John Temple 'former editor, Illinois Rural Electric News

Seventeen years ago a group of land improvement contractors around Trivoli in Peoria County decided the time had come to organize. They recognized an organization could provide services, promote the welfare and protect the interests of individual contractors in a manner they could not do alone.

The result was the formation of the Illinois Land Improvement Contractors Association, Inc. (ILICA) with Ed Williams of Trivoli as its first president.

Subsequently, the Illinois Land Improvement Contractors Association became the Illinois Chapter of the Land Improvement Contractors of America (LICA). The LICA has offices in Brookfield, Ill., with Paul A. Bucha as executive secretary.

Land improvement contractors are dedicated to soil and water conservation and improvement of the environment. They construct grass waterways, build ponds and engage in other water diversion activities, construct terraces, install tile for better drainage and work on pasture improvement and land rehabilitation. In addition, a number of the contractors are active in farming and engage in other construction programs.

A land improvement contractor must be a good businessman and a skilled worker. The occupation requires a large investment in expensive machinery and equipment, and the work must meet high standards. Contractors work closely with representatives of the U.S. Soil Conservation Service, county soil and water conservation districts, the Illinois Department of Agriculture, the general farm organizations in Illinois and all organizations and agencies established to serve the rural people of the state.

Since its inception the ILICA has received invaluable assistance from Prof. Ralph C. Hay and Prof. Car-

roll J. W. Drablos of the University of Illinois, Department of Agricultural Engineering. Drablos now serves as educational adviser to the ILICA. Since Hay retired from university service he has continued to serve as a consultant to the state organization.

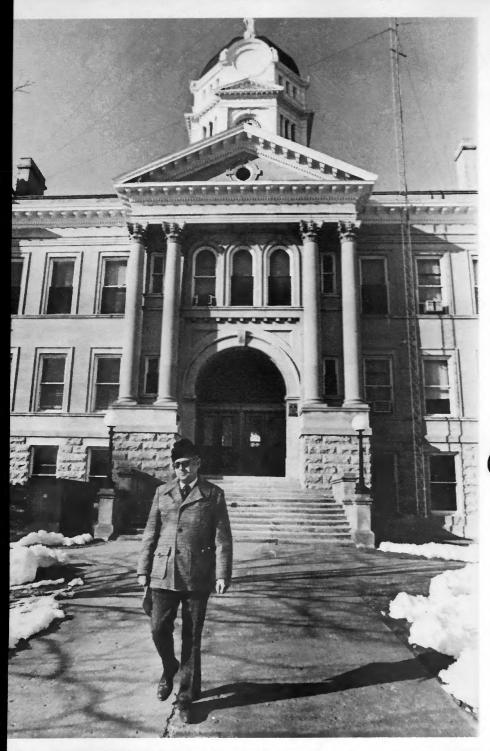
Some of the more important activities of the Illinois Chapter, LICA, throughout the years have included:

- 1. Members have conducted five soil and water conservation demonstrations in Illinois. The purpose of the demonstrations was to show the most up-to-date practices in soil and water conservation.
- 2. Each year members have participated in several conservation workshops in cooperation with the Department of Agricultural Engineering, University of Illinois, and the U.S. Soil Conservation Service.
- 3. An annual meeting is held where members obtain information on the latest soil and water conservation practices and procedures.
- 4. The ILICA has an active and effective state legislative program. From 1968 through 1974 the Association of Illinois Electric Cooperatives (AIEC) worked with members of the ILICA to provide this service. During this period the ILICA gained recognition as one of the responsible rural organizations in the state. According to Dale Knuppel of Mackinaw, ILICA president, "Tom Moore, the AIEC board of directors, the organization's staff and membership deserve our deepest thanks for what they have done to help us grow and develop, not only with a strong legislative program but with publicity, organization and management and in numerous other areas."
- 5. Frequent conferences with departments and agencies of the state have been held on problems affecting land improvement contractors.

The ILICA has received numerous national honors.

Two members, Ed Williams and Max H. Norris of Polo,

(continued on page 22)





city. "Another of the election promises was, that should we feel anything was going to be controversial, there would be a hearing on it," Aeilts said. "By the attendance at the hearing on the airport, we were glad we had one. Besides giving the people a voice in their government, it also gave the council an indication of the feelings of the community. A majority felt we should look into the possibilities and come up with a proposal."

The mayor believes that although

## Mayor

there are few major problems that the city faces, there are many immediate needs the council and mayor must try to meet.

"It seems like there is an almost constant need for improvements in streets and roads, as well as surface water drainage," Aeilts said. "These are the kinds of problems we are working to solve and hopefully anticipate in the future."

What he feels would be the major accomplishment of his administration and of immense benefit to Carthage is the placement of new money in the city by new industry.

"Carthage's economy is presently centered almost entirely around agriculture and agricultural products," Aeilts said. "In the past, either a low crop yield or a low crop price would adversely affect the city's sales and growth.

"By bringing in an industry—not just any industry, but one we feel will not pollute our air, water or soil—we will be able to stabilize the

(continued on page 21)



## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

#### About The Guy Wires . . .

Please do not remove guy wires. Removing a guy wire is a very dangerous thing to do as it will probably cause the pole to lean, resulting in low ground clearance. If there is enough strain on the line, the pole might break and thereby cause an outage for a large number of consumers. A loose guy wire dangling around on the pole can also cause serious injury to an animal or person if it comes in contact with the energized conductor.

While it is quite obvious that in some instances guy wires are an inconvenience to you while working around the farm or home, they are necessary for an electric distribution system to withstand the stress and strain which is placed on the electric line. Unfortunately all of them cannot be placed in the fence row and out of everyone's way.

From time to time you may notice some guy wires appear to be slack and apparently not serving any purpose. However, when there is a heavy load on the line, such as high winds, ice and etc., the guy wire plays a very important part in helping the line to weather the storm and prevent an outage. Should you observe a guy wire which has been disconnected and is wrapped around the pole or dangling in the air, please notify the cooperative office so necessary repairs may be done before an outage or injury occurs.

In addition, livestock which have access to areas near and around a guy wire, sometimes cause an outage on that particular line. Should you know of any location where this is occurring, the operations department of the cooperative would also appreciate hearing from this.

## DON'T FORGET, ENERGY SAVINGS TIME STARTS AT 8P.M. TONITE!



A major factor in the cost of electricity to your cooperative and any electric utility, is the costly mountain of electricity consumed at home and in business during daylight hours. Usually this peak begins at approximately 7 a.m. It rises and falls and reaches a peak again in the early evening hours. Obviously this is caused by breakfast, lunch and dinner meal preparations during the course of a day. The daytime load on all generation stations of any electric system creates the taxing of the generation facilities, and results in costly daytime peak loads to all power suppliers.

The high cost of producing electricity during the daylight time

affects each and every consumer. irregardless of their energy consumption. One way each of us can assist in providing relief from the situation is to keep our eye on the clock. For an example: If we washed and dried our laundry, used the dishwasher and did our baking after 8 p.m. in the evening, the end result would be a lessening of the daytime demand and would tend to make more efficient use of the generators by increasing our evening load. Keeping an eye on the clock can be just as important as keeping an eye on how much electricity we use.

Yes, energy savings time starts at 8 p.m. That's one special hour of the day that you cannot afford to forget.

#### CO-OP COMMENTS

By Lester Aeilts

In our March-April WIEC News and the center section of the April Illinois Rural Electric News I discussed some of the services provided by WIEC



Two required

like this:

without charge. I would like to continue the topic.

Farmstead Wiring Consultation-many members have asked our Member Service Department for assistance in

planning the wiring of some new building, completely rewiring an existing building or the entire farmstead. When this service is requested, an employee is usually dispatched to the premises to review present conditions. After a thorough check, recommendations are made. These recommendations can either be made to the member or his electrician. If the member wants WIEC to do the actual wiring, then he will be charged for the remainder of the work. The consultation and advice are given without charge.

Electric heating calculations and information about insulating buildings are also a service provided to WIEC members. This includes the design of the wiring system and the sizing of heating units, plus a recommendation

of the types of units available to best do the heating and/or cooling of your home or other structures.

Many WIEC members are finding. more and more ways to use electricity to improve efficiency in the home and around the farmsteads. This has caused them to overload their service capacity. Any member who is experiencing trouble with his meter pole breakers, severe extended dimming of lights or some other conditions which would indicate inadequate service capacity can have a load study made by our experienced engineer. The end result of such a study, which includes what equipment

you have now and what you may plan to have in the near future will be recommendation of the most economical size and type of service equipment. He will even suggest some new uses of electricity to see if you might be interested so he can include capacity for it if you think it wise to

Some WIEC members have need for electric service at a location rather remotely located from the other buildings. Our engineer can advise them of the short- and long-range economics of extending service from the present meter pole or providing service at a new metering location.



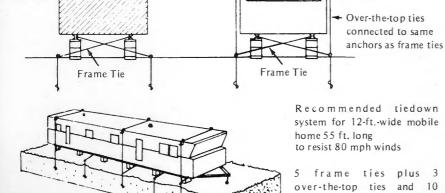
MIRRO-MATIC handles canning jobs in less time and with less effort than other methods, practically guarantees good results. Automatic pressure control. Extra-thick aluminum alloy. Removable gasket, reliable safety fuse. Canning tray and recipe book included.

Special Prices Available to WIEC Members Only.

