

# REN

Illinois Rural Electric News  
April 1989

**How does a  
heat pump work?**  
See page 10

**You may qualify for  
state energy grant**

See page 20

# What's Better than the Best Gas Furnace?

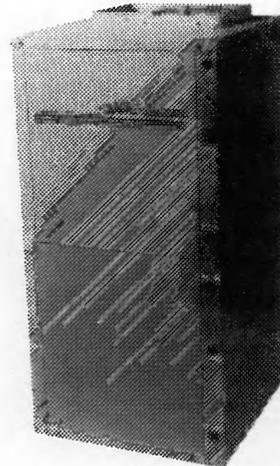
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# Both parties criticize agriculture budget

House members waged a blistering bipartisan attack on President Bush's budget for agriculture, the Rural Electrification Administration (REA) and rural development spending proposals as congressional budget hearings got under way.

Even Clayton Yeutter, Bush's well-regarded Agriculture Secretary, got swatted when he pushed former President Reagan's REA line at a House Budget Committee hearing. REA lends money to the nation's 1,000 nonprofit rural electric cooperatives. Yeutter asserted that most co-ops can afford private financing and the higher interest rates they would pay to non-government lenders would "add only a few cents per month" to consumer bills—a contention Rep. Harold Rogers (R-Ky.) did not let pass.

"Surely you understand that there are some co-ops that serve purely rural areas," Rogers demanded of Yeutter, adding that such systems would have a difficult time securing private financing at reasonable interest rates.

That exchange came one day after leaders of the Rural Development, Agriculture and Related Agencies Subcommittee of the House Agriculture Committee subjected the Bush Administration's budget proposal to critical scrutiny.

"I don't expect you to defend it because I don't think you could," panel Chairman Rep. Jamie Whitten (D-Miss.) said after Agriculture Department budget officer Stephen Dewhurst outlined the USDA spending plan.

Rep. Virginia Smith (R-Neb.), the panel's ranking

minority member, echoed Whitten: "I won't ask you to justify this. But if you have any explanations, we'd be glad to hear them."

Both took issue with presidential suggestions that call for cuts totaling more than \$4.7 billion in agriculture spending.

Bush's budget also drew fire for resurrecting plans to phase out REA, replacing its lending programs with partial government guarantees. Such a scheme was floated repeatedly by President Reagan, but Congress never found any merit in it.

Whitten's and Smith's comments came a few days after the Democratic and Republican leaders of the House Agriculture Committee warned their Budget Committee colleagues against adopting Bush's agriculture cuts, especially in rural economic development programs.

"This is a sector that continues in need of assistance," wrote Rep. Kika de la Garza (D-Tex.), Agriculture Committee chairman, and Rep. Edward Madigan (R-Ill.), the panel's ranking minority member, in a letter approved by the full committee. "The Committee has been unable to provide the programs to address the rural economy's continuing poor performance, compared to the rest of the country, because of budget constraints. Recommendations to reduce direct Rural Electrification Administration loans by \$1.9 billion and Farmers Home Administration rural development assistance by \$400 million, over 40 percent, are unwarranted."

—Rural Electric News Service

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## REN

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**Cover: Spring is a good time to do some caulking or any of a number of other fix-up tasks around your home. If you are planning weatherization or adding new equipment, you should check with your electric cooperative to see if you are eligible for a grant from the Illinois Department of Energy and Natural Resources. The grants are for electric cooperative members only. They can be used for a wide range of home energy-related uses. See article on pages 20 and 21.**

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# Washington benefit Swingsations' goal

## Highly rated Mt. Zion swing choir plans to join others helping homeless children

Washington, D.C., which has seen more than its fair share of "song and dance routines," will see yet another—a real one—late this month, and some 50 talented Illinois high school youths will have a part in the festivities.

The Mt. Zion High School Swingsations, along with several other swing choirs, will participate in "America Sings," a benefit for the homeless children of America. They will leave St. Louis on April 27, and will perform on the grounds of the Washington Monument on the 29th. Mt. Zion High School, near Decatur, has a number of students whose parents are members of Shelby Electric Cooperative, and some of those students are members of the Swingsations.

Groups from all over the country are scheduled to perform during a day-long swing-fest, and the entire combined group—perhaps thousands of youngsters—will do a routine at the end of the day's activities. The groups have been provided with a video tape to enable them to work in concert with all the others.

Although the Swingsations are an accomplished group, with a roomful of medals, ribbons and man-sized trophies, Mrs. Roberta Vest notes that "America Sings" is designed to raise money for homeless kids and is not a competition. "Basically," she says, "we're involved because of what the event stands for—raising money for homeless children. We're glad to have an opportunity to help others."

John Jacobson, organizer of the Washington festival, spells out the non-competitive nature of "America Sings," too. "If you're a group of nine kids in dark slacks and white shirts, you are welcome. If you have 200 in sequined

gowns and top hats, you are welcome. Every person who participates is a volunteer. All royalties, television profits, contributions, fees and so on are being donated to an already established organization to help provide a home for children who don't have one," he emphasizes.

Interestingly, the program is not designed just for long-established school groups, but anyone who wants to pitch in and help. Elementary and junior high groups are well-represented in the festivities, and many groups have started up on their own solely to go to Washington and take part.

The Swingsations, by the way, are a fairly old group, having been formed in 1976, when Mrs. Vest arrived at Mt. Zion High School. "There was a group before that," she says, "but it wasn't set up like this one is now. When I started, we had about 30 kids in the group."

In addition to providing funding for travel, food and lodging, the group is responsible for a \$20 per person donation to help the homeless, and each will receive a T-shirt to commemorate their participation. In all, they needed to raise some \$18,000 to make the trip a reality. They have been increasingly busy lately, working hard to raise money, for the trip and also for an educational tour of Washington.

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**Niki Haskett, left foreground, and Heather Pistorius, center, flank the trophy the Swingsations brought back from their latest competition. Director Roberta Vest is at right front, while the rest of the Swingsations are in the background. Niki's and Heather's parents are members of Shelby Electric Cooperative.**



# **BRIEFLY**

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News items of interest to members of Illinois electric cooperatives

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## **Manager talks to educators about satellite dish program**

Tim Reeves, manager of Southern Illinois Electric Cooperative, Dongola, was a featured speaker in a statewide education workshop February 28 in Springfield. Speaking to educators during a meeting on "Technological Strategies for Rural and Small Schools," Reeves participated in a workshop session entitled "Creative Funding for Instructional Techniques." He told the educators how SIEC had given 11 satellite dishes to schools in his cooperative's five-county service area, and why. "We knew that our area educators were doing the best they could with what was available," he said, "and we knew that more needed to be done. We also knew that money was short, so we decided to help. We got a package deal with our supplier, Hamilton County Telephone Co-Op, to keep the costs down and bought and installed them for about our cost. We've used satellite training ourselves for about three years, so we know it has some good possibilities." A copy of the "Learning from the Sky" article in the February 1989 issue of the Illinois Rural Electric News was distributed to workshop participants. Other presenters were Andrea Brown, assistant regional superintendent for Alexander, Johnson, Massac, Pulaski and Union counties; Bill Rich, vice president for academic affairs, Lake Land College, Mattoon, and Mark Myers, also of Lake Land College.

## **Bush gets consumer health, safety agenda**

A coalition of about two dozen consumer, health and insurance groups has delivered President Bush and other government leaders proposals for tougher health and safety laws to protect Americans. The Coalition for Consumer Health and Safety made specific policy recommendations in six product-related areas where accidents result in hundreds of thousands of deaths and millions of injuries each year. Among the policy recommendations, the coalition called for tougher drunken driving laws; improvements in the operation of the Consumer Product Safety Commission; federal legislation on indoor air pollution; a mandatory inspection of fish and shellfish; smoking restrictions in public facilities, and limitations on alcohol advertising.

