

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

(continued from page 6)

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

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

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

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

How did King land his job?

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

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

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

# NEW LOW PRICES!



Model No. 50P70



50' x 70' (13'3" Clearance)

Model No. 42P60



42' x 60' (13'3" Clearance)

Model No. 30P40



30' x 40' (9'3" Clearance)

Model No. 3816P60



54' x 60' (13'3" Clearance)

All building lengths expandable  
in 20' increments

## ON OUR FOUR MOST POPULAR BUILDINGS!

Four popular farm buildings in the sizes farmers want most. Pre-engineered to Wickes high quality standards, and reduced in price to pass along the big savings now possible with new advanced construction methods. Like all Wickes buildings, they're backed by our reputation for dependability and economy, and the low package prices include prompt erection on your land by skilled Wickes crews.

## NEW ADVANCED CONSTRUCTION METHODS.

Reduce labor costs at the job site.

**COLORS GALORE** Seven beautiful new farmstead siding colors. Seven contrasting trim colors!

**STRONGEST WARRANTY** 5-year warranty on all materials and workmanship. 30-year warranty on roof leaks due to corrosion.

# W Wickes Buildings

A Division of The Wickes Corporation

### Illinois

Galesburg, Box 548 (309) 342-3416  
Mendota, Box 9 (815) 539-9325  
Gilman, Box 336 (815) 265-7257  
Mt. Vernon, Box 1142 (618) 756-2347  
Taylorville, Box 117 (217) 824-9851

Call Collect or Mail Coupon Today

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_

County \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

IR 156



# WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

217-357-3125

CARTHAGE, ILL.

## Co-op Comments



Lester Aeilts  
Manager

Western Illinois Electrical Coop. has entered into a contract for the services of Central Area Data Processing Corporation (CADPC). This is a nonprofit organization, owned, operated and controlled by some 80 electric cooperatives using its services. CADPC was formed by 14 statewide organizations to provide data processing services, with its many benefits, to electric cooperatives like WIEC.

CADPC will be able to provide more economically a number of operations for WIEC and its members. Included will be the processing of monthly electric bills and furnishing operating information which will be very helpful to operations and engineering departments as well as accounting and billing.

The switch to data processing represents a major change for both WIEC members and its employees. The new system has been adopted only after your board has given serious consideration and attention to several alternatives.

The major change affecting you, the members, will be the change in the monthly billing procedure. It will not change anything until April, 1977. WIEC members who are receiving service under a program we call annual seasonal billing received a letter with their bill in December giving them information and directions for that type of bill. Those of you who read your meters and pay your bills each month will be getting a letter during March giving you more details. During January, February and March, we will be preparing information for the computer center and making preparation for the changeover. We will try to keep you informed as plans progress. I repeat—if you are presently reading your meter, figuring your bill, and sending it in each month, there will be no change until your April bill is due.

### Wanted!! Neighborhood Meter Readers

Would you like to spend about two or three days each month reading meters in your neighborhood? WIEC is looking for responsible members who would like to serve as "neighborhood meter readers."

About 17 members are needed. Each will read a route of approximately 200 electric meters. The readings will be taken within a three-day period each month. We expect the

average time required to read each route to be about 12 to 16 hours.

The normal three-day reading period will be between the 22nd and the 27th of each month depending upon weekends and holidays. No meters will be read on Sundays or holidays.

Members selected as neighborhood meter readers will be required to furnish their own transportation. You will be paid a moderate hourly wage and mileage for the use of your automobile. **Deadline for making application as a neighborhood meter reader is February 1, 1977.**

In selecting meter readers, consideration will be given to where the applicant lives. Ideally, he or she should be centrally located in reference to the route to be read. One of the factors that will be considered in the selection of the meter readers will be their close proximity to the respective meter reading routes.

The neighborhood meter reader would hopefully have knowledge of most of the people in the neighborhood thus having less trouble learning and adapting to the route.

We will accept applications from both men and women. Each applicant will be expected to have a relief person to call upon in the event of sickness or other unavoidable absence.

Meter readers whom we employ will be trained initially and route mapping will be explained during instructional sessions conducted in our office by experienced WIEC personnel.

It isn't a big job. You won't earn lots of money. But, we think you will find it interesting and enjoyable. This is an opportunity for responsible WIEC members to earn some extra money for a one to three day a month job.