#### STORM SEASON IS HERE

like this:

Three required



system for 12-ft.-wide mobile

frame ties plus 3 ground anchors

It's time to think about the vulnerability of your shelter to strong winds. Mobile homes are extremely vulnerable unless special effort is made to tie the home to the earth. Here's an example of a tie-down system with 10 ground anchors, each with a holding capacity of 4,800 pounds. Steel cable (7/32") or aircraft cable (1/2") can be used. And this, mind you, is not to protect you from a tornado, but only from 80 mph winds, the kind we sometimes get in violent thunderstorms. This information is from a booklet entitled "Protecting Mobile Homes From High Winds." Copies of the booklet can be obtained from your local civil defense office or by writing directly to: U.S. Army AG Publications Center, Civil Defense Branch, 2800 Eastern Blvd. (Middle River), Baltimore, Maryland 21220.

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#### Where Rheumatism Pain Strikes



Rheumatic and Arthritic Pain can strike the joints in any of the indicated areas. (see arrows on chart)



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21	000	N. Illin	ois St.	, Ind	ianapo	olis,	Ind.	46202

Please rush ICY-HOT to me. I must be completely satisfied with the results or I will send you a note for a full refund. (I won't bother returning the unused portion.)

 $\square$  I enclose \$3.00 for the  $3\frac{1}{2}$  oz. jar. ☐ I enclose \$5.00 for the 7 oz. jar.

	Cash	☐ Check
ī	Money	Order

NAME

ADDRESS

CITY

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SMASH-HIT FROM JOLTS AND JARS! The SHOCK-HITCH, a triple springloaded shock absorbing trailer naded shock absorbing trailer hitch, is a boon to anyone pulling a trailer . . . especially farmers and Among the benefits of owning a SHOCK-HITCH are: helps protect driver's back and neck from sharp joits and snaps; prolongs life of both trailer and pickup; and, it prevents possible injury to livestock by absorbing jerks caused by starting and stopping.
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It is the nature of essay contests, beauty contests or almost any other type of contest that there must be winners and there must be losers.

Or is it?

Three years ago, cooperative officials sponsoring the "Youth to Washington" essay contest in Illinois decided that yes, there had to be winners, but no, everyone else did not have to be a loser.

That decision fostered the beginning of the now annual "Youth to Springfield" tour. After only a year of the tour for all essay finalists, the day the contestants visited Springfield was also proclaimed as "Illinois Rural Electric Youth Day" by Governor Dan Walker.

It was "Illinois Rural Electric Youth Day" again recently when more than 150 "winners" and chaperones representing 12 of Illinois' 29 electric cooperatives visited Springfield. There they saw their government in action, met with Congressmen and walked where Lincoln walked in the streets of his city.

Governor Walker in his statement this year said, "These young adults are to be commended for their interest in rural electrification and the role their cooperatives play in meeting the challenges of the energy crisis.

"This effort to interest youths in an important problem that all of us face and provide them with an in depth insight into how their government works is highly commendable and should contribute immeasurably to the development of loyal, responsible citizens," he added.

Sponsoring the capital tour were Adams, Camp Point; Clinton, Breese; Coles-Moultrie, Mattoon; Eastern, Paxton; Egyptian, Steeleville; Illinois Rural, Winchester; Menard, Petersburg; Monroe, Waterloo; Southern, Dongola; Southwestern, Greenville; Wayne-White, Fairfield; and Western, Carthage.

A full day of touring was in store for the group. They first visited the State Capitol building and both the House and Senate chambers. The delegation was recognized on the floor of the Senate and given a round of applause by their legislators.

A reciprocal round of applause was given by the students to Secretary of State Michael J. Howlett, who addressed the group during the noon meal at the Forum XXX.

Howlett congratulated the contestants on their well-written and thoughtful essays and said he hoped they would consider "parlaying your talents by competing in our statewide Bicentennial Essay Contest." He said that his office is accepting entries in the contest on the theme "What is the Spirit of '76?"

If the morning tours belonged to legislators, the afternoon was strictly devoted to Lincoln. The students toured Lincoln's Home, the Old State Capitol Building and Lincoln's Tomb.

In the later afternoon, the tour ended for students from nine cooperatives. But for students representing Adams, Illinois Rural and Western the best part of the tour was only beginning.

Legislators from the 47th, 48th and 49th Districts, the districts covering the three cooperative's service areas, dined with the students at the Forum XXX in the evening.

And finally, it was over. Fifty of the finalists have been selected or will be selected to journey to Washington, D. C. on June 7-14. The rest went home—but not as losers.

#### **Proper Fusing**

If you are blowing fuses in your home, there is a good reason for it. Either the circuit is overloaded or "shorted" out. In each case the answer is not the next size fuse. The answer is

#### Mark Your Calendar

Mark Your Calendar W.I.E.C. 1975 Annual Meeting, Thursday July 31, 1975, Hancock County Extension Center correct the situation before there is damage that a fuse won't fix.

Below is a list of wire sizes and the fuse designed for the wire. If the following fuses are used with the size wires, you can be sure your wiring system is not being overworked.

No. 14 wire			. use 15 amp. fuse
No. 12 wire			. use 20 amp. fuse
No. 10 wire			. use 30 amp. fuse
No. 8 wire			. use 40 amp. fuse
No. 6 wire			. use 50 amp. fuse
No. 4 wire			. use 70 amp. fuse
No. 2 wire			use 100 amp, fuse

### For Sale



We still have some fuse testers for sale at the office. This is a very handy device that will test all types of fuses and fusestats and also will serve as an emergency flashlight. Price only \$1.10. Save time and inconvenience when power could be restored with the replacement of a new fuse in a matter of minutes!



## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

### CO-OP COMMENTS

By Lester Aeilts

I really don't know how to adequately say "thank you" to the Western Illinois Electrical Coop.



Lester Aeilts Manager

employees who worked so hard during the ice storms this past winter. One day, we had employees start at 6:30 a.m. and worked straight through until midnight.

We were fortunate we didn't have as many lines down and broken as most of our cooperative and private utility neighbors. The crews were able to start working on most lines within a short time after an outage was reported.

Our biggest problem was when Illinois Power's transmission line broke and the Lomax substation went dead. A solution was found when all the Henderson County service area was picked up by the Carthage substation.

We didn't really think our system would carry this much load over the

system peak, which normally takes place in the evening, this time of year. It did, however, and the members in Henderson County were only out of power about two hours instead of 10 hours as would have otherwise been the case.

During an extensive storm-created outage, the severe weather and hazardous road conditions still exist while linemen are battling under pressure to restore so many services. The tenseness of lengthy emergency duty is also felt by the cooperative employees who control and dispatch the linemen, who answer the continuously ringing phones and who perform the many other tasks associated with returning light and heat and motor muscle to members.

So again I say, "Thank you to the men and women of this cooperative. I think our employees do a terrific job!"

A thank you is also in order to many WIEC members. You were great, too. Your help enabled the linemen to restore service more quickly. We don't have the names of all who provided real assistance, but—

Thanks to you who called in to report locations of downed wires and broken poles. This helps pinpoint the need and safely coordinate the effort.

Thanks to you who were nice on the phone and were patient when we

advised you we honestly didn't know when your service would be restored, but that we were doing our level best to take care of every member.

These are the kind of people we appreciate working for, and fortunately a large majority of WIEC members do have such understanding.

Many of you have probably noticed some nice bright yellow equipment which looks terribly expensive rolling up and down the roads with WIEC decals on the side. Let me assure you it is expensive equipment, but boy can a pair of linemen ever put up a large number of broken conductors even during an ice storm with one of those bucket trucks! The digger trucks were busy all day too stubbing down broken poles until we could get time the next week to replace them.

This same equipment is used every day to improve the efficiency of our construction and maintenance crews. The crews can be broken up into smaller groups when there is more equipment available. We are working diligently to provide preventive maintenance programs for the equipment so it is available when the men need it, which is every working day.

I am proud of our employees and their dedication to serve you.

### Ventilation, Dehumidification, Airconditioning

#### Points to Consider

An air conditioner works on the same principle as your electric household refrigerator. Heat is removed from one area and placed in another.

Air conditioners and dehumidifiers both provide dehumidification (they remove moisture from the air). Air conditioners are used in areas where both cooling and dehumidification are desired and dehumidifiers are used in areas where only dehumidification is needed.

An air conditioner does a good job of cooling and dehumidifying if it is the right size. A unit will not cool properly if it is too small and it will not dehumidify properly if it is too large.

Cooling requires a larger air flow than heating to be effective. Therefore, if an add-on system is installed it may be necessary to increase the capacity of the furnace circulating fan and motor, and enlarge or even relocate the distribution ducts.

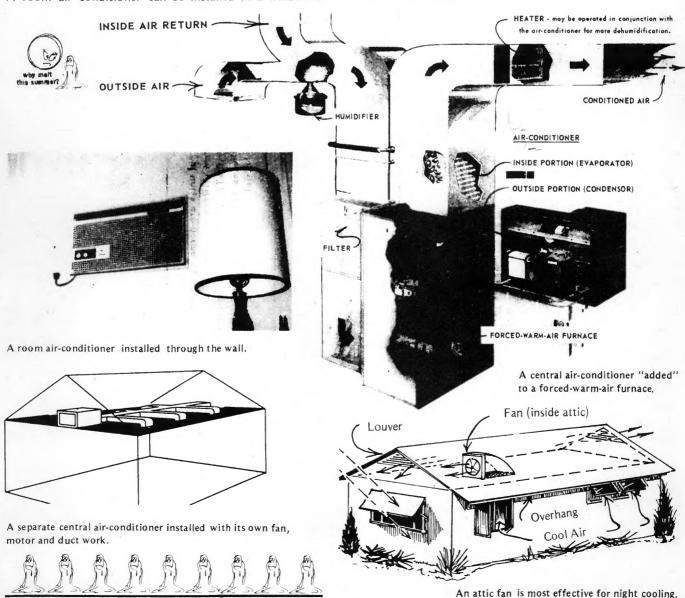
A room air conditioner can be installed in a window or

through the wall. The wall installation is usually neater and more permanent.