## **USDA to map genes of crops**

The Agricultural Research Service plans to launch a massive program to map the genes of key food and forest crops, a step officials say would strengthen the U.S. position as a leader in agriculture. Goals of the research will be to identify the genes present in the crops and to determine what they do and how they function. The information could shorten the time needed to develop new varieties of crops with resistance to diseases or insects or to meet other demands. The research service has been assigned responsibility for providing federal leadership in developing the project, which will involve federal, state and university research.

## **Ag exports up last year**

U.S. agricultural exports rose 26 percent to \$35.2 billion for fiscal year 1988, the Agriculture Department reports. The export total for the fiscal year ended September 30 was up more than \$7 billion from 1987's \$27.87 billion figure, USDA says. Wheat accounted for two-thirds of the volume increase, and corn, feeds and vegetable oils also increased.

## **Farmers expected to spend more**

Farmers are expected to notch sizable increases in their use of seed, fertilizers and pesticides this spring—and pay higher costs for them, the Agriculture Department reports. The increased use would reflect government encouragement of farmers to grow more grain to rebuild U.S. supplies after last year's drought. Up to 25 million more acres are expected to go into production. At the end of last year, the Agriculture Department estimated farmers will spend between \$115 billion and \$118 billion on crop inputs this year, which would be 4 percent to 6 percent more than 1988.

## **Median family income hits \$30,850**

The nation's median family income in 1987 reached \$30,850, rising 1 percent from 1986 after inflation and narrowly exceeding the previous high mark of 1973, the Census Bureau reports. At the same time, however, the increase has concentrated among white families while the medians for black and Hispanic families remained stagnant at \$18,100 and \$20,310, respectively. Moreover, the annual survey found median household income—that of single earners as well as unrelated persons in a household—was \$25,900, essentially unchanged from 1986.

## **Weather forecasters ask for money**

A panel of experts, arguing U.S. metrological programs are "decaying" even as concern over climate changes increases, has urged President Bush to provide \$170 million more for weather monitoring. The panel of private experts, convened by the Climate Institute, said recent federal funding cutbacks threaten efforts to collect vital climate data needed to make effective policies in addressing global warming and depletion of the earth's protective ozone layer. The panel said that because of budget cutbacks for metrological programs, the system for predicting climate changes is deteriorating.

## **Supreme Court refuses to hear pollution case**

The Supreme Court has let stand a ruling that the Environmental Protection Agency could not be forced by six Northeastern states to act on the problem of interstate air pollution. The court refused to hear the case brought by Maine, Pennsylvania, Connecticut, Vermont, New Hampshire and New Jersey seeking review of a ruling by the U.S. Court of Appeal for the District of Columbia. The case began when Pennsylvania filed a petition with the EPA in December 1980 seeking a ruling that pollution from Ohio and West Virginia was keeping the state from meeting air pollution standards. The other Northeastern states brought similar rulings against other Midwestern states, including Illinois, Indiana, Michigan, Kentucky and Tennessee. The EPA eventually denied the petitions and the states brought suit in federal court, but the courts agreed with the EPA's determination.

## **Emission controls create other problems**

Sometimes you just can't win: Scientists now speculate that the same emission controls that help reduce acid rain also keep acid-neutralizing compounds out of the air. That's the only explanation they can come up with, anyway, for a persistently high acidity level in New England streams. Twenty-five years of data collection on a New Hampshire stream shows that acid rain deposits peaked in the early 1970s and have been declining ever since, according to a recent issue of Environmental Science and Technology. But, researchers report, the stream remains acidic. Records of those years also trace a decrease in the levels of alkaline compounds, which neutralize acid. Although the reason for the drop isn't clear, the scientists reporting the study suspect acid rain controls of also filtering out the alkaline.

## **California rep to introduce anti-REA bill**

Rep. Jim Bates (D-Calif.) was happy to carry President Reagan's water with an "REA reform bill," and he's pulling the same duty for President Bush. Bates announced he'll introduce the bill again this year, claiming that phasing out the Rural Electrification Administration (REA) lending programs would slash the budget by \$5 billion a year. REA lends money to the nation's 1,000 nonprofit, consumer-owned electric cooperatives. Bates' argument overlooks the point NRECA executive vice president Bob Bergland made recently: Last year, rural electric cooperatives paid more money back to the federal government than they borrowed, to the tune of \$4 billion.

## **People prefer small towns**

A lot of people would rather live in a small town than anywhere else, a new survey on residential preference reveals. When asked where they would most like to live, 31 percent of the survey's participants said they would prefer a small town, while 26 percent would opt for farm life, 23 percent would live in the suburbs and 19 percent prefer the big city. The Gallup Organization poll differs slightly from one taken in 1972 that showed 32 percent in favor of small-town living, 31 percent for the suburbs, 23 percent for farms and just 13 percent for the big city. Surveys conducted during the 1970s typically showed a preference for rural and small-town living because of the perceived better quality of life there.

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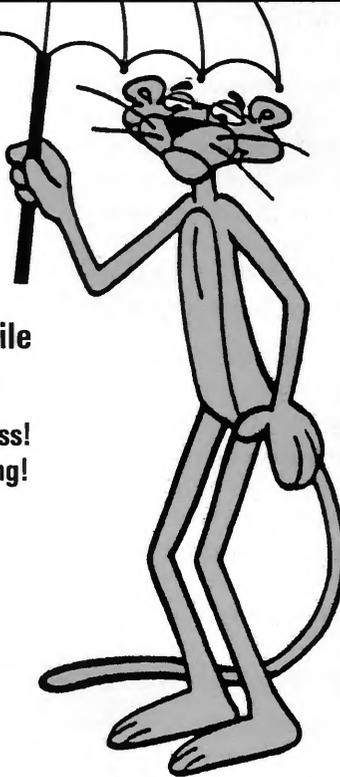
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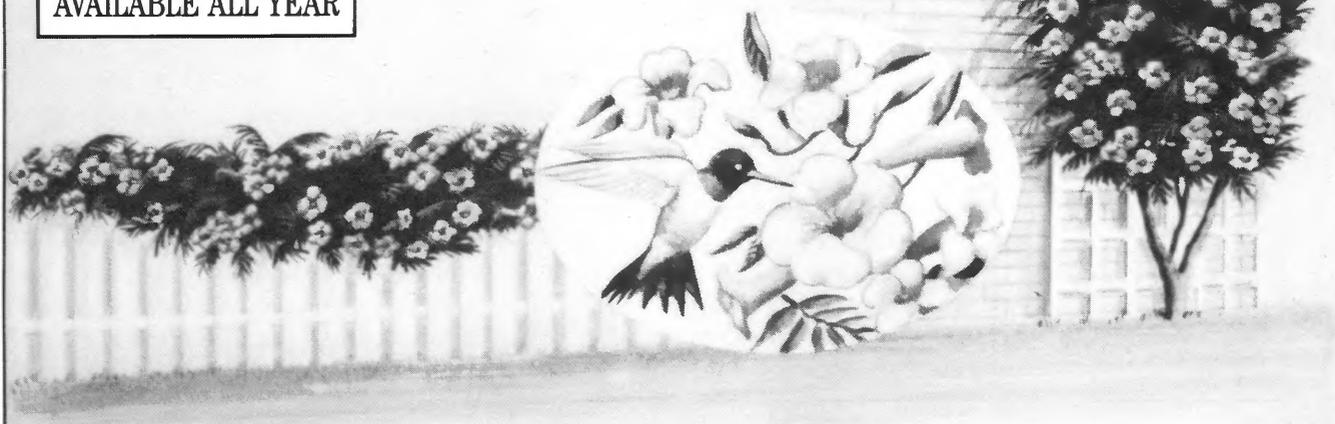
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# Energy & you

## Heat pump 'magic'

This is one in a series of consumer-oriented articles relating to home energy use. The articles are prepared in coordination with the Association of Illinois Electric Cooperatives Member Services/Power Use Section, which is made up of staff personnel of the state's electric cooperatives who are directly involved in consumer energy efficiency activities.

