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Manufacturing a middle class in Illinois once again

It won't be easy, but it will be worth it

Illinois manufacturers are leaders in technology and innovation with nearly 20,000 companies and facilities that call this state home. Industry-leading advancements from farm machinery to fighter plane controls have resulted in an industry of forward-thinking companies that contribute the single largest share – 12.4 percent – of the Gross State Product and employ approximately 565,000 workers in good, high-paying jobs. From an economic impact, every dollar spent in manufacturing returns \$1.40 in additional economic value which is the highest multiplier of any sector.

Yet, times are tough in our industry. Illinois job reports show that 9,800 manufacturing jobs disappeared in 2016 alone. Add that to the 304,000 jobs our industry has lost since 2000 and you can start to visualize the impact the manufacturing exodus has on our state, our revenues and more importantly, Illinois middle class families. These aren't faceless statistics. Each of these lost jobs has a name, family, hopes and dreams.

There's an urgent need in this state to create jobs – and I'm not talking about minimum wage service sector positions that currently lead our job creation and employment reports. I'm talking about highly skilled, manufacturing positions that in Illinois bring in an average compensation package of \$75,000, including benefits. It's no secret that manufacturing creates wealth in this country – the type of wealth that offers a chance for middle class job security. I remember the days where we had that type of industry in Illinois, and we can have it again.

Some might tell you that the manufacturing industry is on a downward slide and that statement couldn't be further from the truth. Nationally, our industry is alive and

well. Our neighbors have created real manufacturing jobs: Michigan's 171,300, Indiana's 83,700, Wisconsin's 44,000, and Kentucky's 35,000. American manufacturing is thriving, but yet in Illinois, the struggles continue. It has nothing to do with the quality of our workforce or the economic advantages of our state, but everything to do with Illinois' poor policy decisions and compounding rules and regulations that make running a business in our state almost impossible.

Since 2000, Illinois politicians have added 4,709 pages of laws and thousands of additional pages in rules and regulations. We've let our politics become the expert in running a business and the result has been businesses feeling unwelcome and moving operations to other states.

This past fall I've been traveling the state talking about the issues facing our industry and raising the alarm that something must be done to return manufacturing prosperity to Illinois. The IMA has proposed the “**Middle Class Manufacturing Agenda**” that focuses on five key reforms:

- **Get the state's fiscal house in order.** We need to restrain spending, balance the budget and adopt pension reform.
- **Enact meaningful workers' compensation reform.** Illinois can reduce costs on employers while still ensuring that injured workers receive quality health care by pushing back on union leaders, trial attorneys and special interests who are feeding off this system.
- **Reform the state's tax code.** The best tax systems are broad based with low rates. Illinois needs tax reform that includes permanent extensions of critical tax incentives including the Research



& Development tax credit and Manufacturers Purchase Credit.

- **Overhaul property taxes.** Stop shifting the tax burden onto commercial and industrial taxpayers.
- **Strengthen the education and workforce development system.** Illinois needs to ensure a pipeline of qualified workers for our global economy. As the baby boom generation retires, 30,000 manufacturing engineers and production technicians in Illinois will leave the workforce every year between now and 2028. Finding skilled workers and funding educational programs that do so need to be a top priority of policymakers.

Illinois can do this - it won't be easy, but it will be worth it. Manufacturing is an industry worth fighting for and I hope to one day see a revitalized middle class again and a state that takes advantage of the many benefits we have that makes us one of the most well positioned states in the country. ♡



Greg Baise is the President and CEO of the Illinois Manufacturers' Association, a statewide advocacy organization representing more than 4,000 member manufacturing companies and supportive industries.

Diabetes Healing Secret

by James Victor

Here's important news for anyone with diabetes. A remarkable book is now available that reveals a medically tested method that normalizes blood sugar naturally... and greatly improves the complications associated with diabetes. People report better vision, more energy, faster healing, regained feeling in their feet, as well as a reduction of various risk factors associated with other diseases.

It's called "The Diabetes Code," and it was researched and developed based on the latest scientific studies and medical research. It shows you exactly how nature can activate your body's built-in healers once you start eating the right combination of foods. It works for both Type I and Type II diabetes and it can reduce, and in some cases even eliminate, the need to take insulin. It

gives diabetics control of their lives and a feeling of satisfaction that comes from having normal blood sugar profiles.