A separate central air conditioner is installed as a separate unit with its own fan, motor and duct work. Adequate Attic Ventilation—An attic needs ventilation to remove any moisture that gets into the attic space (mainly in winter) and to remove summer heat. Most attics are ventilated through louvers at each gable end of the house or by a combination of louvers located at the eave and in the roof or ridge. Minimum openings of one square foot for each 300 square feet of attic space are recommended.

An attic fan draws cool air into the house and forces warm air out of the attic. It is most effective for night cooling.

A central air conditioner can be "added" to a forced-warm-air furnace to make a total comfort system which cools and dehumidifies in summer, and heats and humidifies in winter.



### Legislative Rally: inroads into congress



Representative Paul Findley of Pittsfield talks to legislative rally participants from Illinois on the steps of the Capitol.

Feedback.

It's what legislators need in order to understand fully the positions of their constituents. Without it, they have little opportunity to judge the "back-home" feeling on bills, and often vote accordingly.

But with close interaction, a great deal of legislation that directly affects their constituents is passed for the greater good or rejected as adversely affecting well-being and growth.

Feedback is what more than 40 Illinois electric cooperative officials and more than 700 national delegates brought to their respective senators and representatives during a three-day legislative rally held recently in Washington, D. C.

Never has the feedback been more important. During visits to their legislators cooperative officials discussed issues vital both to the cooperatives themselves and in turn to their members. Three important topics were coal usage restrictions, nuclear construction and financing.

As more and more consumermembers are asking "why is my electric bill rising?", so are cooperative officials asking what can be done to stop the rising costs of power.

Why, for instance, cannot Illinois coal be used to fire the much needed generation plants and thus apply a

partial braking to the rising cost of power? Why does it seem environmental fringe groups are able to advance legislation that acts as a detriment to the energy business even at a time when forecasts predict an upsurge both in price and in electric needs?

Why are nuclear "terror-tactics" being applied even in the face of studies and practical applications to the contrary? And why, at a time when the greatest demands ever on cooperatives are being made, is there the least security in the financial market for the cooperatives?

Coal surely must become the nation's basic tool for achieving self-reliance over the next few years. It will be at least that long before reasonable alternatives—nuclear power, energy conservation and perhaps some of the more exotic fuel projects—can make a significant impact.

Illinois is fortunate in that it has a great supply of coal which could be used for generation. Because of its high sulfur content, it may never be used under existing laws.

The conflict between the values of energy and the environment has been too long portrayed as an either/or situation by environmentalists. Cooperative officials believe and have told their legislators

that reasonable approaches exist to ensure both clean air and adequate energy supplies.

One reasonable approach which cooperative leaders support is H.R. 1447, which would amend the Clean Air Act to eliminate ambiguous interpretations of certain clauses of the act, would allow the use of alternatives to uniform emission controls as a means of achieving air quality standards in state implementation plans and would permit an owner to petition for and obtain a less stringent emission limitation if he can demonstrate that air quality standards would not be exceeded and the cost of complying with a more stringent limitation would not be justified. In the latter case, an example would be the difference between requirements for a city such as Chicago and requirements for a non-metropolitan area where the generation plant was one of the few industries and would not produce exceedingly high air quality emissions.

Cooperative officials also asked for consideration of legislation concerning nuclear power. Of particular concern is an over reaction to charges by a small group of scientists that nuclear power is both unsafe and unsavory.

(continued on page 17)

### **Cut off the electricity**



and your life can be drastically affected for several hours.

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Like electricity, good health is something we often take for granted. But just as light-ning can suddenly cut off the electrical power, disability can just as quickly cut off your earnings. At a time when medical bills are added to the cost of everyday living, the loss of your income can be conscious. especially serious.

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Business Meeting Begins at 7:30 P.M.

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## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

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CARTHAGE, ILL.

### CO-OP COMMENTS

By Lester Aeilts

We're 37 years old this year! Your cooperative was born in 1938 about three years after the Rural Electrification program became a reality. The average life of a pole is



Lester Aeilts Manager

35 years. We can expect an increasing number of poles to need replacing each year. We think our poles had a very severe test this winter when the lines were loaded

with ice. Only a very few failed and we were able to stub them down almost as fast as they were reported.

We feel quite strongly that we should begin a pole inspection program. This job should be done by pole specialists who know wood and have experience in sounding, boring and treating poles. Five to seven percent of the poles have deteriorated to the place where they should be replaced. The life of the other 93 to 95 percent can be extended 15 to 20

years, if they are treated with a wood preservative.

A pole which cost \$25.00 set in place when your electrical system was built and paid for with two percent borrowed funds now cost \$270 to replace with interest costing five percent from the Rural Electrification Administration and nine percent from National Rural Utilities Cooperative Finance Corporation, our own financing bank. The interest cost on the original pole was 50 cents per year as compared to \$13.50 per year on its replacement-27 times more, not to mention the 11 times greater cost of the pole itself.

We are delaying the start of a pole inspection program because we didn't want to add this extra cost to the already staggering costs which face us every month. It doesn't seem wise to delay this program very long considering the inspection and treatment would cost approximately seven dollars per pole as compared to replacement of poles averaging \$270 per pole.

The tremendous increase in the cost of poles and other line materials have been dwarfed by the astronomical increase in the cost of fuel. The fuel costs for generating electricity have risen so rapidly that between the time your board of directors adopted a new

rate schedule in December and went into effect on your April bill, the cost of purchased power increased some 38 percent.

Other costs are also increasing, particularly gasoline. Frank Zarb federal energy administrator warned us this week gasoline would increase seven to 10 cents before September. He said the administration would suggest some form of relief for the low income people.

This will not help WIEC hold down power cost. I want to remind you that your service crews can't start their day's work until they drive to your place or to one of your neighbors. We try to plan our work so the trucks travel the fewest number of miles. This has to be balanced with the most efficient use of our manpower. We don't feel it is wise to have four men on a job for four hours because they may be needed at another location for a couple of hours later in the day. We feel it is wiser to use two vehicles with two men each getting twice as many jobs out of the way during the initial period and then bring them together for the last job where four men are needed.

These are decisions we must make every day as we diligently try to run your cooperative in the most efficient manner.

#### **NUCLEAR SAFETY**

In response to a request from an Iowa system, National Rural Electric Cooperative Association General Manager and Executive Vice President Robert D. Partridge on March 3 wrote members of the Iowa congressional delegation a letter setting forth the association's views on nuclear power plant safety.

Partridge's letter, in part, follows:
We are convinced that they are completely safe and that the close surveillance of their operation provided by the Nuclear Regulatory Commission would quickly uncover any situation even remotely capable of posing a hazard to the public.

Our real concern is that the proliferation of inaccurate information about these plants will improperly influence the public against them. This is particularly important since the only two energy resources the U. S. still possesses in abundance are coal and uranium.

A nuclear power plant reactor cannot explode. The nuclear material is not sufficiently enriched nor is the containment sufficient to create an explosive force.

You are undoubtedly aware of the two-year, \$3-million report on nuclear power plant safety recently published by the AEC. The report, prepared

under the direction of Dr. Norman C. Rasmussen of MIT, finds that even the possibility of a core "melt down" type accident causing as many as 100 deaths is one in each 10,000 years with 100 large power reactors on line (1985). According to Rasmussen, the probability of 100 people being killed is 500 times more for an earthquake than for a nuclear power plant, 2000 times more for a hurricane or tornado, 100 times more for a toxic gas release. 635 times more for an explosion, 1,429 times more for a fire and 5,000 times more for a plane crash. The report shows then if you live close to a reactor you are 75,000 times more likely to be killed by a car than by the reactor and 150 times more likely to be killed by lightning than by the reactor.

The problems of site selection and means of disposing of radioactive waste (waste canisters salt domes, etc.) have not been fully resolved to date. We would suggest that Congress consider authorizing greater funding for disposal technology than the \$13-million set aside in the 1976 fiscal year Energy Research & Development Administration (ERDA) budget for this purpose. We believe research in disposal technology directed toward transmuting plutonium into elements with much shorter lives holds promise and should be encouraged. It must also

be borne in mind that the actual physical volume of such waste is not prohibitively large. Dr. Frank Pittman, the ERDA director of waste management, has stated:"...the total volume of the solidified high-level radioactive waste which must be managed between now and the end of the century would be of the order of one million cubic feet—a space 25 feet high and 200 feet on a side." In order to provide a cooling of these wastes, perhaps as much as ten acres might be required. Most of this information came from a new book entitled The Nuclear Controversy by Dr. Ralph E. Lapp, a noted nuclear physicist and journalist.