One of the laws of physics states that "Energy can neither be created nor destroyed." Yet, proponents of the electric heat pump say that for every one dollar spent for electricity to operate a heat pump the consumer receives \$2-3 worth of heat. How can that be?

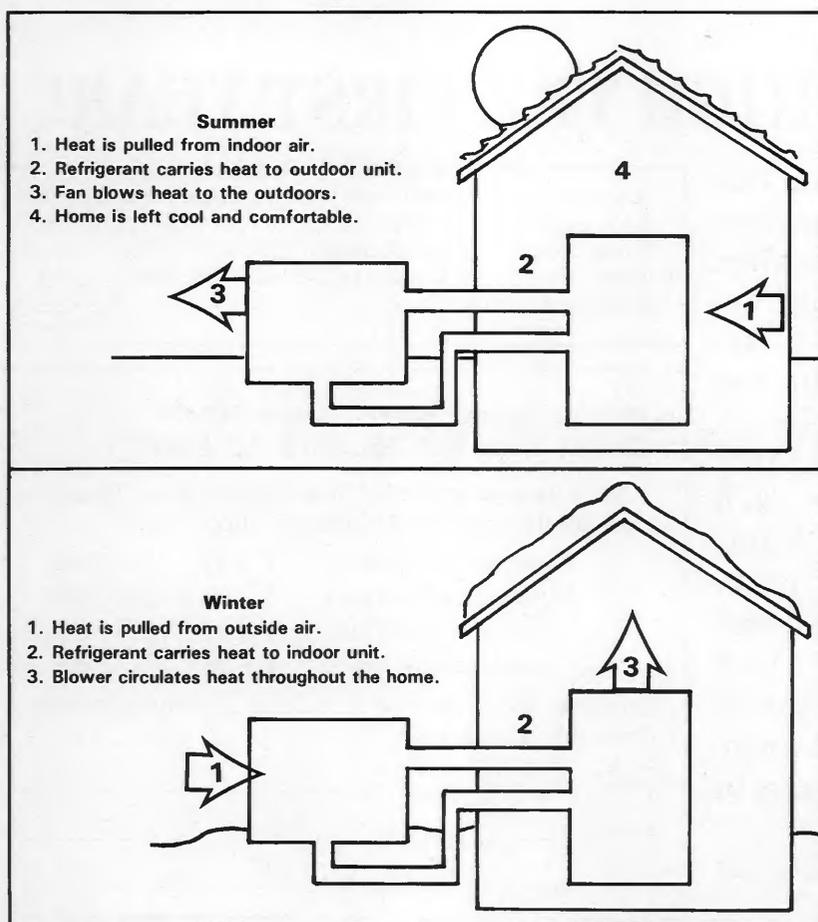
Well, there is nothing magic about a heat pump and the way it operates. And be assured that the heat pump concept does not defy any law of physics. But heat pumps do operate very efficiently, because they "move" heat rather than "create" heat.

Most heating systems use some type of fossil fuel and burn it to convert the energy to the form of heat. Heat pumps have the capability to take existing energy (that is in the form of heat) and transfer it (or pump it—thus the name "heat pump") to another location. The sources of energy that storing energy in the form of heat waiting to be used are air, water, and the earth. And, the heat pump is a double-purpose machine—it works as a heater in the winter and as an air conditioner in the summer.

Using a cool medium such as the air, water, or the earth (especially in wintertime) to get heat sounds like a contradiction. But heat and temperature are **not** the same thing. Just because a thermometer says the air is 0 degrees F does not mean the air has no heat! Most people normally think that if air contains heat it should feel warm. But, scientifically, the term "heat" is not directly related to the way something feels. Heat is a form of energy. To a scientist, air at 0 degrees F contains almost 90 percent of the heat it contains at 70 degrees F. In fact, a measurable amount of heat remains in the air until the temperature drops to absolute zero (-460 degrees F).

The following examples help demonstrate the relationship of heat and temperature:

- An ice cube has a small amount of mass (therefore, a small number of molecules) and the molecules are moving slowly. So, there is little heat, and low temperature exists.
- A burning match is a small amount of mass with a few rapidly moving molecules. So, little heat is given but a high temperature exists.
- An iceberg has a large mass but



slow-moving molecules. So, a lot of heat is present, but it has a low temperature.

The iceberg has much more heat than the burning match even though the match is much hotter. Therefore, we can now understand that large masses of cold air or water have large amounts of available heat. The trick is getting all this heat concentrated into a usable form (warmth).

Illinois has a lot of cold weather in wintertime, and all that cold air is really a source of heat. It was mentioned before that air contains some amount of heat unless it reaches absolute zero (or -460 degrees F). Knowing that, it can accurately be stated that 0 degrees F is 460 degrees "warmer" than absolute zero. If absolute zero is the reference point, then 0 degrees F is a 460 degree difference, and 70 degrees F is a 530 degree difference, so 460 divided by 530 is approximately 87 percent. Air at 0 degree F **does** contain almost 90 percent of the heat it contains at 70 degrees F. During the winter, then, all that has to be done is concentrate the available heat. When concentration occurs, temperature automatically rises and usable heat (heat that feels warm to the touch) results.

This is what an air source heat pump does. It accomplishes this by using an outdoor coil containing a low-pressure liquid refrigerant that cycles in and out of your home. When a fan blows outdoor winter air cross the coil, this cold air happens to be much warmer than the refrigerant. This winter air that feels cold is so much warmer than the refrigerant that it causes the refrigerant to boil and vaporize. (In order to get a liquid to boil, there has to be a source of heat. In this situation, the heat source is the winter air. This is why heat pumps are considered devices that take heat from cold.) The refrigerant has undergone a phase change—it has changed from a liquid into a gas and has absorbed latent heat. (See related article to understand what happens during a phase change.)

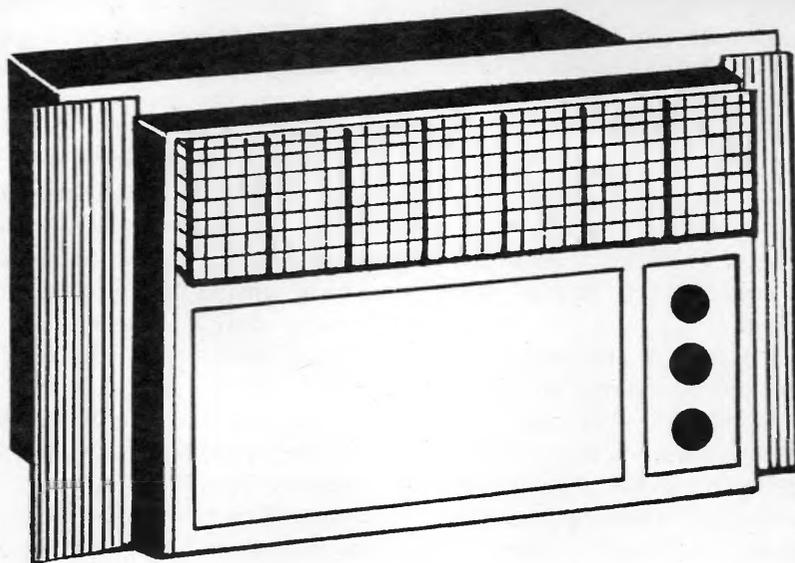
This vapor (carrying heat taken from the outside air) is now pumped through a compressor where the vapor is pressurized or concentrated making it now very hot to the touch. The refrigerant vapor that is now superheated is pumped to the indoor coil. Because the vapor is now hotter than room temper-

ature, it condenses (turns into a liquid) when the room temperature air is passed across the indoor coil by the blower fan. The change from vapor to a liquid releases heat (see inset). This heat can then be delivered throughout the house via the duct system. The liquid refrigerant, now cool to the touch, goes back outside passing through an expansion valve, which lowers the refrigerant's pressure which allows it to boil more readily.