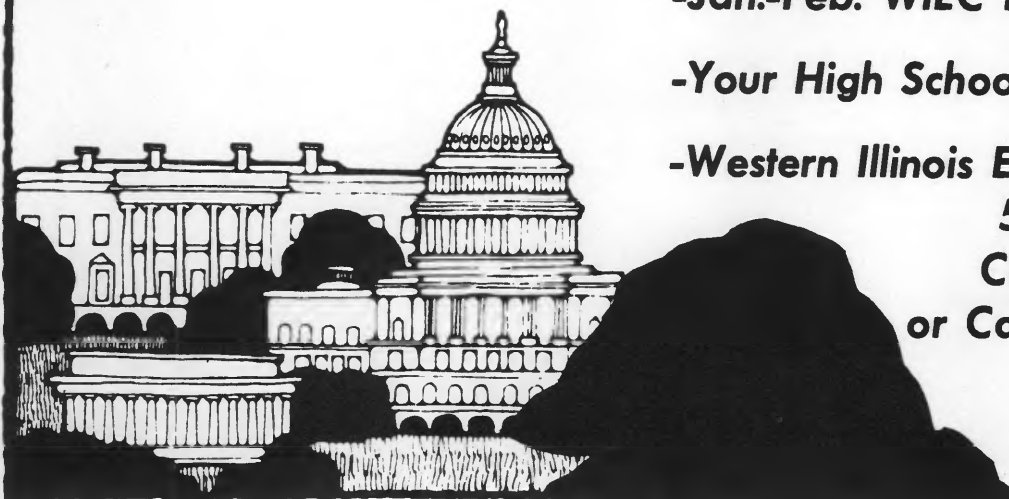
If you are interested in being considered for selection as a WIEC neighborhood meter reader, we invite you to immediately complete the coupon on page 17. You will receive a formal application by return mail.

Following the decision to go to computer billing, the Board of Directors concluded that the time was also right to review and evaluate the status of our present meter reading program. After thoroughly studying the situation and investigating various alternate methods, it was decided that the use of our own members to read meters had definite advantages and was the most practical means of acquiring meter readings within the time period compatible with the schedule for computer billing.

Although having each member read his own meter has worked well in the past, the changing situation calls for us to go to a different method at this time. There are definite advantages to having meters read by a neighborhood meter reader. Some are:

# Youth Tour 1977

**Attention  
Sophomores and Juniors  
Win a Free Trip to Washington, D.C.  
for Details See:**



**-Jan.-Feb. WIEC Newsletter or  
-Your High School Principal or  
-Western Illinois Electrical Co-op.  
524 N. Madison  
Carthage, Illinois  
or Call 217/357-3125**

1. Insures that the meter will be read on approximately the same day each month, thus avoiding higher bills in "long" months.
2. Eliminates embarrassment on part of the member for forgetting to read the meter and pay bill and subsequently being sent a reminder notice.
3. Precludes estimating an electric bill when a meter reading has not been received. Meter readers will relieve the member of the chore of reading his own meter and all the inconveniences associated with it.
4. Meter readers will enable the cooperative to maintain closer contact with changes that have occurred.
5. The newcomer to our system will not have to make the adjustment to reading his own meter.
6. Operations will run more smoothly and efficiently in the WIEC Billing Department with readings coming in on a regular schedule.
7. There will be more accuracy realized in the billing operation and questions concerning usage can be answered more effectively because of having meter readings on a regular schedule. (This will be true for the 7-10 percent of our members who have not been so regular or accurate in their meter reading as the other members have been.)

We think you'll like your neighborhood meter reader. He or she will probably be a person you already know. If

not, we know you'll soon become acquainted.

Next month we will give you more details about the neighborhood meter reader program. And again, if you are interested in being a WIEC neighborhood meter reader, be sure to contact WIEC immediately. Call (217) 357-3125 or write P. O. Box 338, Carthage, Illinois 62321.

TO: Western Illinois Electrical Coop.  
P. O. Box 338  
Carthage, Illinois 62321

I am interested in being a WIEC Neighborhood Meter Reader. Please send me a job application form. I am a member of Western Illinois Electrical Coop.