It is unquestionably true that all of the problems associated with nuclear power have not been solved. Obviously all of the problems of air transportation have not been solved. We think it is in the public interest to encourage nuclear development so that more of these problems can be solved and full utilization made of an abundant U.S. energy resource.

Solar energy, wind power, fuel cells, etc., are all good concepts for use down the road. But for the immediate future, about all we have is coal and nuclear.

(This article taken from NRECA's Rural Electric Newsletter, issue No. 715, March 7, 1975.)

#### Nuclear Power Saves Users Billions

Nuclear energy can supply the United States with the energy equivalent to 25-billion tons of coal in the next quarter century, according to Dr. Ralph Lapp, pioneer nuclear physicist and author.

"No other energy source within our technological grasp holds such promise and that's the basic reason why the community of informed scientists and engineers is so overwhelmingly in favor of nuclear power," Lapp wrote in a May 11 letter to members of Congress.

Accompanying the letter was a 118-page critique of Ralph Nader's campaign against nuclear power. At a press conference at the National Press Club in Washington Lapp released the critique which comments on "27 items of contention" in Nader's case against nuclear power. Lapp charged that the items "turn out to be

ill-supported allegations and gross exaggerations.

"Nader would have the American people pay more for their monthly electric bills," Lapp said. "According to my calculations, it would cost Americans \$13.7 billion more for electric power in the 1976-1980 period if nuclear plants were to be shut down."

In commenting on various sections of the report, Lapp said:

"I have carefully examined Nader's case, and I find it to be a casually constructed set of arguments, deeply flawed by Nader's lack of nuclear expertise. This inability of Nader to do his own homework and his apparent unwillingness to listen to anything but extremist advice results in a lack of evidence to support Nader's claims.

"Nader supercharges the nuclear

debate atmosphere with unending misinformation and misinterpretation of data. The result is that Nader excites but does not inform. Nader makes rational debate of nuclear issues impossible. Nader asserts that other sources of energy can fill America's energy gap in the future. Nader does not live in a real world of energy resources. He would have America give up a sure thing-nuclear power equal to the energy of 100-billion barrels of oil during the next 25 years. But his alternative sources of energy are either too costly, too unavailable or too far below the technological horizon to do us any good.

(This article taken from NRECA's Rural Electric Newsletter, issue No. 725, May 16, 1975.)

#### learning about electric cooperatives

## Foreign Trainees Visit Monroe County

R ural electrification has been, and still is, one of the greatest single factors for the raising of living standards in rural areas. It is for this reason other countries, still in the infancy of rural electrification compared to the U.S., send personnel here for a two-month study tour and seminar on the development of distribution systems.

This international training program is sponsored by the U.S. Department of Agriculture, Agency for International Development, NRECA, universities, colleges and other organizations.

Monroe County Electric Co-operative, Waterloo, recently hosted four foreign visitors as they examined the workings of a typical rural electric cooperative in the midwest.

Manager LeRoy Hard gave them free run of the cooperative, and, as he put it, "threw open the doors" allowing his guests to ask any and all questions while observing the dayto-day operations of the cooperative.

The visitors were Mejardo Pulanco Arcelo, chief of the training division of the National Electrification Administration (NEA) in the Philippines; Antonieto Figueras Tacazon, head of the management audit section of NEA in the Philippines; Karjundi Wirapradja, chief of the Technical Department at the State Enterprise for Electricity in Bandung, Indonesia; and Abdul Wahid, executive construction engineer for the State Electrification Administration in Karachi, Pakistan.

The guests began their three-day

visit with a briefing. Manager Hard outlined the services offered, discussed the office procedures and in general gave a quick verbal picture of the cooperative.

The visitors separated into groups with Arcelo and Tacazon spending the rest of their first day in the office examining bookkeeping and billing procedures and talking with personnel in the engineering department and the warehouse.

Meanwhile, Wirapradja and Wahid journeyed southwest of Waterloo where they observed line construction. A cooperative crew was hanging transformers to provide power for construction of a pumping station on the levee near the Mississippi River.

The following day, the two groups traded places, thus giving each a long look at the total operation of the cooperative. For a bit of relaxation, Manager Hard and Monroe President Robert Ripplemeyer gave the visitors a taste of American hospitality and took them to St. Louis for dinner and a baseball game.

On their last day the trainees toured the cooperative area with members of the Monroe staff. They visited farms, a quarry and several businesses, to give them a closer look at how electric power is utilized in the rural area.

Leaving late in the afternoon, the four boarded a plane for Little Rock, Arkansas, the next stop on the two-month training tour.

Prior to coming to Monroe, they had gone through several training seminars, lecturers and presentations





TOP: The trainees gave a cooperative line crew a hand with a sticky conduit coupling. ABOVE: Manager LeRoy Hard discusses the day with visitors, prior to an outing in St. Louis. RIGHT: The group watches a line crew finish wiring the transformer installation.

by the U.S. Department of Agriculture, Rural Electrification Administration and the National Rural Electric Cooperative Association. They also had toured cooperatives in North Carolina, South Carolina and Florida.

In Little Rock, the trainees will examine the operations of a statewide association and the services it provides to member cooperatives. They will then spend several days at



much as he can about artifacts and archaeology in general, has made him both an avid reader and a person many professional archaeologists have come to respect almost as an equal.

"When I became interested in artifacts, I started reading everything I could get my hands on," Downs said. "I guess I have read more than 800 books and I don't know how many periodicals.

"If you want to get into this you need to read everything from the Sears catalog to the Bible," Downs added. "It takes a lot of time and you have to grab every spare moment to read."

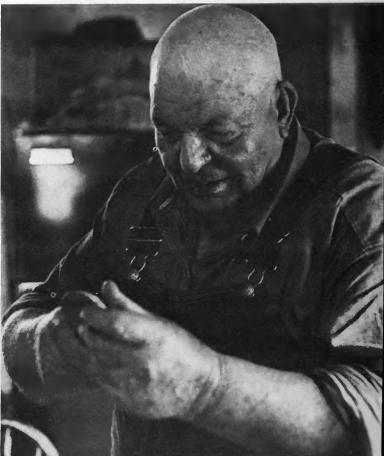
Downs has even read books on archaeology written in Russian, although he admits "I had to look at the pictures to try to match them with the words.

"People all over the world are ahead of the Americans in studying their pasts," Downs said. "We are only beginning to learn how to look and study."

Downs has become knowledgeable about the different cultures in Illinois and can identify most of the periods of Indian history through artifacts. At least 25 and perhaps as many as 50 separate cultures inhabited Illinois. The oldest culture started anywhere from 20,000 to 60,000 years before the white man first landed on American shores.

"There may have been hundreds of cultures, too, (Continued on page 16)

LEFT: A major part of looking for Indian artifacts is walking the fields. Downs puts more mileage on his boots in front of his farm. BELOW: Downs examines a promising artifact for his collection.



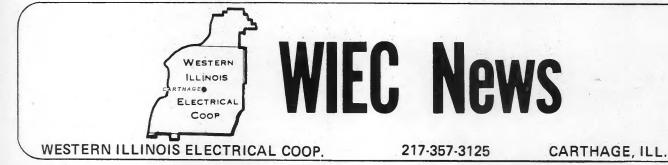
#### Rate Increases

We have just received notice from our two power suppliers requesting rate increases. These increases will be in addition to the fuel clause adjustments we receive each month.

We do not yet know the size of the increases but one company is

requesting a 49 percent increase. We will be working diligently to keep these increases to a minimum but we are aware that some increase is justified.

The fuel clause adjustments are adding up in increasing amounts and are increasing so rapidly we will either have to send out new rate charts every three or four months or change our system of billing so the increased cost of purchased power can be passed along each month. We are studying this problem to determine the most economical way to solve it. We are considering several possibilities and will let you know when a decision is made.



#### CO-OP COMMENTS

By Lester Aeilts

I came across this article the other day which quite appropriately stated the frustrations we have experienced and are experiencing.

"We in the electric utility industry are witnessing and experiencing a strange paradox. For several years there has been a rising tide of environmental concern in this country that has resulted in numerous laws, rules and regulations that greatly restrict our ability to produce and use energy, and adds to its cost. Now that the bills for environmental regulations are beginning to come in, along with the higher costs associated with the energy crisis, inflation, and higher money costs, consumer groups have begun to organize and lead protests against rising electric rates.

What is so frustrating to us in the electric utility business is that often the same groups who strongly oppose the construction of electric generating plants, transmission lines, nuclear energy, strip mining, etc. are often the same groups that are protesting the high electric rates that these restrictions have brought about. So we are in the position of a mule who is being prodded from behind to get in the stall, while hit over the head every time he steps into it." (Capsule Comments)

#### Service Charges

What is a service call and why is there a "service call charge?"

First of all, let us remind you that WIEC owns the facilities to the meter pole. This includes the pole and the meter. Therefore, WIEC is responsible for the proper functions of its facilities.

The meter loop and the breakers in the loop are the member's responsibility and must be maintained by the member.

All the form system wiring and attachments on the meter pole is the member's property and must be maintained by the member.

Therefore, when you call and report that you are out of service, the first question we ask is "Have you checked your fuses or breakers?" Be sure and check your meter pole breakers as well as any fuses and/or breakers in the entrance panel in your house, or any out building that would have a fuse or breaker panel. Then we also want to know if you have been having any trouble with your own equipment, which might cause you to be out of service.