The air-to-air heat pump has been used as the example to show how heat is extracted from seemingly cold air. The most efficient heat pump system is usually the ground source heat pump. These use the earth's stored energy. A liquid, usually an antifreeze solution, is circulated through plastic pipe buried in the ground. The earth's temperature at the buried pipe depth is relatively constant year-round (50 to 55 degrees F in this area). The ground source heat pump pulls heat from the earth into your home in the winter and takes heat from your home in the summer, moving it to the earth.

## Heat and phase change

Ordinarily, when heat is added to a substance, one would normally expect the temperature to rise, but that is not always the case. For example, when heat is added to a block of ice (at standard pressure) the temperature of the ice block will start rising until it reaches 32 degrees F. At that particular point, addition of more heat will not cause the temperature in the ice to rise. But now the ice block begins to melt and temperature will not rise again until all the ice has melted. As more heat is added the water now begins to increase in temperature until it reaches 212 degrees F. Again, same as before, when more heat is added, the temperature of the water will not change until all the water has turned into steam. At that point and only at that point will addition of more heat cause the temperature to rise again. That is why a burn from steam is more painful than a burn from boiling water. There is more heat in the steam. The extra heat required to change from a solid into a liquid (ice into water) is called the latent heat of fusion and the extra heat required to change a liquid into a gas (water into steam) is called the latent heat of vaporization. Latent heat is heat that is added which does not cause a change in temperature, but a change in phase. Sensible heat, or heat you can sense, is heat that causes a temperature change. The principles just outlined pertain for heat removal as well as for heat addition.



## Getting the most from air conditioners

It will soon be summer, with hot, steamy afternoons. Memories of record heat make us aware of the comforts that air conditioning systems can produce. The comfort we enjoy is produced by an appliance that if properly maintained can give us the satisfaction of comfort for many summers.

The maintenance begins with having a qualified air conditioner service person inspect your air conditioning system once a year. He will check the refrigerant, inspect and oil the fan, and make sure the unit is operating properly. This annual inspection could save you a trouble call on a hot, steamy afternoon.

Although your air conditioning system needs the professional annual check, there are numerous things you as the homeowner can do to ensure the system's maximum performance:

1. Clean or replace filters once a month. When the filter is dirty the fan must run longer to move the same amount of air, and this uses more electricity.

2. A thermostat setting of 78 degrees F. or higher is generally recommended. Each degree cooler than 78 degrees costs you about 3 percent more. If you plan to be out of the house most of the day, it is advisable to raise the setting considerably higher or turn the unit off completely.

3. Ducts in your air conditioning

system should be properly insulated, especially those that pass through attics or other uncooled areas. Return ducts should be insulated.

4. Keep doors and windows closed when cooling system is operating.

5. Keep the outside unit clear of shrubbery and grass.

6. The coils on the units should be vacuumed or washed with a mild detergent and flushed with fresh running water. Keeping coils dust free allows proper air flow across the coils for maximum efficiency.

7. Keep heat out of the house. Use drapes, blinds and curtains to shield out the sun. Plant trees and shrubs that will shade glass area from the sun.

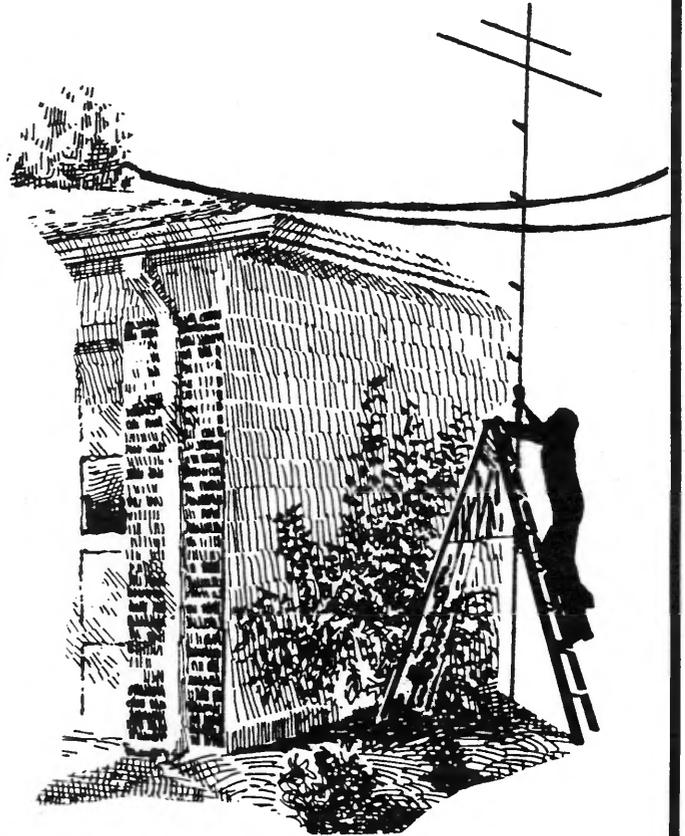
8. Schedule the use of heat-producing appliances during the early morning or late evenings. Washing and drying clothes and cooking during cooler periods can reduce the air conditioning load.

9. Don't place lamps or TV sets near your air conditioning thermostat. Heat from these appliances is sensed by the thermostat and could cause the air conditioner to run longer.

10. Have your system serviced at least once a year.

Obviously, there are many factors that affect air conditioning, but its greatest influence is you, the member. Air conditioners create electrical demands that amount to millions of dollars annually. If we can prevent that demand from becoming critically high, we can help control future bills. Contact your electric cooperative about when its peak demand occurs.

# Look up . . .



# and live!

A weekend project such as putting up an antenna may give you a feeling of accomplishment, but tangle with power lines and the result could be death. When working with tall objects like TV antennas, metal ladders and swimming pool cleaners, remember—be aware of the wires above you. Look up..and live to see another weekend.



# Soyland, WIPCO merger complete

Two Illinois electric generation-and-transmission cooperatives became one March 29. The merged boards of Soyland Power Cooperative and Western Illinois Power Cooperative (WIPCO) held their first meeting in Decatur, location of the headquarters of the surviving organization, Soyland Power Cooperative.

Representing 21 electric distribution cooperatives and serving nearly one-half million Illinois citizens, the combined organization has assets of approximately \$850 million and annual operating revenues of \$150 million.

Guests for the historic first board meeting included Jack Van Mark, acting administrator, Rural Electrification Administration, Washington, D.C., and Jack Williams of Prince Frederick, Md., president of the board of directors of the National Rural Electric Cooperative Association.

The merger of the two cooperatives,

providing power to nearly two-thirds of the land mass of Illinois, has been pending since mid-1988 when members voted in favor of the merger. The former headquarters of WIPCO in Jacksonville will serve as a district office and as headquarters for a subsidiary of Soyland, WaterFurnace of Illinois.

"We have been pooling the power supply facilities of the two organizations since January 1985 and dispatching electric loads as one entity," E.H. Williams, executive vice president and general manager of Soyland, said of the merger. "The formal merger of the two organizations was just a final step in a long-range plan to stabilize electric rates for the one-half million persons who depend on our 21 member distribution cooperatives for their electric energy."

Work toward the merger began after electric rates for cooperatives owning a 13.3 percent share of the nuclear Clinton Power Station began to increase rapidly in the early 1980s. "The Rural Electrification Administration restructured WIPCO's Clinton Power Station debt, resulting in significant savings to the members. The debt restructuring by REA provides the economic basis for WIPCO to merge with Soyland," Williams said. "We expect Soyland's electric rates to remain stable for the next 10 years, with potential increases not to exceed the rate of inflation."