NAME \_\_\_\_\_

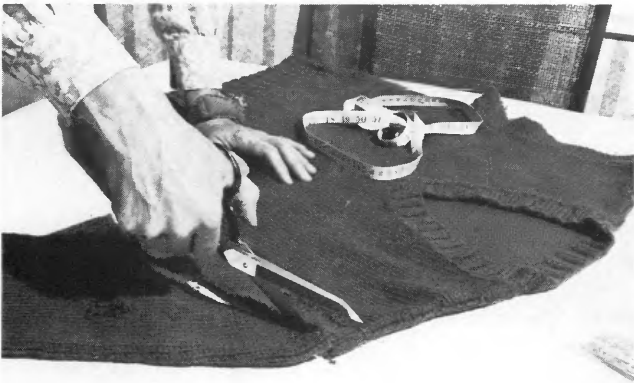
ADDRESS \_\_\_\_\_  
\_\_\_\_\_

PHONE \_\_\_\_\_

..... 'Recreate



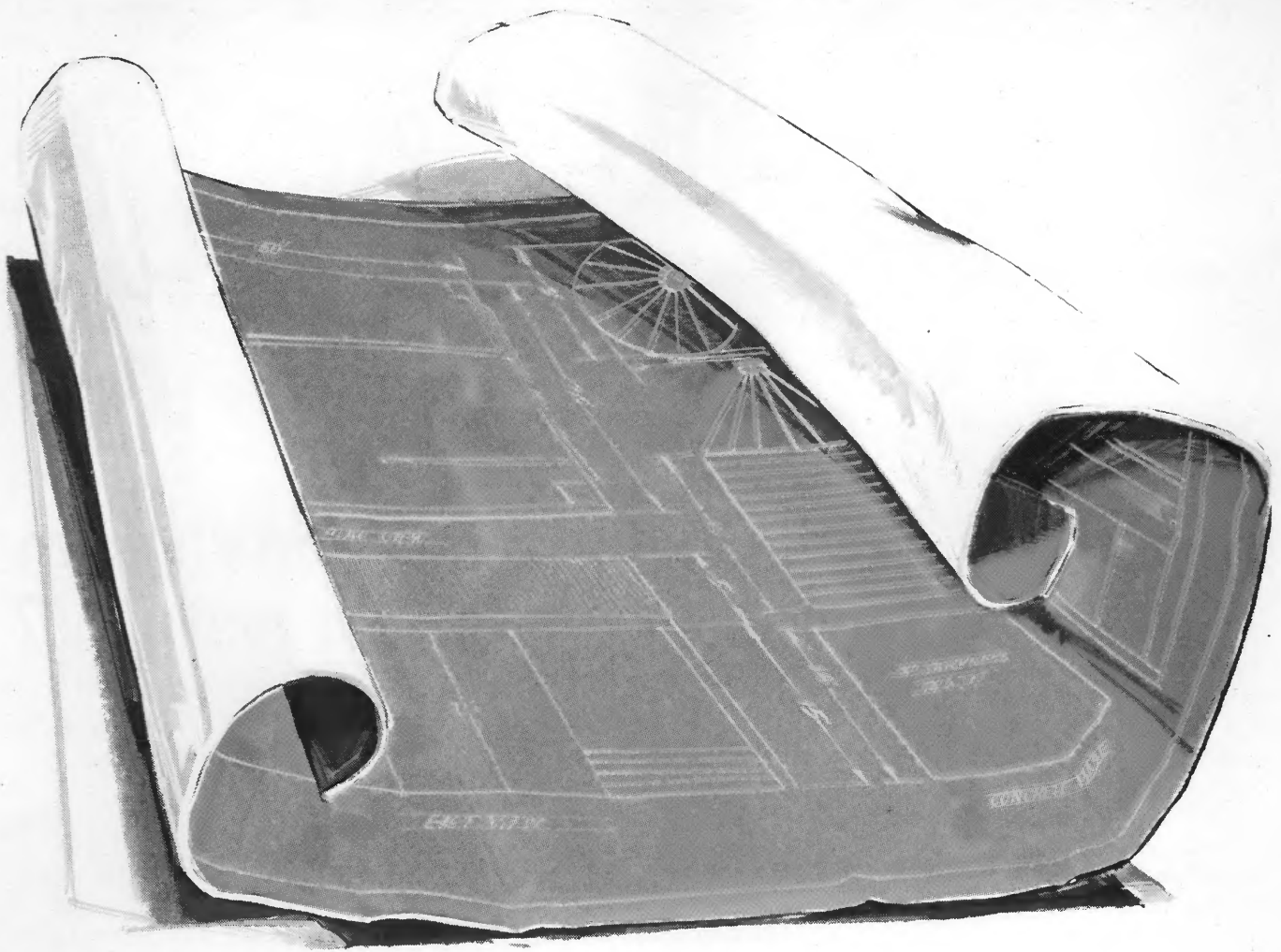
*If jeans become too short, but the fabric is good, create a fashionable jeans skirt. Open inner leg seams, lay front and back flat, measure length of wearer, cut off bottom of pant legs and use to fill in the triangles created when you lay the garment flat. With some topstitching, the skirt is ready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



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







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

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





# WIEC News

WESTERN ILLINOIS ELECTRICAL COOP.