WIEC crews are never reluctant to restore service for you. If they seem to be, it's because they want to be certain that it is WIEC's facilities that needs attention and that a call to your farm will not cost you an unnecessary "service call charge." Overtime service calls are: For one man — \$22.50 for the first ½ hour and \$10.50 for each

additional hour, and for two men - \$30.50 for the first  $\frac{1}{2}$  hour and \$19.50 for each additional hour.

A service charge is made when a line crew comes to your premises and finds that the cause of your trouble is on your own premises and finds that you or your wireman or electrician could have fixed the trouble. It may be that trouble is in the fuses, the circuit breaker, or a loose connection, or disconnected wires, bare wires that are touching or twisted, or something of that nature.

It is very expensive for WIEC, especially after hours or on weekends and holidays, to send a crew out. In addition to the wages paid — at overtime rates — there are many additional overhead costs that must be met, such as social security and unemployment taxes, workmen's compensation insurance — all based on the wages paid; and then there are the operating costs for the equipment, etc.

We want you to have the best service possible at all times, at the lowest possible cost to you. But, when you request "extra service," doing something you could have done, it is necessary that there be an "extra charge."



## DON'T DIE in the grain bin!

#### CONSIDER THESE case histories:

- \* An Indiana farmer found flow blocked when he started to unload a bin. He took a pipe, climbed the bin and poled through the crust. Next thing he knew, he was waist deep in flowing grain. He sank so fast he couldn't free himself. Luckily, the pipe hit the hopper and jammed the auger. He was rescued a few hours later.
- \* A father and his son walked across grain in a bin. Grandpa followed but broke through the crust and suffocated.
- \* A farmer raced to his bin hatch to retrieve a scoop he'd forgotten. Just as he reached for it, the shovel slid into the withdrawal cone. He lunged to grab it and fell headfirst into the flowing grain. He got out by using the shovel to paddle himself up the cone.
- \* Another man left his two children in his truck and went to turn on the auger. A few minutes later he returned to the loaded truck but couldn't find his children. He thought they might be in the grain so he dumped the load in the yard. He found them but one had already smothered.

THESE ARE just a few examples; pages could be filled with others. There are no accurate statistics on grain handling deaths, and further, near-misses often go unreported. However, research indicates fatal and non-fatal

accidents like these probably occur at least 100 times each year in the grain belt.

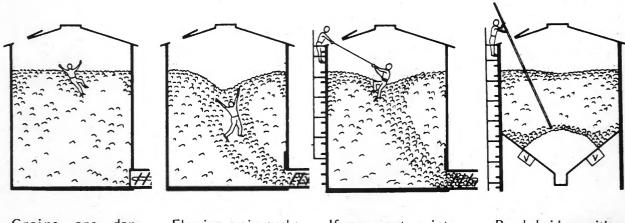
Few people realize how flowing grain acts, according to Bruce McKenzie, Agriculture Engineer, Purdue University. He says, "It flows almost like a fluid when it's drawn from the bottom of a bin. You start with your legs about a foot deep in grain and you're helpless when it gets above your knees."

Accidents are occurring now because we're handling more grain, faster, with bigger equipment and with fewer people.

Grain suffocation doesn't have to happen if you follow these rules:

- (1) Install ladders in all bins.
- (2) If trapped in a grain bin or silo, stay near the outer wall and keep moving. You can walk the bin down until it is empty and flow stops.
- (3) If you enter a bin with potential danger, use a rope and safety harness with two men outside to hold you and get help if needed.
- (4) A rope, chain or pipe ladder hanging from a roof may save you, but these safety devices have drawbacks. They are not proven and you may not have any way to get out of the bin if you use them.

Remember that flowing grain is dangerous. Preach that to your family, helpers and neighbors.



Grains are dangerous as quicksand even when not unloading.

Flowing grain sucks you under suddenly when unloading starts.

If you must go into the bin, use a lifeline and have someone there. Break bridges with a pole. Use vibrators to keep grain flowing.

### energy realities

(Continued from page 9)

plant on the ground and provide data needed to determine the level of pollution. If a high level of sulfur dioxide is present, the plant could be shut down, slowed down or use more expensive low-sulfur coal until an acceptable level is achieved.

"And if the plant is not polluting, then there is no reason to impose a regulation," Clevenger said. "As it stands, the EPA regulation assumes there is a problem. Provisions of this bill, intermittent controls, would determine if that problem actually exists."

The only alternative offered to power producers by the EPA is the implementation of scrubbers to remove the sulfur dioxide. "The EPA calls scrubbers an answer, but they don't say that the scrubbers now being made are both of unproven reliability and questionable impact,"

Clevenger said. "They are also so costly that they often will total about 25 percent of a power plant's total investment. By necessity, this additional cost will be passed on to the consumers in the form of higher rates."

Impact statements prepared by the Pollution Control Board (PCB) to determine environmental effects should include the cost-benefit ratio of an EPA impact study. At present, there is no effective mechanism—staff, governing body or financing—to provide these vital additions to the studies. Thus, a PCB regulation does not presently consider financial costs against the specific benefit to the environment.

Senate Bill 805 would amend the Illinois "Environmental Protection Act" to require the Institute for Environmental Quality to prepare and

publish economic impact statements for rules of the Illinois Pollution Control Board as selected by the Economic Technical Advisory Committee, also created by S.B. 805. The bill also requires an economic impact hearing by the Illinois Pollution Control Board before adoption of an amendment to its regulations.

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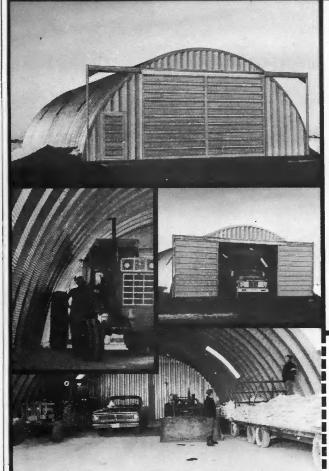
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FROM LEFT: Handcrafted jewelry by Helen Schumm of Secor gains the attention of ladies at the Goodfield Saturday Market. Lapidarist Lawrence Nichols of Congerville shows customers the different stones in his collection of handcrafted items. Fine handmade quilts are the family pride of Ora Koehne, daughter Ruth Sayer and granddaughter Melanie. Marie Bour and daughter of Eureka turn ordinary satin Christmas tree bulbs into highly decorative ornaments.



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More than just another pretty face, our *Town & Country* is also a practical, efficient building, with plenty of storage space for vehicles, recreational equipment, implements—or workshop if you want one. A spacious 30' x 40' clear span structure with maintenance-free exteriors of color aluminum or color steel.

Call today, and we'll have a beautiful, new Wickes *Town & Country* sitting pretty on your land tomorrow.

## Market

year got us off to a good start," said Guild President Mrs. R. L. Holder, "but this year more people know we are here and the crowds have been excellent."

Featured at the market are drawings and paintings, macrame', leathercraft, ceramic and eggshell jewelry, lapidary work, Christmas ornaments and needlework.

Also at the market, visitors may purchase vegetables from the gardens of members of a newly formed produce cooperative.

Home baked goods are available and for those who wish to do their own, one exhibitor sells freshly ground wheat flour, corn meal and cracked wheat, along with appropriate recipes.

One of the best items at the market, however, is not for sale. It is the friendly atmosphere, which is free to all and maybe is one reason why people keep coming back to the Goodfield Saturday Market.

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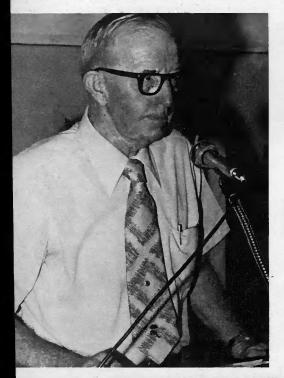


## WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.



# Manager Les Aeilts Tells Annual Med Electric Rates

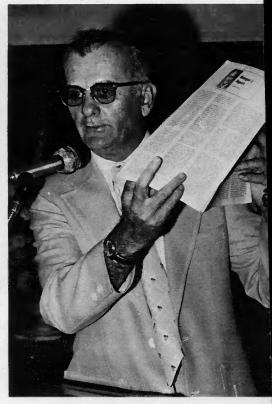
The rising cost of wholesale power, materials and labor necessitated an increase in electric rates for members of our cooperative, effective August 26. The explanation of the causes of a nine mill surcharge were explained at this year's annual meeting, but for those who missed the meeting or the news release in their local newspaper we have included the report in this

month's center section along with a capsule look at this year's meeting.

"Coal and the cost of coal is the key to the escalating cost of electricity," Manager Lester W. Aeilts said. "The price of coal has risen drastically and no end is in sight. This increase is related to how much it costs our power supplier, Western Illinois Power Cooperative, Inc., (WIPCO),



CLOCKWISE FROM ABOVE: A variety of electric appliances were on sale for cooperative members again at this year's annual meeting. President Donald Kerr, Sr. of Warsaw explained the board's decision to raise rates. John Williams, Illinois Power Company discussed the future of different energy sources. More than 600 people attended this year's annual meeting. Donald B. Bringman, general manager, Western Illinois Power Cooperative, Inc., Jacksonville, explained the problems his organization faces as a power supplier to WIEC and other electric cooperatives.



## Crowd Rise

Jacksonville, to generate electric power and, in turn, how much you pay for the electric power.

"The wholesale power purchased by our cooperative during April, May and June cost \$27,000 more than we planned for when we established the rate structure that went into effect in March of this year," Aeilts said. "And based on wholesale power costs remaining the same for July and August, we will fall behind another \$22,000 for those two months alone."