The results speak for themselves. "The Diabetes Code" is based on documented scientific principles that can:

- Eliminate ketones and give you more abundant energy
- Make blood sugar levels go from High Risk to Normal
- Stimulate scratches and scrapes to heal faster
- Improve eyesight
- Improve your balance
- Help numb feet regain a level of feeling
- Reverse neuropathy and resultant heel ulcers
- Lower blood pressure, lower cholesterol and reduce triglyceride levels

TO ORDER A COPY of *The Diabetes Code* see Savings Coupon with Free Gift Offer

Do Amish People Know Something That Doctors Don't?

by James Victor

If you are concerned about prescription drugs and their side effect... not to mention their spiraling cost... Look at the Amish. They are robust and healthy. Yet they rely on simple, drug-free home remedies and folk medicine for their everyday health problems.

Their philosophy is "What's old is of the good." They claim their folk medicines, handed down from generation to generation, still work today for everything from colds to *kee-gretz* (foot fungus.)

An encyclopedia of their natural health secrets, called *Amish Health Secrets* is now available to the general public. It has hundreds of proven home remedies using simple items you have around your home like vinegar, salt, soda, onions – even olive oil. You'll be amazed at the ordinary spices and herbs the Amish use for their health qualities.

Learn natural Amish folk medicine secrets for common

health problems like these:

- **Backache?** This home-made liniment has been used for years to relieve aches and pains.
- **Poor memory?** The Amish swear by this common seed to sharpen the memory.
- **Can't take aspirin?** Discover the natural ingredients that have pain killing properties.
- **Allergies?** Learn how to use nature's antihistamine.
- **Arthritis pain?** An all-natural tonic can give hours of relief.
- **Prostate trouble?** A good dose of this ordinary tea is the Amish secret.
- **Trouble sleeping?** This simple remedy is said to induce a peaceful slumber.
- **Nervous?** Enjoy blissful tranquility without drugs.

Amish Health Secrets also reveals natural health tips for: **constipation, cold sores, menopausal problems, sinus trouble, hemorrhoids, varicose veins, age spots, flu and more.**

TO ORDER A COPY of the *Amish Health Secrets* see Savings Coupon with Free Gift Offer

Vinegar, Better than Prescription Drugs?

by James Victor

If you want to lose weight and keep it off -- hate dieting and are tired of taking pills, buying costly diet foods or gimmick "fast loss" plans that don't work-- you'll love the easy Vinegar way to lose all the pounds you want to lose. And keep them off!

Today, the natural Vinegar weight loss plan is a reality after years of research by noted vinegar authority Emily Thacker. Her just published book "Vinegar Anniversary" will help you attain your ideal weight the healthiest and most enjoyable way ever.

You'll never again have to count calories. Or go hungry. Or go to expensive diet salons. Or buy pills, drugs.

You'll eat foods you like and get a trimmer, slimmer figure-- free of fat and flab-- as the pounds fade away.

To prove that you can eat great and feel great while losing ugly, unhealthy pounds the natural Vinegar way, you're invited to try the program for up to 3 months on a "You Must Be Satisfied Trial."

Let your bathroom scale decide if the plan works for you. You must be satisfied. You never risk one cent. Guaranteed.

What's the secret? Modern research combined with nature's golden elixir.

Since ancient times apple cider vinegar has been used in folk remedies to help control weight and speed-up the metabolism to burn fat. And to also aid overall good health.

Now-- for the first time-- Emily has combined the latest

scientific findings and all the weight loss benefits of vinegar into a program with lifetime benefits-- to melt away pounds for health and beauty.

If you like food and hate dieting, you'll love losing pounds and inches the Vinegar way.

Suddenly your body will be energized with new vigor and zest as you combine nature's most powerful, nutritional foods with vinegar to trim away pounds while helping the body to heal itself.

You'll feel and look years younger shedding unhealthy pounds that make one look older than their age.

According to her findings, staying trim and fit the Vinegar way also provides preventive health care against the curses of mankind-- cancer, heart disease, diabetes, high cholesterol and blood pressure and other maladies.

In fact, the book's program is so complete that it also helps you:

- Learn secrets of ageless beauty and glowing skin
- Help build the immune system, to fight arthritis and disease
- Speed the metabolism to use natural thermogenesis to burn fat

PLUS so much more that you simply must use the book's easy Vinegar way to lose all the weight you want to lose--and enjoy all its other benefits-- before deciding if you want to keep it.