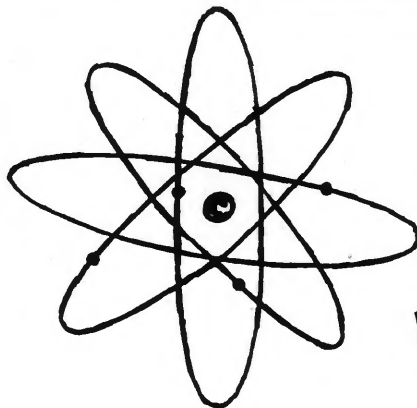
217-357-3125

CARTHAGE, ILL.

## Across the Manager's Desk



Lester Aeilts  
Manager



## Nuclear Power: What and Why?

Electric rates are going up!!! That is correct. We are trying to keep them from going up as fast as other forms of energy.

Why are electric rates going up?

The number one reason electric rates are going up is the cost of fuel. Most of you, at least those of you who are farming, know that your fuel costs are rising, so it probably is no surprise to you that fuel for generating electricity is rising too. Coal is the major fuel for generating electricity. Coal prices have risen for the same reasons as other fuels—labor costs, increased provisions for the safety of the workers, increased cost of capital, etc. Coal costs have one other ingredient that some other fuels do not have.

Coal in many areas of the United States has a high sulfur content. In order to meet environmental standards required by E.P.A., large quantities of coal must be shipped from the western states of Wyoming and Montana. The cost of this transportation is about two and a half times the cost of the coal. This increased cost is directly attributable to E.P.A. clean air requirements.

We all like clean air, but some of us wonder if we can afford it.

The alternative to burning western coal is to install scrubbers. Many utilities find it more economical to pay considerably more for Western low-sulfur coal than to install

Electricity is our most versatile form of energy. Versatile because it has so many uses. And versatile because it can be produced so many ways. Most of our electricity today is produced by burning fossil fuels. . .such as coal, oil and gas. These

expensive unreliable scrubbers that greatly limit plant reliability and cause a great many operating problems.

Another cost that is beginning to have a major effect on the price of electricity is the interest on the money used to construct generating plants, substations and transmission lines. The cost of building these facilities is much greater, the interest on the money is much higher, and, in addition to that, it takes much longer to get the plants in production. Why is this true? Primarily this is true because of the great number of permits required by new laws and regulations. Here is one example: In Europe they can put a nuclear plant on line in four years—in this country it takes ten years. We are told this is mainly caused by our much stricter regulations. It is plain to see that interest on 1 1/2 to 2 billion dollars for an extra six years will add significantly to the cost of the electricity sold from that plant.

I will try to cover other reasons for electric rates going up in future columns.

are combustible fuels. When they are burned in an electric power plant, they produce heat which boils water to steam, which drives a turbine-generator, which produces electricity.

But, to varying degrees, the supply, price and environmental effect of these fuels are making them less attractive for generating electricity.

There is another fuel source for the generation of electricity. . .one that's available with present-day technology. . .and, unlike the fossil fuels, one that has few alternative uses. It's uranium. . .a fission fuel.

When it comes to generating electricity, uranium (specifically uranium-235) also produces heat to make steam to generate electricity. What makes nuclear energy different is the way that heat is produced.

A nuclear power plant relies on fissioning uranium-235 to produce the necessary heat energy.

Since nothing is burned to produce this heat, no smoke or combustion products are released to the environment. Thus, one clean form of energy is used to generate another clean form of energy.

Despite such advantages, nuclear power is controversial to some people. Critics contend that its risks outweigh its advantages. For some perspective on these concerns, the following sections address the key considerations

associated with nuclear power generation.

#### Safety

The most comprehensive study of nuclear power plant safety was sponsored by the Nuclear Regulatory Commission under the direction of Dr. Norman Rasmussen of the Massachusetts Institute of Technology. Assuming 100 operating reactors, the study placed the chance of a nuclear accident involving 1,000 fatalities in the same class as that of a meteor striking a U.S. population center, causing the same number of deaths.