Aeilts said the rising costs of wholesale power had been a problem the board and management had

wrestled with for the past few years. "Even though rates are much higher than we would like, there just doesn't seem to be much we can do about the ever-escalating fuel costs."

"In 1974 more than 49.6 percent of each cooperative dollar went for wholesale power," Aeilts said. "This amounted to more than \$586,000. In 1973, 47 percent of the dollar went to wholesale power, a matter of \$474,000." Since the annual meeting, further study has revealed that only a 3 mill increase is necessary.

President Donald Kerr, Sr. of

Warsaw further explained the reasoning behind the board's decision to raise the rates.

"We didn't have any real choice but to pass these increases on to the membership in one way or another," Kerr said. "How to pass them on was the only question. Several alternatives were discussed, all of which would add to the already escalating cost. We believed that you would rather keep the lower cost method of billing even if increases were a little larger, but at less frequent intervals."

Secretary-Treasurer Charles R. Melvin of Carthage reported that the total assets of the cooperative totaled more than \$3.2 million and that the physical plant was valued at more than \$2.4 million. Melvin added the cooperative paid more than \$98,500 in taxes during 1974.

During their business session, members reelected Kerr and Melvin to serve three-year terms on the board of directors. At a reorganization meeting Massie was elected president; DeMoss, vice president and Melvin was reelected secretary-treasurer.

Guest speaker was John M. Williams, manager of energy supply, Illinois Power Company, who discussed the future of different energy sources needed to provide dependable electric service. Before and after the meeting Mrs. Orville Sinele provided interlude music on the organ.



#### Farm Productivity-A Success Story

The chronicles of agricultural productivity—fewer and fewer farmers producing greater amounts of food for more and more people—is a success story unparalleled in U.S. history.

From 100 percent of the original settlers working the land for their own survival to the present total of less than five percent of the U.S. population engaged in farming to feed the remainder of the country and a sizable part of the world, it's a story of amazing agricultural statistics.

At the time of the Revolution, more than 90 percent of the population of the new nation was still engaged in farming.

By 1820, the percentage of farmers had dropped to some 83 percent and about 60 man-hours of labor were needed to produce an acre of wheat.

Gradually, the number of Americans in agriculture continued to slip until by 1870 farmers were no longer in a majority in the U.S. By then, only 47 percent of the country's population could be classified in agriculture.

The number of farmers dwindled further and by 1910 only a third of the growing population was in agriculture.

With only 21 percent of the population in farming in 1930, total man-hours required to produce an acre of wheat fell to just three.

In the 1950's, the farming population dipped to less than 15 percent and continuing declines reduced that percentage to less than five presently. But agricultural production maintained its upward climb and output per man-hour jumped some  $3\frac{1}{2}$  times in the past two decades.

Never have so few given so much to so many. And never will the challenges be so great as in the future.

Name of Organization .





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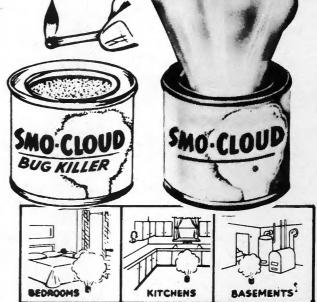
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# WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

## CO-OP COMMENTS

by Lester Aeilts

Mr. Robert D. Partridge, executive vice president and general manager, National Rural Electric Cooperative Association, prepared the following statement for National Co-op Month. I would like to bring it to you in this column. His statement follows:

"Cooperatives-Pioneers in Serving



Lester Aeilts Manager

A merica," this year's National Co-op Month theme, brings to mind the early days of the cooperative movement that had its beginnings in a

little food store, set up by 28 people in Rochdale, England, in 1844. Today, there are more than 40,000 cooperatives of many kinds, meeting many different needs, across the nation.

In fact, 1975 seems to be a special year for reflecting upon beginnings and pioneers. Not only is it the eve of our nation's 200th birthday, but it also marks the 40th anniversary for our own cooperative program, rural electrification—for it was in 1935 that the Rural Electrification Administration was created by President Franklin D. Roosevelt, and the first lines strung in rural areas.

Many people said it was impossible to bring quality electric service to the remote and sparsely populated rural areas of the nation, but the men and women who wanted to raise their standard of living and enjoy the benefits that electricity had brought to their urban neighbors wisely declined to listen.

Many are the stories of what it was

like when the first light switch was flipped in a rural home, when the first radio was turned on, or when the first electric machinery was installed to ease back breaking farm work. And as these events began to take place in the 1930's, and the difficulties were overcome in setting up and managing a rural electric cooperative, rural Americans throughout the nation got together with their friends and neighbors so that they too could form cooperatives and benefit from the changes electricity would bring to their way of life.

Today, there are nearly 1,000 rural electric cooperatives which serve about 25-million people in 46 states. To think that just 40 years ago less than ten percent of America's rural areas were electrified! Now, nearly 100 percent enjoy central station electricity.

But the job of turning on lights in rural America is just one part of the rural electrification story. Rural electric cooperatives must keep pace with rapidly changing times in order to provide adequate and reliable service to their consumer-members. And because rural electric cooperatives are a vital part of their communities, they are working hard to solve problems facing every rural community—problems dealing with the energy crisis, rising fuel costs, environmental issues, adequate housing, jobs and community facilities.

People who work together toward a common goal—the cooperative way of getting a job done—are people who care about their communities. They are people whose expertise and leadership are looked to because they have proven that they can meet challenges and take on responsibilities.

The rural electrification program is often referred to as one of America's greatest success stories—a tribute to the early founders of the rural electric

cooperatives which set a pattern for others to follow. Those people were, indeed, "Pioneers in Serving America," and today's consumer-members are modern-day pioneers seeking new and better ways to serve their communities.

#### October Is Co-op Month

The following cooperatives in WIEC's area are all "Pioneers in Serving America" and should be supported by all people.

#### Hancock County

Four Rivers PCA, Carthage Federal Land Bank Association, Carthage

Interstate Producers Livestock, Association, Elvaston

Interstate Producers Livestock, Association, Bowen

Augusta Farmers Cooperative, Augusta Country Companies Insurance, Carthage

Harmony Mutual Insurance Co., Carthage

Hancock Frozen Food Cooperative, Carthage

Hancock Grain Co., Carthage

Dallas City Township Mutual Fire Insurance Co., Niota

Appanoose and Sonora Mutual Fire
Insurance Co., Nauvoo
Wythe Township Mutual Fire

Wythe Township Mutual Fire Insurance Co., Basco

Western Illinois Electrical Cooperative, Carthage

#### **Henderson County**

Stockland FS

Country Companies Insurance, Stronghurst

Interstate Producers Livestock Association, Stronghurst

Monmouth PCA, Monmouth

Federal Land Bank Association, Monmouth

Stronghurst Mutual Country Fire Insurance Co., Stronghurst

#### Other Area Cooperatives

Adams Telephone Co-operative, Golden

McDonough Telephone Cooperative, Inc., Colchester

ILLINOIS RURAL ELECTRIC NEWS

# How to Determine the Problem When Your Lights Go Off

We don't like it any more than you do when your electricity goes off. It's irritating, aggravating and frustrating to say the least. In this and next month's center section we are going to try to show you things you can check to determine where your problem might be so your service can be restored as soon as possible.

There are four (4) basic causes for your electricity going off. This month we are going to discuss the first two (2) of these causes.

- 1. Power Supply outage—This could involve any combination of the following:
  - (A) A line type breaker tripping
  - (B) A line down and/or broken
  - (C) A substation outage
  - (D) Our power supplier (WIPCO) experiencing or causing the outage.

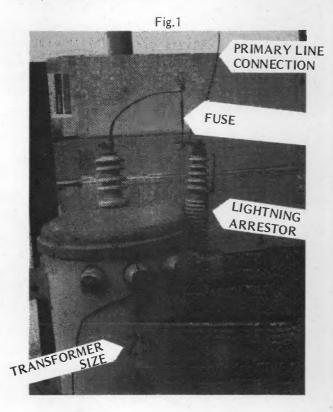
Actually you members can help us with only "B" above. If you see a line down, broken, sparking, etc., please notify us immediately and STAY AWAY FROM IT. We appreciate this information whenever we can get it.

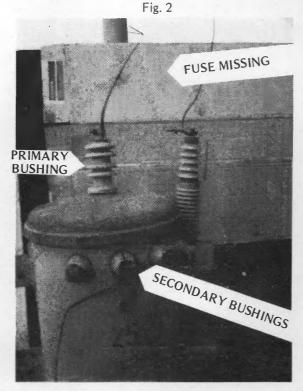
- 2. TRANSFORMER PROBLEMS—This could involve any combination of the following:
  - (A) The fuse being out of the transformer. Compare the pictures—note the location of the fuse and what it looks like (Fig. A). Also note that the "spring" type device attached to the primary bushing is almost in a vertical position when the fuse has blown or is missing (Fig. B)
  - (B) Primary connections may be loose or burnt in half. Note in the pictures that the "primary connection" is made on the top of the lightning arrester near the bottom part of the fuse. (Fig.A) The other end of this "primary connection wire" is attached to the top wire on the primary line that passes by your home. If this wire is loose or burnt in half, your electricity could be off.
  - (C) Secondary connections may be loose or burnt in half. The three secondary bushings on the side of the transformer is where the wires that go to the meter pole are connected. (Fig. B) If any of these wires are loose, your electricity should be off.
  - (D) Dead animals on the transformer or at the base of the pole. Raccoons, squirrels, opossum, birds, and sometimes even snakes, get on the transformer and cause the fuse to blow or sometimes even take the whole line out. If you see this sort of thing, it is a good indication that this is the cause of your outage.