During the first meeting of the merged board, new mortgage agreements were executed by the board and Van Mark, representing REA. At the same time Soyland's Williams presented Van Mark with the first payment to REA on the restructured WIPCO debt.

Soyland will continue as an Illinois not-for-profit corporation with the board made up of 14 directors representing the previous WIPCO member distribution cooperatives and 28 directors representing Soyland member-cooperatives for a total board of 42 members.

Soyland's Williams (left) and REA's Van Mark.



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# Microwave variety

## CARIBBEAN BARBECUED CHICKEN

3 tablespoons cream of coconut  
3 tablespoons dark rum  
1½ lbs. skinned, boned chicken breasts

¼ cup (½ pkg.) seasoning and coating mixture—original barbecue recipe for chicken

### Microwave

Combine cream of coconut and rum in 12"x7½" microwave-safe baking dish; mix well. Add chicken and turn to coat. Sprinkle chicken with seasoning and coating mixture, turning to coat evenly. Cover and cook at HIGH 6 minutes. Rotate dish half turn and cook 6 minutes longer. Let stand 5 minutes. Spoon sauce over chicken, if desired. Makes 4 servings. **Note:** Store remaining seasoning and coating mixture in airtight container.

## SWEET 'N SOUR BARBECUED CHICKEN

¼ cup apricot jam  
2 tablespoons vinegar  
2 tablespoons chopped scallions  
1½ lbs. skinned boned chicken breasts

¼ cup (½ pkg.) seasoning and coating mixture—original barbecue recipe for chicken

### Microwave

Combine jam and vinegar in 12"x7½" microwave-safe baking dish; mix well and add scallions. Add chicken and turn to coat. Sprinkle chicken with seasoning and coating mixture, turning to coat evenly. Cover and cook at HIGH 6 minutes. Rotate dish half turn and cook 6 minutes longer. Let stand for 5 minutes. Spoon sauce over chicken, if desired. Makes 4 servings. **Note:** Store remaining seasoning and coating mixture in airtight container.

## BEEF ROLLS FLORENTINE

1 pkg. (9 oz.) frozen creamed spinach, thawed  
½ cup enriched pre-cooked rice (measured dry from package)  
¼ cup half and half  
1 teaspoon onion powder

¼ teaspoon salt  
⅛ teaspoon pepper  
¾ lb. cube steaks (2)  
1 tablespoon Dijon-style mustard  
1 tablespoon Worcestershire sauce

### Microwave

Combine spinach, rice, half and half, onion powder, salt and pepper. Let stand 10 minutes. Meanwhile, pound steaks with meat hammer or the edge of a heavy plate. Spread half the spinach mixture on each steak. Roll up and secure with wooden picks. Place in 8" microwave-safe dish. Combine mustard and Worcestershire sauce; spread 1 tablespoon of mixture on rolled steaks. Cover dish and cook at HIGH 8 minutes. Spread remaining mustard mixture on steaks. Cover and rotate dish half a turn. Cook 2 minutes longer. Let stand 5 minutes. Makes 2 servings.

## ORIENTAL HOT CHICKEN WINGS

2 tablespoons water  
½ to ¾ teaspoon hot pepper sauce  
1½ lbs. chicken wings  
1 tablespoon toasted sesame seed

¼ cup (½ pkg.) seasoning and coating mixture—original barbecue recipe for chicken

### Microwave

Combine water and pepper sauce in 9" microwave-safe pie plate. Add chicken wings and turn to moisten. Sprinkle chicken with seasoning and coating mixture, turn to coat evenly. Cover and cook at HIGH 6 minutes. Sprinkle with sesame seed. Rotate dish half turn. Cover and cook 6 minutes longer. Let stand 4 minutes. Makes 4 servings. **Note:** Store remaining seasoning and coating mixture in airtight container.

## CREAMY ZUCCHINI SOUP

2 tablespoons butter or margarine  
1 medium onion, chopped  
2 medium potatoes, peeled and thinly sliced  
1 lb. zucchini, thinly sliced  
3 cups chicken broth  
2 tablespoons lemon juice

¼ cup chopped fresh parsley  
½ teaspoon salt  
½ teaspoon freshly ground pepper  
1 cup plain yogurt or sour cream  
¼ cup chopped chives or green onion tops

In 3-quart microwave casserole combine butter or margarine and onion. Microwave on high 2 to 3 minutes, until onion is translucent but tender-crisp. Add potatoes and cover tightly. Cook on high 6 to 8 minutes, until potatoes are tender, stirring once. Stir in zucchini; recover. Cook on high 4 to 6 minutes, until zucchini is tender, stirring once. Spoon mixture into a blender or food processor; puree. Return to casserole. Stir in broth, lemon juice, parsley, salt and pepper. Cover tightly and microwave on high 6 to 8 minutes, until boiling, stirring once. Spoon into bowls; top with yogurt and sprinkle with chives. Microwave time: 18 to 25 minutes. Makes 4 to 6 servings, about 190 calories each per 4, 130 calories each per 6.

## CAP'N CRUNCH CANDIES (microwave)

1 lb. white chocolate or almond bark  
¾ cup creamy peanut butter

1 large box Cap'n Crunch Peanut Butter cereal

Microwave white chocolate and peanut butter in large bowl for 3 minutes on high. Add cereal gradually (will use almost entire box). Mix well and spoon in mounds on wax paper-lined cookie sheet. Cool in refrigerator until hard. Store in air tight containers.



Beef Rolls Florentine and Caribbean Barbecued Chicken.

## FROZEN RASPBERRY SALAD

1 pkg. (8-oz.) cream cheese  
1 cup mayonnaise  
8 marshmallows  
1 pkg. frozen raspberries, thawed

1 mashed banana  
1 small can drained crushed pineapple  
2 cups green seedless grapes

Soften cream cheese, add remaining ingredients and mix. Freeze. Serve on lettuce leaf.

## CHOCOLATE E'CLAIRS

1 cup boiling water  
½ cup shortening

1 cup flour  
4 eggs

Add the boiling water to the shortening, bring to a boil and stir in flour thoroughly. Remove from heat and add eggs, one at a time, beating in each one before adding the next. Drop by spoonfuls onto a greased pan about 2 inches apart having the batter a little higher in the center. Bake 1 hour (15 minutes at 400 degrees, then reduce to 350 degrees). Cool, cut open and fill with Cream Filling and ice with Chocolate Icing. Keep refrigerated after making.

### CREAM FILLING:

⅔ cup sugar  
½ cup flour  
⅛ teaspoon salt

2 eggs  
2 cups milk  
1 teaspoon vanilla

Mix dry ingredients and add milk. Cook over medium heat until very thick. Add vanilla, cool and spread between e'clairs.

### CHOCOLATE ICING:

1 square chocolate  
1 tablespoon butter  
6 cut-up marshmallows  
⅓ cup water

Dash salt  
½ box confectioners' sugar  
½ teaspoon vanilla

Put all ingredients in pan and cook over low heat until marshmallows and chocolate melt (You may use double boiler). Beat in confectioners' sugar and add vanilla. Ice top of e'clairs.

## NEW PINEAPPLE CRUSH CAKE

1 pkg. pineapple cake mix  
1 pkg. (8 oz.) cream cheese, softened  
1 pkg. (4 serving size) vanilla instant pudding and pie filling

2 cups cold milk  
1 can (8 oz.) crushed pineapple, drained

Preheat oven to 350 degrees. Grease and flour two 13x9x2-inch pans. Prepare cake as directed on package. Divide evenly in pans. Bake at 350 degrees for 20 to 25 minutes; follow package directions for doneness test and cooling. For filling, beat cream cheese, instant pudding mix, and cold milk in small mixer bowl. Beat for 2 minutes at medium speed. Spread on one cooled cake layer. Spoon drained crushed pineapple over top. Add second layer. Spread whipped topping on sides and top of cake. Store in refrigerator until next day before serving. Yield: 16 servings.