TO ORDER A COPY of the *Vinegar Anniversary Book* see Savings Coupon with Free Gift Offer

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Savings Coupon

Here's how to get the *Vinegar Anniversary Book*, *The Diabetes Code* and *Amish Health Secrets* on a 90 day money back guarantee. Simply fill out this coupon and mail to:

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America's problems require 'profound change' to solve

President-elect Donald Trump's unexpected White House win can be summed up simply: an unorthodox candidate meeting a moment in time when voters—especially those in rural communities—were fed up with the federal government. So declared former U.S. House Speaker Newt Gingrich in post-Election Day remarks during the National Rural Utilities Cooperative Finance

Corporation (CFC) Independent Borrowers Executive Summit (IBES) 2016 held just after the election.

"In any other [election] cycle Trump wouldn't have survived," Gingrich acknowledged. "But now, as of today, he faces the huge task of governing, which is 10 times harder than running for office. If he really hopes to 'drain the swamp' in the nation's capital, he will need

electric cooperative members and the American people to continually apply pressure on Congress to push through much-needed, and difficult, reforms."

Gingrich pointed out. "A Trump presidency must outline lofty purposes, deal with Congress to see them enacted, and resist the temptation to fall back on issuing executive orders to accomplish things if Congress drags its feet."🔒

Source: CFC Solutions 11-14-16

Co-op leaders discuss today's challenges at leadership roundtable

Cooperatives serving rural areas are successful when board leaders and managers are responsive to each other and to today's co-op member. To discuss new issues and learn from each other cooperative leaders from Illinois, Alabama, South Dakota, North Dakota and Indiana attended the Cooperative Board Chairmen's Roundtable sponsored by the Mid America Cooperative Council, Inc., Indianapolis, Ind., and the Association of Illinois Electric Cooperatives (AIEC), in Springfield, Ill. on Nov. 15 and 16.

The roundtable included sessions and guidance from Dennis Bolling, Past President and CEO of United Producers, a livestock marketing, finance and member services cooperative in Columbus, Ohio; Dr. Megan

Gerhardt, Associate Professor of Management in the Farmer School of Business and Director of the Buck Rodgers Business Leadership Program at Miami University, Oxford, Ohio; Dan Kelley, Vice Chairman of CoBank and former Chairman of Growmark, Inc., Normal, Ill.; and Duane Noland, President and CEO for the AIEC. The speakers provided tools to help board chairs guide their boards and cooperatives' management in making decisions that best serve their members' needs, while navigating through a variety of business risks and governance challenges.

Noland said, "Directors assume a demanding leadership role when they become the board chair. This roundtable session helped provide tools for their success and a great opportunity to network with others in the same position."🔒



Discussing cooperative board and management challenges during the November 15-16 Mid America Cooperative Board Roundtable are (l-r) Duane Noland, President and CEO of the AIEC; David Senn, Board Chairman, Jo-Carroll Energy, Inc.; Bernard Marvel, Board Chairman, Spoon River Electric Cooperative; Dan Kelley, Vice Chairman, CoBank and former Chairman of Growmark, Inc., and Dennis Fredrickson, AIEC Board Chairman and Board Member of Corn Belt Energy Corporation.

Voter turnout in rural America made an impact

As pundits continue to dissect Donald Trump's election as President, NRECA CEO Jim Matheson declared, Co-ops Vote, the nonpartisan campaign to boost rural voter turnout, a resounding success.

"We really do feel quite confident that our Co-ops Vote program had significant impact on voter turnout," said Matheson. "Rural America's voice was heard in this election and it will be a powerful voice moving forward."

That should well serve the more than 42 million electric co-op members in 47 states when it comes to

negotiating on key legislative or regulatory issues, such as the Farm Bill or the Clean Power Plan, he said.

Analyses by other organizations showed that rural voters came out in substantially higher numbers—an apparent reversal from previous years' elections where votes outside metropolitan areas were seen as dwindling.

"What we're looking for is flexibility to best serve our members with safe, reliable, affordable power



and that's going to be the focus of our association," Matheson said. "Rural voters spoke out with a loud voice about wanting to be a part of the future of this country and not be left out in terms of the 21st century economy. America's

electric co-ops will continue to be a voice at the table to offer substantive comments and constructive ideas about a better way to move forward for our member-consumers." ♡

Source: NRECA, Cathy Cash



On course for 10 percent

Hoosier Energy and its co-op partners in Indiana and Illinois dedicated four new 1-MW solar farms in October and plan to dedicate three more in 2017, the middle and back end of a package of 10 identical projects. Three were dedicated in 2015.