The things we have mentioned above are ways of determining if your transformer is the cause of your outage. Of the above, the most frequent cause is the blown fuse in the transformer. This is probably the easiest for you, the member, to detect. If you see that the fuse is out of the transformer or one of the other items above is the cause, please tell us so when you report the outage, this information will be greatly appreciated. Check the

transformer only after you have checked with your neighbors, your meter pole breakers, and your fuses or breakers in your service panel.

We suggest that you might want to tear this page out to keep for future reference.





OCTOBER 1975





TOP: An FEC publication "Food and Energy," depicts the sun working its miracle. LOWER LEFT: Administrator David A. Hamil, of REA (left), lunches with Dean L. Searls, manager of Adams Electrical Co-Operative. LOWER RIGHT: Hamil and Secretary of Agriculture Earl Butz, right center, listen during the symposium.



### CLASS BACK IN THE CLASSICS

(Continued from page 13)

and spend all his time writing and doing illustrations.

His artistic talent and knack with mechanical things may have been inherited from his grandfather Guy P. Smith. Although his grandfather didn't know much about vintage cars, he was a part-time inventor who came very close to fame and fortune.

Grandfather Smith, a photoengraver with a St. Louis newspaper lived in Richmond Heights, Missouri. It was there, in 1912, he built the world's first 35mm camera—years before a similar version was introduced by foreign camera manufacturers.

At the time of his invention, the only film available was movie film. It was extremely grainy and any enlargements from it were extremely poor. Because of the problems with the film, Smith didn't patent the invention and put it on the shelf.

Grandfather Smith's invention was written up in the December, 1938 issue of *Popular Science*. The article posed the editorial question, "Who Invented the Miniature Camera?" and explained about Smith's invention.

Although Grandfather Smith never achieved any great acclaim, he did live a very interesting life. In his early years, he lived for a period of time on the Sioux Rosebud Indian Reservation. His father was a doctor there and he was the only white child on the reservation.

Growing older, Guy Smith took up oil painting and began his inventing. Most of his inventions took their shapes in wood, a material he was very skilled with.

Picture frames, mandolins that were inlaid with mother-of-pearl, were later followed by the first 35mm camera, which itself had a wooden body.

While the elder Smith was intrigued with inventing new things, his grandson at the present time seems content with restoring autos of the past. But the same restlessness the elder Smith had is apparent in the ever-searching work of his grandson.

And maybe someday, someone will be restoring one of his classics.

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# WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

### CO-OP COMMENTS

by Lester Aeilts

We must expand energy supplies, not just curtail usage. We Americans have been berated for using energy recklessly and wastefully. We see statistics in print which indicate that we represent only six percent of the



Lester Aeilts Manager

world's population but use one third of the energy consumed in the world each year.

I am certain the U.S. has nearly onehalf of the farm tractors, combines and bulldozers in the

world, which probably contributes dramatically to our energy consumption. I really don't think we want to go back to the old way of doing the jobs these machines are performing. I doubt whether horse drawn farm machinery is that much more efficient even though the consumption of petroleum would be dramatically reduced if this should happen. Land clearing and highway construction has been done with little or no use of petroleum products, but I don't think we want to go back to those "good old days."

Not only have the methods of field work been transformed, but the pitch fork and scoop shovel are nearly obsolete. The feed lots all across America has been mechanized requiring large amounts of energy. This is the only way the modern farmer can produce food competitively. Agricultural exports have not only fed the hungry of the world but have been a major factor in strengthening the U.S. economy.

Not many years ago the use of data showing the degree of our mechanization, was used to indicate America's success in harnessing technology and energy resources. Now the same information is being used to indicate how wasteful we are in regard to energy.

I believe that rather than feeling guilty over the high use of energy in this country and seeking ways to arbitrarily curb energy consumption, we should make vigorous efforts in finding ways of expanding our energy supplies to make possible still higher levels of use.

There is a direct relationship between the level of energy consumption and the level of unemployment. When energy consumption goes down, unemployment goes up. The resulting increased number of people who need to be cared for by those who continue working is an ever-increasing burden on the American taxpayer.

The increased use of energy has given the American farmer the opportunity to expand his operation while fewer people were interested in working on farms.

The relationship between the level of energy consumption and the level of economic activity is alterable in the long run. But the relationship is a gradually changing one. With our past record of achievement in mind, it seems reasonable to expect that any future outlook with regard to energy is far better than some would have us believe.

We have on the horizons new technological opportunities for restoring energy abundance over the long term. These include such prospects as the breeder reactor, fusion power, shale oil, coal gasification and solar energy.

Instead of feeling guilty about our affluence, we should make vigorous efforts to expand the supply of energy (including ways to use energy more efficiently). Instead of focusing primarily on arbitrarily curbing our use of energy, we should concentrate on

developing energy resources to increase standards of living both in the U.S. and abroad. This may require reappraisal of our environmental goals and the speed with which we seek to attain them. These goals are costly and need to be properly balanced with the need for an adequate energy supply which will support the attainment of our economic objectives.

In short, as a nation, we need to expand our efforts to assure adequate energy supplies rather than curtail use at the expense of our standard of living.



...for freedom, and all it means—won for our nation at great cost by people of vision and will.

It's a priceless heritage, the firm foundation on which to build new ventures, find new answers to old problems—new pathways into the future.

Our forefathers were thankful for some pretty basic things—food, shelter, and above all, freedom.

So are we.

## How to Determine the Problem When Your Lights Go Off

In last month's center section of the *Illinois Rural Electric News*, we discussed two things that caused your electricity to go off. The first we said was a Power Supply Outage and the second was Transformer Problems.

We explained how to determine if the fuse was out of the transformer. As we explained last month, if neither of the above caused the problem the next place to check is the meter loop breakers. With the following pictures we hope to explain where you can find these "meter pole breakers" if you don't already know.

#### 3. METER LOOP BREAKERS:

Meter loops come in three sizes depending on the size of service required. They are 50-amp, 100-amp and 200-amp.

A. 50-amp Meter Loops—This is the oldest size and style of loop. This loop has two 50-amp breakers in it. When electricity originally came to the rural area, this size of loop was usually put up. Many farms have this size yet today and by the same token many are overloaded. Figure A. shows what a 50-amp loop looks like and where the breakers may be found. The breakers in any size loop should always be in the UP position for you to have full and proper electrical service.

B. 100-amp Meter Loops—As farms increased in size and more and more could be done electrically, the 50-amp loop was outgrown. 100-amp loops were needed which have two 100-amp breakers in them. Figure B. shows what the 100-amp looks like and where the breakers are located. Like the 50-amp loop, the 100-amp breakers must be in the UP position to provide proper electrical service.

C. 200-amp Meter Loops—It was soon discovered that the 100-amp loop was too small also. The solution to the problem was to add

two more 100-amp breakers to the 100-amp loop giving it a 200-amp capacity. This type loop looks like the 100-amp loop except that it has four 100-amp breakers in it. Due to the large size wire that is used in a 200-amp loop a new style enclosure is being used. This newest type of 200-amp loop is shown in Figure C. This style 200-amp loop has only one 200-amp breaker. The enclosure is longer on this type which allows more room to make connections.

Some of you say "we don't have any of these. What do we do?" Some services have meter bases mounted on the house rather than on a pole, others have electric heat meters mounted on the house and some underground services don't have breakers. Since these services have no breakers under them you will have to check directly in your service panel.

Others of you say "we have a 400-amp disconnect. What do we do?" These 400-amp disconnects have no

overload protection device such as a breaker in them to trip. The only way this will be off is if someone turns them off.

Again we suggest you might want to save this page for future reference.

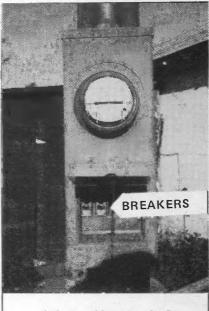


FIG. B-100 AMP LOOP

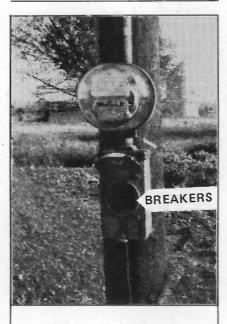


FIG. A-50 AMP LOOP

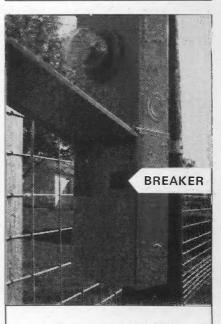
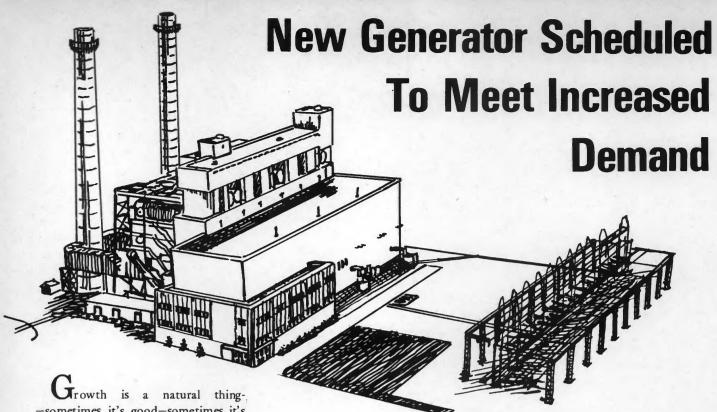


FIG. C-200 AMP LOOP



Growth is a natural thing--sometimes it's good-sometimes it's bad, but in the electric utility industry it is always necessary, necessary that is, if the supplier is to stay ahead of the consumer and his ever-increasing use of electricity.