# MISSING



**MICHAELA JOY GARECHT**

LAST SEEN: 11/19/88 EYES: Blue  
 FROM: Hoyword, CA HEIGHT: 4'8"  
 DOB: 01/24/79 WEIGHT: 75  
 WHITE FEMALE HAIR: Blonde



**MYRON TIMELL TRAYLOR**

LAST SEEN: 07/27/88 EYES: Brown  
 FROM: Phoenix, AZ HEIGHT: 5'5"  
 DOB: 10/01/74 WEIGHT: 106  
 BLACK MALE HAIR: Black

If you can identify these or any other missing children, call The National Center for Missing and Exploited Children at:

**1-800-843-5678**

(sightings only)

This message is brought to you as a public service by Association of Illinois Electric Cooperatives, in cooperation with National Child Safety Council.

## -Safety Tip of the Month-

Alert your child to the many tactics used by possible abductors to lure children away with them. Advise them how to respond in these situations. It is best to ignore these dangerous people

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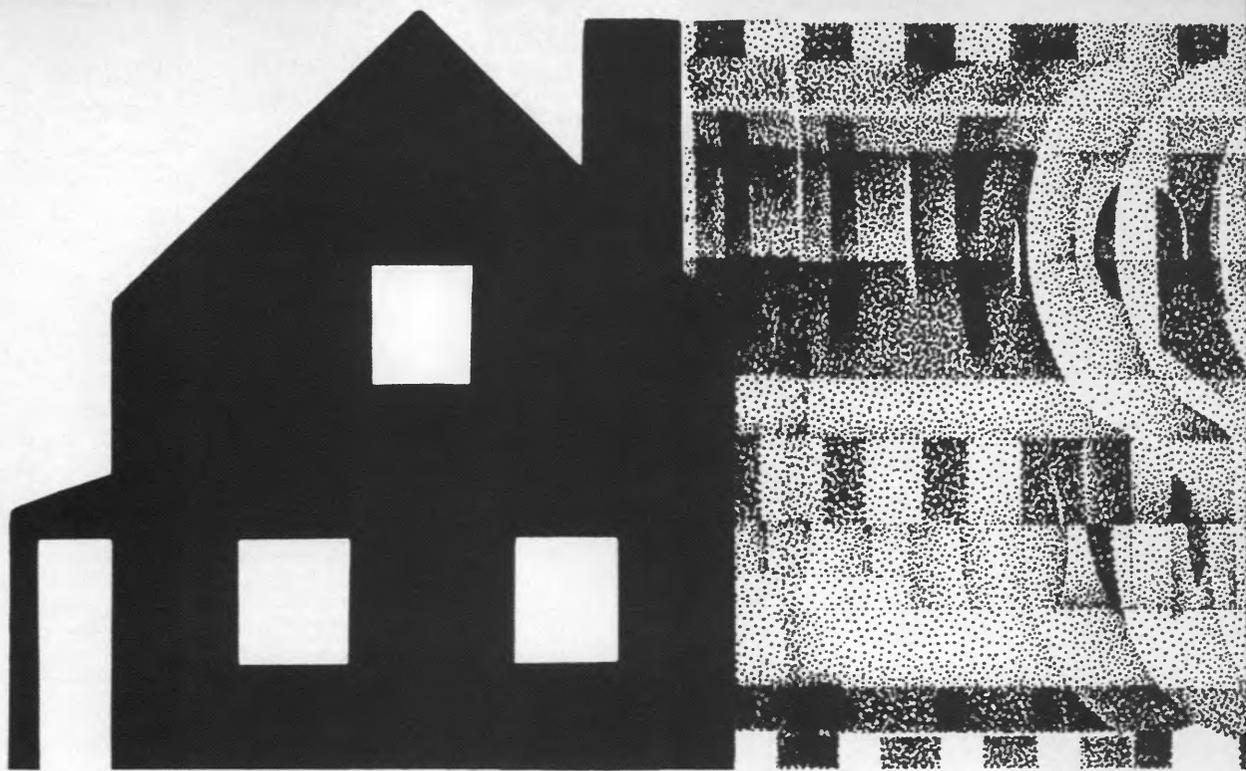
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# Rural Home Energy

## *Grants available for electric cooperative*

If your spring fix-up plans include projects to weatherize your home, or if you plan to replace a heating system or water heater, you should check with your electric cooperative.

For the second consecutive year, a home weatherization or energy conservation grant of up to \$1,500 is available to eligible members of Illinois electric cooperatives through the Illinois Department of Energy and Natural Resources (ENR). Grant money totalling \$2.5 million has been allocated for qualified cooperative members during this program year.

This money can be used to help you in upgrading or replacing inefficient heating systems, installation of insulation, weatherstripping storm windows and doors, and a number of other weatherization projects.

The funding is offered through the Rural Home Energy Program, which was established by the Illinois General Assembly in 1987. Money was generated through penalties assessed by the federal government against oil companies for overcharges to consumers. Illinois received about \$100 million as

its share of money returned to individual states. The General Assembly set aside \$1.5 million for grants during the first 12 months. Response to the program was very good, and many electric cooperatives had lists of qualifying members carry over into the second year of the program.

The Rural Revival Bill, introduced in 1986, included a provision for the Rural Home Energy Program. The development of the legislation and final enactment was promoted and assisted by the Association of Illinois Electric Cooperatives.

Only eligible consumer-members of an Illinois electric cooperative may participate in the program. Any cooperative member with a household income of 80 percent or less of the cooperative service area's median income is eligible for a grant of up to \$1,500. This is a total grant, without any matching funds required by the applicant.

For members whose household income is 80 to 120 percent of the area's median income, a grant of up to \$1,000 is available. This is a 50 percent matching grant. The consumer-member



# Program

## members

pays 50 percent of the project's cost.

For this second year, the list of projects eligible for funding under the program has been changed somewhat from the first year. On some items there is a dollar limit on the amount of subsidy available. In no case is the subsidy offered for more than the cost of the work, of \$1,500.

Eligible projects include:

- Insulation projects for walls, ceilings, attics, foundations, crawlspaces, floors, basements walls or ceiling, water pipes, air ducts, underpinning, and mobile home undercarriages

- Water-saving shower heads

- New, energy-efficient water heaters (must meet ASHRAE 90 Standards as required by Illinois law)

- Water heater jackets (blankets)

- Set-back thermostats

- Central air-conditioners with a SEER greater than 10.0 (or room air conditioners with an EER greater than 8.6) only for medical reasons (A medical doctor's certification is required.)

- Water and ground source heat pumps with a SEER rating of greater than 8.6 (Maximum grant is \$1,000 for

these types of systems.)

- Electric heat pumps with SEER ratings of greater than 8.6

- Furnace load management systems and furnace efficiency modifications

- Furnace flue modifications and electronic ignition systems

- Furnaces with an AFUE rating of 90 or better, and under certain circumstances and with prior approval for ENR, other heating systems with lower ratings may be eligible (Call ENR for details.)

- Storm doors and thermal doors for a grant of up to \$150 maximum per entrance

- Storm windows and thermal replacement windows for a grant of up to \$150 maximum per entire window unit

- Caulking and weatherstripping

- Energy-saving fluorescent lighting

All projects must demonstrate a 10-year payback to the member in energy savings, as determined by an energy audit.

Contact your cooperative or ENR if you are interested in applying for a Rural Home Energy Program grant. Before being considered for the grant, participants must have an energy audit completed on their home and have a written bid from at least two contractors for proposed projects. These bids must contain model numbers and efficiency ratings for heating systems and cost estimates.