The basis for nuclear power safety lies in its engineered safeguards and the design philosophy with which they are applied. After a nuclear plant is designed to operate properly, its designers assume the failure of various safety-related equipment. Then, they design auxiliary systems to keep the plant safe despite such failures. Then, some of these auxiliary systems themselves are assumed to fail. And additional backup systems are provided which will still keep the plant safe.

The core of a nuclear reactor consists of several hundred fuel bundles. These bundles are made up of 12-foot metal tubes each containing a stack of hard ceramic-like pellets made of uranium oxide. The arrangement and dilution of this fuel is exactly opposite from that needed to produce a nuclear explosion. Therefore, a nuclear power plant can't blow up like a bomb.

Since the fuel pellets tend to retain most radioactive byproducts of the fission process, they form the first in a series of barriers to prevent the uncontrolled release of radioactive materials from the plant. The second barrier is the sealed metal tubes which enclose the pellets. These tubes which make up the fuel bundles are inside a third barrier, a 6-to 8-inch thick steel reactor vessel weighing several hundred tons. Surrounding this in the multiple-barrier containment concept is a steel shell and concrete containment structure at least three feet thick.

The water in which the fuel core is immersed serves two purposes. First, it is heated by the fission process to form steam to drive the turbine.

Second, it makes the fission process possible by acting as a "braking agent"

to slow down neutrons. That's because slow-moving neutrons make the U-235 nucleus fission more readily.

In the highly unlikely event that all water were lost, fission would cease. A complete loss of water from the reactor vessel, however, would allow a buildup of residual heat in the reactor that could damage or melt the core. To prevent this, there are standby core cooling systems which would immediately and automatically reflow the reactor vessel and simultaneously spray the core from the top with thousands of gallons of water per minute.

#### Radiation

With or without nuclear power plants, radiation is around us all the time. It's as much a part of our everyday environment as the light and heat of the sun's rays. Scientists call this "background radiation," and measure it in "millirems." This natural radiation exposes you to an average of about 140 millirems annually. And radiation from man-made sources (primarily medical X-rays) adds a yearly average of 60 millirems more.

National and international scientific organizations have set a limit of 500 millirems per year which any member of the public may receive from a nuclear plant. In practice, nuclear plants release far less than that amount.

And even by the year 2000, radiation from the entire U.S. nuclear power industry will account for less than one percent of natural background levels.

#### Reprocessing Wastes

Every year or so, a nuclear plant must be shut down and some of the depleted fuel bundles in its core replaced with new "reload" fuel. But the bulk of the used fuel isn't wasted at all. Up to 97 percent of it can be recovered at a reprocessing plant and recycled again and again in nuclear plant reload fuel. (That's one big reason for a nuclear power plant's lower fuel cost.)

So, the volume of waste byproducts (highly radioactive waste left over after all reusable material is removed from the depleted reactor fuel) is small. Although this waste is in liquid form following reprocessing, it is subsequently reduced to a dry, solid form. In this state, it is nonexplosive,

noncorrosive, nonvolatile and insoluble.

A 1,000,000 kilowatt nuclear plant would produce about 100 cubic feet of this solidified waste annually...about the same volume as two telephone booths. Waste is sealed in specially-designed canisters and placed in a carefully monitored federal repository.

#### Heat

Almost all power plants, fossil or nuclear, draw water from a nearby lake, river or ocean to cool the turbine condenser. This external water is isolated from, and never mixes with, the water used to generate steam.

If discharged directly, cooling water from a nuclear power plant generally is about 15 to 25 degrees warmer when it first leaves the plant than when it entered. This water cools rapidly as it is diffused into a river or ocean so that normally it would not raise the immediately surrounding water temperature more than two to five degrees.

#### Where do we go from here?

Industry experience and cost studies continue to confirm that nuclear plants produce electricity more cheaply because their fuel costs are lower than for fossil fueled plants...an average of about 45 percent lower in 1975. Although specific fuel costs vary with locality and the availability of fossil fuels, savings from the use of U.S. nuclear generating plants in 1975 totalled about \$2 billion.

These nuclear fuel savings more than offset the somewhat higher capital cost of constructing a nuclear plant, and can help hold the line on the cost of electricity to the consumer.