Southern Illinois Power Cooperative (SIPC) located about eight miles south of Marion, presently supplies electric power generation for three electric distribution cooperatives in Southern Illinois. In taking steps to meet the projected growth in the service area of Eldorado-based Southeastern Illinois Electric Cooperative, Steeleville-based Egyptian Electric Cooperative and the Dongola-based Southern Illinois Electric Cooperative, SIPC is in the process of more than doubling its capacity.

Although the increased capacity is extremely necessary, it is also expensive on the other hand. The original plant, which was dedicated in August in 1965 by Governor Otto Kerner, cost \$12.5 million. SIPC financed the plant, Lake of Egypt and 460 miles of transmission line with a \$25.8 million Rural Electrification Administration (REA) loan.

In today's inflated monetary terms it is going to cost \$83 million to double the plant's capacity. Breaking down the total costs, \$66 million will go for the generating capacity and approximately \$17 million will be used to purchase and install required

pollution control equipment.

Funds for the needed expansion have come to SIPC through a loan from the REA and is the first power supply loan of its type in Illinois. The money comes from the Federal Finance Bank, which was set up several years ago to handle all government loans. The loan is guaranteed by the government and is issued at the bank's going interest rate.

Presently the three generators in service provide net generation capacity of 35 megawatts (Mw) each. The new fourth unit alone will have 160 Mw of net generating capacity, some 55 Mw more than the present facility. Together they will produce enough power to meet short term needs.

According to SIPC officials, 80 percent of the material for the plant are on order and are being fabricated. However, no actual construction will begin until the first of January. Plans are for the unit to begin commercial operation in June of 1978, supplying a needed total (projected for 1979) of nearly 750 million kilowatt-hours (kwh) to consumers in the three cooperative area.

The projected figure for 1979 can be readily compared to the present three cooperative consumption of 482 million kwh's a year, and the projected total consumption of 1031 million kwh by the year 1985.

These figures are from studies made by each of the cooperatives during the past year. The projected figures are growth that can be expected today for the next 10 years. It may be that these projections will be low, but it is very unlikely that they will be high.

Growth in the Egyptian Electric Cooperative service area is expected to climb more than 131 percent in the next 10 years. Canalization of the Kaskaskia River played a big part in boosting the growth figures. Industrial growth, bringing with it residential growth in the Kaskaskia basin has played an important factor in the Steeleville-based cooperative's plans for the future.

Along with this potential, the proposed coal gasification plant south of New Athens, will itself bring in satellite residential growth of a proportion that must be considered in any future power requirement planning.

Along with these factors, Egyptian officials are expecting a tremendous growth in the Carbondale-Murphysboro area, where it already serves over 2200 members.

Southern Illinois Electric Coopera-

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# WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

#### CO-OP COMMENTS

by Lester Aeilts

We hear a lot about energy these days. Nearly every newspaper has at least one article telling something about one of the kinds of energy—



Lester Aeilts Manager

usually telling how scarce it is and the price is going up. What is energy? It is the potential for doing work. It is used for pushing, pulling, lifting, cooling, heating, problem solving, etc.

Most of the energy we use today comes from the earth in the form of fossil fuels. We burn these fuels to heat our homes, power our cars, trucks, tractors and combines and make electricity. Is there enough fuel for our needs? Yes, but there is a growing gap between the amount of energy we use and the amount of new sources we develop each year. In other words our known sources are running low. We need a national determination to develop additional sources. This must come in three steps. The first step is to increase our efforts to develop new sources of energy for our long range needs. Step number two is to increase production of our known reserves of fossil fuels for today's needs. The third step is to conserve our present supply while step one and two are being done.

The new sources include nuclear power, harnessing natural steam, solar energy, coal gasification. Nuclear power, including the breeder reactor, is the chief promise for the future. Today's nuclear power provides over five percent of our electricity—in 20 years it may provide 50 percent. Nuclear plants have not been built as fast as we had hoped because of environ-

mental, site and cost problems.

In the meantime we have to make sure we have enough fuel for today's needs. All forms of domestic fuel must be developed and used sensibly. In order to get through the next year or two we need to conserve our present supply of energy, construct new pipelines and refineries to process known energy sources and invest and explore to develop new sources and new reserves.

Can we have the energy we need today and still protect the environment? A balance between energy production and a suitable environment must be found. We should set standards for environmental protection that can be met at reasonable costs. As individuals we must look again at offshore drilling, the Alaskan pipeline, nuclear power plants and strip mining. The question now is not just how can we get more power, but how can we get it with the least adverse effect on the environment.

The cost of producing all forms of energy is going up. This is caused by the installation of expensive pollution control equipment. Much of this equipment is not only expensive to install but more expensive to operate. In addition some of it is not doing the job it was intended to do and in some cases the pollution control equipment is causing more and different problems. Construction costs are rising

exceptionally fast. Some of these increases are caused by more strict safety regulations. This is particularly true in the mining industry and, to some extent, in all industries. Workmen's compensation insurance premiums just went up 43 percent because of a new law just passed, giving greater benefits. The increased research needed to develop new ways to produce energy for the future means spending now without immediate return. All of these factors and others are adding to fuel costs at an ever increasing rate. Who pays for it? The ultimate consumer, which is WIEC's case, is the WIEC member.

I want to once more express the appreciation of your board of directors, the WIEC employees, and myself, for your understanding and compassion while fuel costs and rates continue to climb. We have not forgotten that we are working for you. We are still striving to make every dollar count. Many of us start early and work late to adopt policies and negotiate contracts that we believe will ultimately provide you with the most adequate amount of power with greatest continuity of service at the lowest possible cost. Even that cost will be much higher than we would

God bless you all as we approach the holiday season and throughout the new year.

A Thoughtful Electric Gift-Always In Season and Always Appreciated

A personal gift means more if it meets a need or want, and if it is chosen with care.

- BE SURE it is made by a reputable manufacturer and sold by a trusted dealer. Check the guarantee and servicing availability to avoid future problems.
- NOTICE whether the appliance is sturdy and easy to clean. Examine the controls to be sure they are conveniently located and clearly marked.
- BE CERTAIN that complete maintenance instructions, warranty, etc., accompany the gift, and that the packaging is secure.

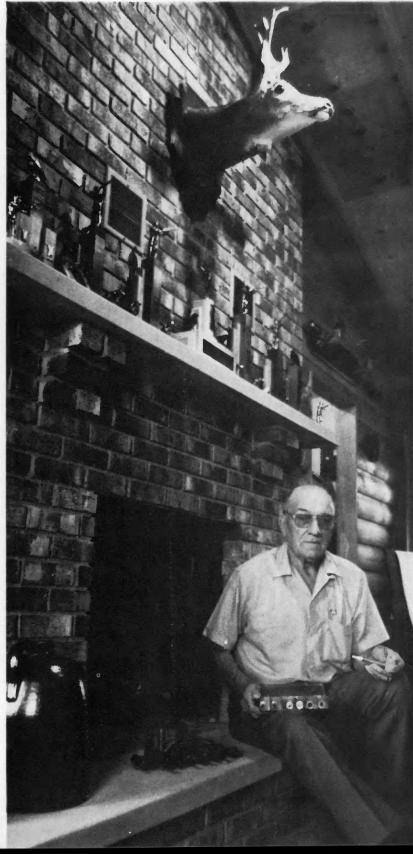




ON BEHALF OF THE DIRECTORS, MANAGE-MENT, AND STAFF OF YOUR ELECTRIC COOPERATIVE FAMILY, WE EXTEND TO YOU AND YOURS THE VERY BEST FOR A JOYFUL HOLIDAY SEASON AND A NEW YEAR FILLED WITH HAPPINESS.

### former national crow calling champion







The life a national crow calling champion leads while he is still in competition isn't all glory, Herb Dieckmann of Vandalia can attest to that.

"Mess up once and come back with only one lousy crow and you'll never hear the end of it," Dieckmann said, telling how that happened to him during the 25th annual crow shoot which was held in Southern Illinois. And how as the old saying goes, he had to "eat crow" because of it.

What was even worse, a photographer was present, the crow was placed on a meat platter, Dieckmann was given a bib and carving utensils and the whole humiliating scene was captured on film and reproduced in a number of newspapers.

Dieckmann still chuckles when he tells the story and swears it was an "isolated incident" and has over 30 trophies won in crow calling and shooting competition to prove it.

He won his first championship in 1954 and topped the field once again in 1964, placing well up in the running all the years between, with the exception of that one year.

A crow shooting and calling championship is held over a specified area of several counties. Hunters draw by lot, an area in which they are to hunt and are given an hour to get there, three hours to "call in" and shoot the crows and an hour to return to the tourney headquarters.

To win the 1954 championship, Dieckmann killed 27 crows in his

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