Applications must be submitted to the cooperative. After it is reviewed there, the application will be forwarded to the ENR for final review and approval. ENR has the final decision on all Rural Home Energy Program applications.

Once the application gets approval, a check is prepared payable to the consumer-member and the cooperative. The cooperative then endorses the check and presents it to the member for payment. ENR has the right to inspect the completed work, and each approved applicant must also certify to ENR that the installation of materials or equipment funded through the grant program is complete.

For more information, contact your electric cooperative or the Illinois Department of Energy and Natural Resources at (217) 785-2800.

# Illinois Marketplace

Calhoun Co. 40 Acres, orchard, manufactured home, full basement walk out, new cattle barn, fenced, South Hardin \$69,000. 18 acres, Mississippi River View \$18,000.

LARGE CAMPGROUND and R.V. PARK for sale or lease. Owner retiring. Clark County, Ill. 217-382-4565.

GINSENG SEEDS, For planting. \$5,000 possible 1/4 acre, easy grown, Free, how to information, markets. Ginseng, Box 215, Weaubleau, Missouri 65774.

Savin Copiers—Computers—Software—Commercial Telephone systems. New and used custom software consulting sales and service. Don Metsker, 1-800-323-8475.

Pomeranian puppies A.K.C. registered. Males and Females \$200.00. Champion bloodlines (815)698-2042. Linda Stam, RR 2 Box 160, Ashkum, IL 60911.

10 YEAR SCROLL DESK CALENDAR, mounted in solid American walnut or oak. Brass mechanism. Hand crafted and finished. Send \$2.00 for color photos and literature to EHP, RR 1 Box S-7, Astoria, IL 61501.

PEN-PALS—U.S. and FOREIGN! Send self-addressed, stamped envelope for free details to: Pen-Pals, R #1, Box 105, LaPrairie, IL 62346.

## POSITION VACANT/HELP WANTED

Training and Safety Instructor  
Statewide association of electric cooperatives is seeking an individual experienced in electric line work for additional position as Safety Instructor. Degree in education, occupational safety and health or related vocational/technical field preferred. Successful candidate will plan and implement safety instructional programs for member-cooperatives throughout Illinois. Responsibilities include demonstrations instruction during hot line training schools and apprenticeship training programs. Applicant should be skilled in pole climbing, construction and maintenance practices, possess a working knowledge of OSHA, EPA and DOT regulations, and demonstrate excellent verbal and written communication skills. The position requires a sincere interest in motivating others to maintain a safe and healthy working environment. Travel to headquarters of member-cooperatives located throughout Illinois required on regular basis. Salary commensurate with qualifications and experience. Excellent fringe benefits include NRECA hospitalization and retirement programs. Send resume and salary history to: Thomas H. Moore, Executive Vice President, Association of Illinois Electric Cooperatives, P.O. Box 3787, Springfield, IL 62708

TROY-BILT PARTS DISCOUNT CATALOG. Shredder Grinders 20% off—Dealers Welcome. Send stamp for catalog. Kelley's, Box 37, Manilla, Ind. 46150. 317-398-9042.

AKC GERMAN SHEPHERD PUPPIES Hard working, highly intelligent, Champion bloodlines, Both parents on premises. Call 1-217-434-8465.

For Sale ST. BERNARD PUPPIES AKC Registered. Ann Kleinschmidt, RR 2 Box 176, Millstadt, IL 62260. Call (618)476-3818.

PERSONALIZED Gifts—Great for graduation, dorms, Fathers Day, birthdays, Company gifts, Fund Raisers, showers, weddings. Price includes initial or name (personal, company or college) embroidered in any standard color. \*Stadium Blanket—62x42" washable 85% wool, 15% acrylic—navy, black, maroon, grey, dark green, brown \$24. Vinyl carrying case \$2.50

\*Granny Lap Robes—60x60" plaid wool blend (no color choice) great nursing home gift \$21.00

\*Lullaby Baby Blanket—54x36" washable 85% wool, 15% nylon with satin binding; includes name & birthdate. Winter White \$26. \*Double Terry Robe—48" mid calf, Shaw collar. Unisex—white, navy, peach \$39.

\*Luxurious Velour Kimono Style Long Robe—54" unisex. White, black, pink \$56

\*Bath Sheet—35x68" thick, thirsty, 100% cotton Double Terry. Sand, peach, mauve, country blue \$22.50

\*Body Wrap—unisex, Velcro closure. White, peach \$22.50

\*Laundry Bag—26x36" white mesh, twill panel \$12.50

Please list (1) items & color; (2) embroidery color; (3) name or initials in desired order (last name initial appears as largest center initial—list as first, last, middle); (4) enclose check or MO + \$3.00 shipping; (5) your name, shipping address (not PO box) & telephone. Satisfaction guaranteed—Allow 2-4 weeks delivery. KOALA BEAR EMBROIDERY, RR 1 Box 160B, Donovan, IL 60931—phone 815/486-7224.

WHAT'S COOKING? Good Country Cooking. All of our favorite recipes. Arlington Fire Dept. Auxiliary \$7.50 + \$1.00 shipping. Carol Schmidt, Box 38A, Arlington, Ill. 61342.

WICK BUILDINGS—Horse barn, livestock, equipment, residential, commercial, Bill & Jim Parkinson, Hardin, IL 62047, Phone 1-618-576-2287.

Please publish my \_\_\_\_\_ word advertisement for \_\_\_\_\_ times starting with the \_\_\_\_\_ issue. For each month's insertion, I have enclosed \$8 for the first 20 words or less and 30 cents per word for each word beyond 20. Total payment enclosed is \_\_\_\_\_. I am a member of \_\_\_\_\_ electric cooperative and my Illinois Rural Electric News mailing label is attached.

## The policy:

1. You must be a member of an Illinois rural electric cooperative in order to qualify for the special rates. Non-members pay \$1.20 per word with a \$24 minimum for 20 words or less. Members must attach their mailing label to their order form.
2. Advertising copy must be in the Illinois Rural Electric News office no later than first of month preceding month of publication.
3. All ads must be in one paragraph form. No centered copy. Maximum of four all-capital words per ad.
4. Cash, check or money order must accompany ad order. No billing or charges. Make checks payable to Illinois Rural Electric News.
5. Please type or print your ad neatly. Include your name, address and telephone number even if they are not part of the advertising copy you plan to run in the Illinois Marketplace.
6. The publisher reserves the right to reject any advertisement not deemed to be suitable for the publication's readership.

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## Mail to: Illinois Marketplace

Illinois Rural Electric News, P.O. Box 3787 • Springfield, IL 62708

**PLAY GOSPEL SONGS BY EAR!** Add Chords, Piano, Organ. 10 easy lessons \$7.50. Guaranteed. Davidson's, 6727RI Metcalf, Shawnee Mission, Kansas 66204.

**WORK CLOTHES**—Oshkosh, Carhartt and more. Men's and boys'. Free catalog. Strauss' Country Ware, 100 George St., Alton, Illinois 62002.

Used meat saws, slicers, grinders, tenderizers and other butchering equipment. 2615 South 1st, Springfield, Illinois. Phone (217)522-3934.

**TRENCHERS**—New and Used—\$1,250 and up. Ditch Witch Sales, Inc., 107 Troy Road, Collinsville, IL 62234. Phone 618-345-6262. Mo. 314-436-2133

Used and new restaurant and concession equipment. Ice machines, grills, fryers, sinks, poppers, ice cream machines, etc. Erio Sales, 2615 So. 1st, Springfield, IL (217)522-3934.

**"WORK PANTS 3/48.** Coveralls \$5. Lined work jackets \$5. Big and tall work clothing our specialty. Send \$1.00 (Refundable) for catalog." Workmen's Garment Co., 15205-IL Wyoming, Detroit, MI 48238.