And the overall performance of today's operating nuclear plants has been good. Both industry and governmental reports show that nuclear plants equal or exceed the reliability levels of their fossil fueled counterparts.

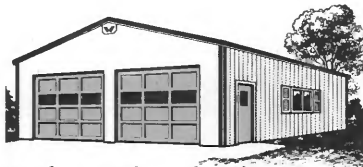
Nuclear power certainly is not a peril. Nor is it a panacea. For nuclear power alone will not solve all our energy needs. But for its part, it can provide a safe, clean, dependable source of electricity if allowed to fulfill its promise.

You  
Pick  
the Space.

We'll Build the Place.

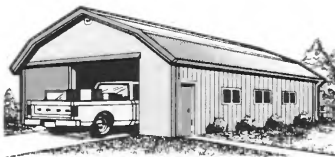
**Garages, Workshops,  
Utility Storage Buildings.**

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



A low-cost Wickes utility building can solve the problem for you—right now, and for years to come. These handsome, maintenance-free structures are available in the size, model or plan you need for a spacious garage, storage place or workshop, or all three in one if you want. In beautiful color steel or aluminum—your choice.

Protect the things you've worked so hard to acquire. With a good-looking, professionally-engineered Wickes utility building. You'll wonder why you waited so long.



**Wickes Buildings**  
A Division of The Wickes Corporation

**ILLINOIS**

Box 548, Galesburg (309) 342-3416  
Box 336, Gilman (815) 265-7257  
Box 9, Mendota (815) 539-9325  
Box 1142, Mt. Vernon (618) 756-2347  
Box 117, Taylorville (217) 824-9851

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Town \_\_\_\_\_  
State \_\_\_\_\_  
County \_\_\_\_\_  
Tel: \_\_\_\_\_

Call collect or mail coupon

IR258

**Solar Grain  
Drying Conference**

*(continued from page 5)*

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

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

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

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



ILLINOIS RURAL ELECTRIC NEWS



*Light  
aircraft repair  
is his  
enjoyable work*

*(Continued from page 5)*

have anybody who can do recovers on the older fabric-covered planes, and I love the heck out of that kind of work. I kind of got into it as a fun hobby," he says," adding, "I really enjoy doing the very kind of work they don't want to be bothered with."

Max is expanding his operation slowly, working on the hangar or airfield, as his work load permits or requires. "At first I kept all the planes I was working on in the hangar, but there got to be too many, so I put a couple of tiedowns outside. When I get more airplanes than I have space for, I go out and put in another tiedown.

"I've got a set of plans for installing runway lights," he says, "and I hope to do that soon, and I'll have a fuel setup in the very near future, too."

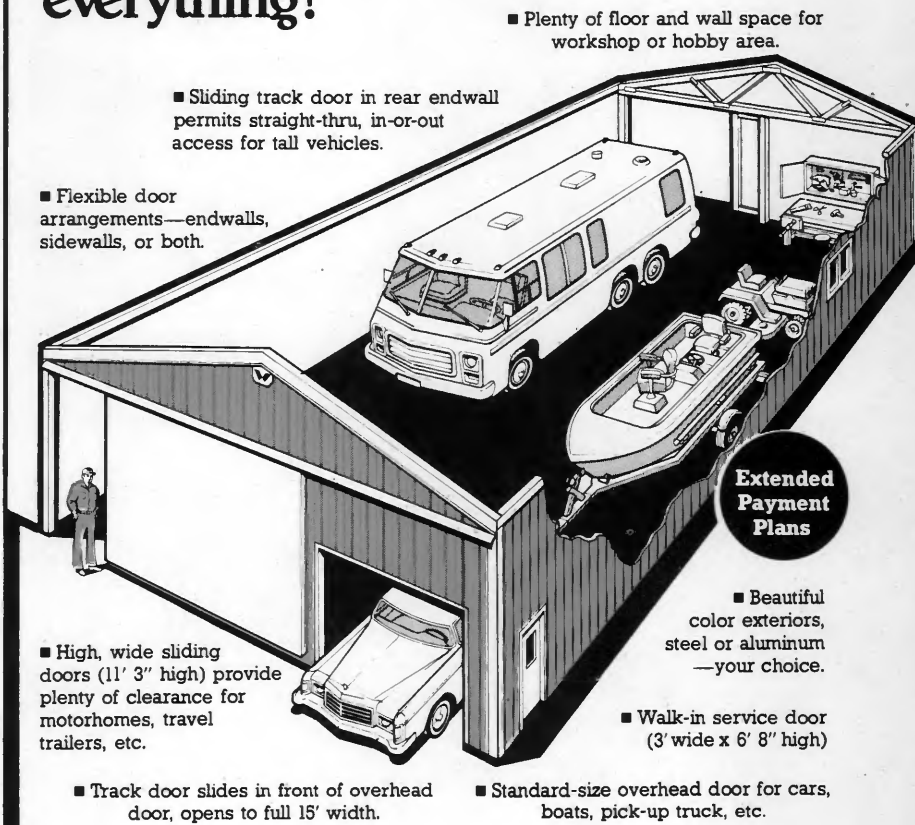
Max notes that interest in aviation seems to be picking up in Brown County. "As far as I can tell, there are about 155 light plane owners in Brown County and the adjoining counties," he says, "and that number's increasing every day. There's an awful lot of interest in aviation around here, and I think my shop has helped spark it because it exposes many local people to aviation. Many of them had never really become interested before because they had never thought about it.