Each consists of 4,100 panels arrayed on 10 acres. They take about three months to build and interconnect and cost \$2.5 million. The debt is paid off over 20 years through a low-cost leasing arrangement.

"Hoosier Energy is focused on providing cost-effective renewable energy for member systems," said President and CEO Steve Smith. "Our board's foresight in embracing a voluntary renewables portfolio, and members' efforts to utilize resources on their own backyard, reflect a long history of cooperatives bringing affordable energy to members."

In 2014, the board set a goal of meeting 10 percent of members' energy requirements through renewables by 2025. Solar, landfill gas, coal-bed methane, wind and hydro make contributions, along with solar. ♡

Source: RE Magazine

Savings Illinois forests by cutting down trees

Conservationists normally plant trees – not cut them down. But, in an innovative project at Trail of Tears State Forest, that is precisely what the Illinois Department of Natural Resources (IDNR) is doing to restore a more open, sunny forest that can support a diversity of life.

"We intent to restore a healthier, more resilient forest. Wildlife should find this a better forest to call home," said IDNR forester David Allen, who co-led a collaborative work group of natural resource professionals, members of the community and conservation leaders through a two-year process to study the forest and determine what actions, if any, should be taken.

What group members found is that dramatic changes are sweeping Southern Illinois forests. Recent inventories of Trail of Tears State Forest reveal oak trees and native plants are on the decline. Oaks, the keystone tree species at the forest, saw numbers in the canopy drop by 50 percent between 1980 and 2014. At the same time, there was a steady increase in American beech and maple. Unfortunately, neither of the trees provides food for wildlife comparable to the oaks that are being lost.

Selectively removing trees should have a ripple effect in the Union County forest which spans more than 5,000 acres. It will restore the forest's wildflowers, grasses and shrubs. Bees, butterflies and other pollinators feast on these flowers. It will improve habitat for wildlife, such as birds that prefer grassy openings for nesting and foraging. The area's oak forests, woodlands and barrens are home to the state-threatened timber rattlesnake and rice rat, and, possibly the federally-endangered Indiana bat. In all, the forest is home to 23 species of conservation concern, a designation that indicates their populations are small and/or declining. ♡

USDA-RD awards IIRA \$200K grant to boost investment in Illinois cooperatives, community-owned businesses

Cooperatives and other community-owned businesses in Illinois will get a boost of investment thanks to the U.S. Department of Agriculture-Rural Cooperative Development Grant Program and the Illinois Institute for Rural Affairs (IIRA) at Western Illinois University.

Officials from USDA-Rural Development presented IIRA officials with a \$200,000 Rural Cooperative Development grant award October 26 on WIU's Macomb campus. The award enables IIRA's Illinois Cooperative Development Center (ICDC) to help start and retain cooperatives and other community-owned businesses in Illinois.

"Cooperatives—businesses owned and democratically controlled by people in the community—are a key way to provide needed services, create jobs and generate capital investment in rural Illinois," noted IIRA's Small Business Development Center Program Manager Sean Park.

Illinois Rural Development Director Colleen Callahan emphasized the importance of partnerships in driving

success for cooperatives and rural communities.

"The cooperative business model is an effective and flexible tool for community economic development," she added. "The more we work together the more we can accomplish. Our partnership with the Illinois Cooperative Development Center extends the impact of this investment many times over."

The relationship between Macomb Food Cooperative and McDonough Telephone Cooperative is a key example of such a partnership, according to IIRA Director Chris Merrett.

"It's been a privilege for IIRA to work with these co-ops to help them succeed and better serve their member-owners," Merrett noted. "McDonough Telephone is now assisting Macomb Food Co-op's start-up by providing use of the building for the Food Co-op's local marketplace operations. This illustrates the economic development snowball effect that a small investment in technical assistance can have." 



Officials from USDA-Rural Development presented IIRA officials with a \$200,000 Rural Cooperative Development grant award October 26 on WIU's Macomb campus. The award enables IIRA's Illinois Cooperative Development Center (ICDC) to help start and retain cooperatives and other community-owned businesses in Illinois. From L to R: Chris Merrett, IIRA director; Kathleen Neumann, WIU interim provost and academic vice president; Dwight Reynolds, area director, USDA-RD Illinois; Karen Peitzmeier, Illinois Cooperative Development Center, IIRA; and Margaret Bau, USDA-RD, co-op program.