**GOVERNMENT SEIZED VEHICLES** from \$100. Fords. Mercedes. Corvettes. Chevys. Surplus. Buyers Guide. (1) 805-687-6000 Ext. S-20126.

**INSULATION—4X8 SHEETS,** Foil Backed Foam—Factory Seconds—Easy to install. Contact Ken Nichols, 217-728-4217.

**WHY DIE WITHOUT A WILL?** Two Legal Will Forms, easy fill-in instructions.—\$4—Guaranteed! Fast Delivery. Ty-Company, Box 1022-RE, Pryor, OK 74362.

**FREE Chicks** with every chick order. Offering top quality chicks (Bantams, Exotics, Standards) at rock-bottom prices. Send for Free Catalog. Clinton Hatchery, Box 548-R16, Clinton, Missouri 64735. Telephone 816-885-8500.

**OUTSTANDING COOKBOOK** 500 choice recipes compiled by Rural Pontoppidan Lutheran Church. Send \$7.25 to Russel May, Box 17, Elliott, Illinois 60933.

**SPICES, HERBS, SEASONINGS.** Many salt-free seasonings. Satisfaction guaranteed. FREE catalog. Creekwood Ltd., Dept. 293, P.O. Box 1165, Marion, IL 62959.

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**COMPARE OUR PRICES!** Heavy Breeds \$20.95-100. Pullets \$34.95. Write today for FREE list of "Super Savers". Atlas Chicks, 2651 Chouteau, St. Louis, MO 63103.

Open pollinated seed corn \$24.00 bu. produces more silage than hybrids. Compares favorably in grain production. 217-857-3377. Joseph Borries, Teutopolis, IL 62467

**CUSTOM MADE WROUGHT IRON** products, security storm doors, window guards, fence and gates, Bob Davenport Welding, 1-217-628-9020.

Cutest little **RED BARN QUARTZ CLOCK** you'll ever own! Easy to see numerals! Battery operated! \$35. You'll love it! Gifts International, R #1, Canton, IL 61520. Mastercard/Visa add \$1.00. 1-800-445-8745.

Just released, **MASTER MIND MARKETING** for fast food businesses. 37 innovative ideas, 6 great chapters! Toby Johnson shares 6 years; independent marketing specialist for Domino's Pizza. Reg. \$29.95—REN customers only \$19.95! Check/money order to: Toby Johnson, c/o The Book Shelf, 131 W. Wood St., Paris, IL 61944, add \$1.25 Illinois State tax, unless C.O.D., no charge for shipping.

Invest in U.S. Cashmere Industry. Excellent possibility doubling money in 2 years. Details P.O. Box 633, Carmi, IL 62821.

**WARD CEDAR LOG HOMES** Free Color Brochure. Catalog of Home Plans \$7.95. Model Home Shown by Appointment. Contact: 1526 Third Street, Peru, Ill. 61354 (815)223-6050.

For Sale **THREE BEDROOM HOME** in Village. Modern garage, two lots near River Canal Lake, low taxes, good condition. Phone (815)659-3121.

**TWO BEDROOM CABIN** for sale on Macoupin Creek. Lot size 66x200 in Jersey County, Ill. Phone 815-942-1752.

**TREE SERVICE**—Buying, selling, removing, or transplanting anywhere. Small and large **CALL** for more information and estimate 217-364-5942 after 6 p.m. or anytime weekends.

**FREE KODAK COLOR FILM,** 120 film certificates, \$5.00, include \$1.00 for Postage. Extra film envelopes, 10 cents ea. RB's Place, Dept. R, R #1, Box 113B, Jewett, IL 62436.

**MOUNTAIN HOME, ARKANSAS.** Two beautiful wooded lots 1/2 acre each between Bull Shoals, Norfort Lakes, \$3,000.00/\$5,500.00 Both. Call 815-667-5255.

**LIFE AT A GLANCE:** Touching Collection of poems about everyday life. Send \$3.95/copy, name, address. To Winter Pub., Rt. 1 Box 64A, Pinckneyville, Ill. 62274.

#### SATELLITE TELEVISION

For Complete Systems, Descramblers, Programming or Maintenance Call Hamilton County Telephone Co-op 1-800-44RURAL if you live in the 618 area. Outside 618 area, call 618-736-2211. We represent Southeastern Illinois, Southern Illinois, Tri-County and Egyptian Electric Cooperatives.

St. Louis company has immediate openings in its Marketing Department for clean-cut young men and women. Telephone sales start at up to \$10/hr. Field sales start at \$15/hr. Call Mr. Harold Toll Free at 1-800-876-9876.

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Free Sample Vidalia Gold Onion Pickles or Relish with ad and order for 25 or 50# onions. Ground or 2nd day air Federal Express. Free List, Linda Allen, Drawer F, Vidalia, GA 30474. 912-537-9595, 537-9260. 1-800-444-9540.

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**PHONE 1-800-835-0130 FOR COLORED CATALOG.** Over 100 varieties Chicks, Bantams, Rare Breeds, Turkeys (wild & domestic), Ducks, Geese, Guineaes, Pheasants, Chukars, Quail, Ornamentals. Insured safe shipments. Credit cards accepted. Protection Hatcheries, Box 370, Pratt, Kansas 67124.

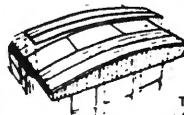
Country Boy starting own record company. First record, "Dirt Farming" and "Boxcars and Bigstars" \$2.50. Cowan Records, RR #1, Box 1400, Jonesboro, IL 62952.

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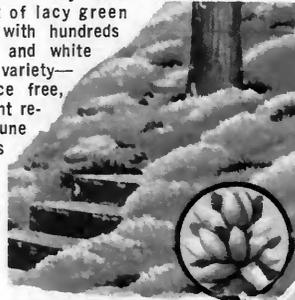
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Quickly transforms steep slopes, banks, troublesome weedy areas into a thick mat of lacy green foliage drenched with hundreds of delicate pink and white blooms. Coronilla variety—hardy, maintenance free, disease and drought resistant. Blooms June year after year without replanting. Prospers even in problem areas where nothing else has a chance!



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Send today for these amazing money-saving offers for spring planting. Each item we ship is guaranteed to be exactly as advertised . . . vigorous and healthy, tagged for easy identification, well packed for prompt arrival in good condition. If not satisfied on arrival, you may return within 15 days for full refund. Any plant that doesn't flourish and thrive, we will replace it free (3 year limit). Complete Spring Planting Guide included with every order. Clip the coupon and mail today!



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Giant balls of flaming color to set your landscape ablaze! These hardy Michigan nursery grown root division perennials come to you in an assortment of vivid, gorgeous colors . . . reds, yellows, pinks, purples, bronze, etc., as available. Normally develop to bushel basket size, each plant drenched with masses of 1-2 inch blooms! Guaranteed to bloom.



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Gorgeous, hardy and undemanding, Sweet Lavender (Lavender heterophylla) creates masses of unforgettablely fragrant purple flowers. #2 size.



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Pretty blue flowers that seem to float on a dense carpet of shiny-evergreen foliage! Thrives in dense shade where grass or flowers won't grow. Mature plant divisions.

**Ground-Hugging Foliage, Mixed Colors!**



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Michigan nursery grown perennial (Phlox subulata), covers the ground with a spreading rug of evergreen foliage. Flowers freely each spring with masses of gay, colorful blooms. Transforms drab areas or rock gardens into a rolling sea of color that enhances your entire landscape.

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6	FREE	Anemones if order mailed by May 31	0.00
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Remittance enclosed, plus \$1.90 for postage and handling. **TOTAL \$ 1.90**

Bill on my credit card, plus \$1.90 postage and handling. (Check one). **GRAND TOTAL \$**

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