"There are a lot of people who get almost a fever when they get around airplanes," he says "and that seems to be what's happening here. There's even talk about a flying club, where people will be able to go in together to buy an airplane and take flight instruction."

It looks as though grass roots aviation is taking off in Brown County.

# OUR Sportsman

**The building that has everything for the Man who has everything!**



■ Plenty of floor and wall space for workshop or hobby area.

■ Sliding track door in rear endwall permits straight-thru, in-or-out access for tall vehicles.

■ Flexible door arrangements—endwalls, sidewalls, or both.

■ High, wide sliding doors (11' 3" high) provide plenty of clearance for motorhomes, travel trailers, etc.

■ Track door slides in front of overhead door, opens to full 15' width.

■ Standard-size overhead door for cars, boats, pick-up truck, etc.

**Extended Payment Plans**

■ Beautiful color exteriors, steel or aluminum—your choice.

■ Walk-in service door (3' wide x 6' 8" high)



**see the Man in the Red Car!**

Find out how little it costs to have this beautiful, professionally engineered building erected on your land by our own skilled crews. Take your time paying for it too; no installment payments 'til January, 1978.

**Wickes Buildings**  
A Division of The Wickes Corporation

**ILLINOIS**  
Box 548, Galesburg (309) 342-3416  
Box 9, Mendota (815) 539-9325  
Box 336, Gilman (815) 265-7257  
Box 1142, Mt. Vernon (618) 756-2347  
Box 117, Taylorville (217) 824-9851

Mall coupon or call collect

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Town \_\_\_\_\_ County \_\_\_\_\_  
State \_\_\_\_\_ Phone \_\_\_\_\_

1R9



interes



# 6th annual meeting

# lie cooks up ing program

*Clockwise from below: Voting delegates listen as a resolution is read prior to the vote. Dr. Thomas Holzberlein, left, professor of physics at Principia College in Elsau talks with Charles Witt, manager of M.J.M. Electric Cooperative; Dr. Holzberlein discussed energy conservation and sources of energy for the future. Wayne Laning, director of Adams Electrical Co-Operative, talks with Robert R. Wagner, Illinois District 5 Director, National Rural Utilities Cooperative Finance Corporation. Joseph S. Spivey, left, vice president of the Illinois Coal Operators Association, and Stanley E. Greathouse, Illinois director, NRECA, visit with David A. Hamil, administrator, Rural Electrification Administration.*







## Old barn

For a long time, Gary and Diane Richards were bothered by the fact that they had no particular use for an old barn on their 100-acre farm near Casey in Clark County. They thought of several possible uses for the structure, but it was a while before they came up with just the right idea.

"There were several old buildings on the place that we had torn down instead of fixing, and it really bothered me to let it go too, but it was a liability, just standing there," he says.

"For a long time we thought of converting it into a house," the former junior high teacher relates, "and it would have made a great house, too, but that wouldn't have made us any money."

Years ago, he says, he had thought of turning it into a teen center, "When I was young and crazy," he laughs, but

# is no longer a liability

*Above: Old farm equipment lines the walls of the Richards Farm Restaurant, and placemats carry a pictorial minihistory of barns in America. Richards notes that he spent countless hours searching for the artifacts for the walls, and that old siding from four barns went into the interior walls of the restaurant. At right: Gary and Diane go over the morning's receipts.*