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If your power is out and you haven’t already heard from your co-op, call the co-op office, then check social media like Facebook or Twitter for outage restoration updates. And be patient and supportive. They’re working as fast as they can in the worst possible conditions.

A message from your Touchstone Energy cooperative.



Touchstone Energy®
Cooperatives

The power of human connections®

Power from the earth

Surveying the future of Illinois coal

by Les O'Dell

With the flick of a fingertip, we brighten a room by flipping on a light switch. Feeling a sudden chill, we bump the thermostat and instantly our furnace responds with warm air. We even charge our computers, phones and – in some cases – our automobiles by plugging them into electrical outlets in our office, home or garage. Without fail, all of these things happen without hesitation and without as much of a thought as to where the energy for all of these uses, and thousands more, actually originates.

For nearly half of all Illinoisans, the electricity that powers our homes, workplaces and much of our lives comes from underground in the form of coal.

The history of Illinois coal is as deep as some of the 24 active mines in the state. European explorers first discovered coal in North America along the Illinois River in 1673. The U.S. Energy Information Administration reports that the coal reserves of the state account for about one-eighth of all recoverable coal reserves at producing mines in the nation and coal underlies roughly two-thirds of the state.

Today, coal is mined in 14 Illinois counties – mostly in the southern portion of the state – and the Illinois coal industry approaches one billion dollars of economic impact annually. More than 42 percent of the electricity supplied to Illinois users in a year comes from coal-fired power. The Illinois Coal Association says that about 4,000

people are employed by Illinois mines. However, that number, along with about every other statistic related to the Illinois coal industry, used to be larger.

“When amendments were made to the Clean Air Act in 1990, we as a state produced about 60 million tons of coal and had 10,000 employees,” recalls Phil Gonet, president of the Illinois Coal Association. He said increased federal regulation, including those more-stringent EPA regulations of 25 years ago as well as others which have followed, have caused many coal-fired plants which used to burn Illinois coal to switch to coal from Wyoming and other western states. This Wyoming coal has a lower sulfur content and therefore meets regulations



without the large investment in what are called scrubbers. “We’ve lost about one-third of the Illinois coal workforce,” he says.

In order to continue to burn Illinois coal electric co-ops and some other utilities added scrubbers in order to stay within federal guidelines. Many other utilities within the state switched to low-sulfur Wyoming coal and avoided installing expensive emission-control systems.

“The challenge for the coal industry is environmental regulation,” explains Don Gulley, President/CEO of Southern Illinois Power Cooperative. “We are a very capital-intensive industry and some of the decisions we make are 20- and 30-year decisions, yet regulations can change every four or eight years.”

Southern Illinois Power Cooperative (SIPC) is a coal-burning electric generation plant, located on Lake of Egypt south of Marion, which provides wholesale electric generation and transmission to seven rural electric cooperatives in the area south of Interstate 64. Gulley says the plant burns about a million tons of Illinois coal annually in two units fit with sulfur reducing technology. These scrubbers and the design of the two units allows SIPC to use locally-mined coal.

“It’s a win-win with our member-owners,” he says. “We’re able to produce affordable energy and provide jobs in our region.” Gulley says a recent economic impact study showed that Southern Illinois Power Cooperative generates about \$800 million for the region. Using locally-mined Illinois coal also avoids the high cost of transportation some Illinois generating plants pay for rail shipment of Wyoming coal.

Even with plants like SIPC and Prairie State Energy Campus, located near Marissa, using Illinois coal, a majority of what is mined in the state is shipped elsewhere. “We’ve had to find other markets,” Gonet says. “We ship a lot up the Ohio River to Indiana, Ohio and Kentucky and we



The Southern Illinois Power Cooperative’s Lake of Egypt power plant began operations in 1966 and has always used locally-produced coal, even when other Illinois utilities began using low sulfur coal from Wyoming. The co-op met EPA sulfur emission standards by adding pollution control equipment called scrubbers.

send a lot down the Mississippi to Florida and the rest of the Southeast.” Much Illinois coal, he adds, is shipped overseas, particularly to China and India, two “coal hungry” nations.

However, Gonet says he is optimistic that a moderating of new federal regulations could lead to increased coal production and benefit many smaller mining communities that rely on the

industry for jobs.

“Take for example, Franklin County in Southern Illinois,” he says. “It was the leading coal county in the state and then went without a coal mine for 10 years. At one time, almost everyone there had something to do with coal, and when the mines shut down, you saw people leaving and going other places for jobs.”

The county is doing better now, says Rick Litton, Executive Director of the Franklin County Economic Development Corp. “Coal built our county,” he explains. “At one time, the economy was wealthy with employment resulting from the mines, but it really fell off.”

Litton says the county now has two active mines and that’s a boost to the area. “Coal jobs are good, well-paying jobs; probably some of the better-paying jobs in our county. When the mines slow, it has a domino effect on everything else from restaurants to service industries. Coal is very important to Franklin County.”

Coal miners are well-trained, hard-working men and women. The Illinois Clean Coal Institute says the average miner is 45 years old and has 16 years of experience. Gonet says miner salaries average \$80,000 – money that goes a long way in small rural communities where mines are found.

Litton estimates the county’s two mines employ 300 to 500 people, plus he says there are more than two dozen coal-related businesses in the county that provide equipment and services to the mine.

Litton, Gonet and others both in and out of the coal industry keep a close eye on jobs and the regulations that impact mining. No group, however, is more anxious about the future of coal than the miners themselves.

“Guys are concerned about the future, wondering if it will last. They’re always worried,” says Dennis Trinkle of Pinkneyville who works underground at Peabody’s Gateway mine near Coulterville. He is wary of increased regulation. “If you shut down coal

in America, you haven’t solved the pollution issue. China and India burn 80 percent of coal and they don’t use scrubbers at all. There’s lots of misunderstanding and fear.”

Many industry leaders hope that Illinois coal has a bright future. They point to Prairie State Energy Campus as a perfect example of making coal both a sustainable and secure source of energy. Prairie State generates 1,600 megawatts of power for more than two million families across the Midwest. The facility is owned by municipalities and electric cooperatives. Started in 2012, Prairie State uses what is called supercritical boiler technology to burn Illinois coal under higher pressure and with higher temperatures than most coal-fired generating plants. The result is a higher efficiency and 15 percent greater energy output. The coal is mined at the same site, further

increasing efficiency and reducing cost.

“That helps us keep our costs low,” says Don Gaston, president and CEO of Prairie State. “This is one of the most advanced coal-fired plants in the country with state-of-the-art environmental controls. We are prepared for very tough environmental regulations going forward.”

Gaston says Prairie State includes more than \$1 billion in emission control efforts.

“This facility burns a fuel source that is readily available in Illinois so we don’t have to import coal from out of state or from overseas. It’s mined by our residents, burned by our residents and helps to fire the Illinois economy.

“I hope that Prairie State can prove that coal has a future,” he continues. “We can burn Illinois coal and be competitive in the market. I believe that we are a role model on how to



At Prairie State’s Lively Grove coal mine, miners use continuous mining methods, employing heavy equipment for room and pillar mining. The coal mine is the only source of coal for the campus and miners will mine nearly 7 million tons each year. After being mined, the coal is ground to about the consistency of talcum powder.



During a tour of the Abbott Power Plant at the University of Illinois, co-op employees learned about the plant's long history of innovation and future research plans to demonstrate how 90 percent of the CO₂ from the coal plant can be captured, plus demonstrate a viable pathway for commercial reuse of the CO₂.

operate a coal plant for the next 30 to 40 years.”

Researchers at the Illinois Sustainable Technology Center at the University of Illinois are looking at ways to ensure coal's place in the coming decades by finding ways to not only reduce emissions, but to capture and utilize carbon dioxide from burning coal. Tomasz Wiltowski and others at Southern Illinois University's Advanced Coal and Energy Research Center are doing similar work, looking for ways to make coal easier to mine, cleaner to burn and especially finding other possibilities for its utilization.

“When I find another use for coal that is environmentally acceptable, then mining will (survive),” he told the Chicago Tribune. “Right now, coal goes only to power plants to produce electricity. We need another application.”

Dr. Kevin O'Brien, Director of the Illinois Sustainable Technology Center at the University of Illinois, also believes coal has a sustainable future if the CO₂ produced by burning coal can be captured, stored and

recycled in new ways. O'Brien and his team of researchers are conducting research at the University's Abbott Power Plant. Recently the University of Illinois received Department of Energy funding to establish the feasibility of a commercial-scale CO₂ geologic storage complex within the Mt. Simon sandstone formation located in Macon County, Ill. for industrial-sourced CO₂. City Water, Light and Power in Springfield and the Abbott Power Plant will be evaluated as CO₂ sources.

O'Brien told the state's electric co-op board members at a meeting this summer that he believes a market can be developed making reuse of captured CO₂ a viable and a sustainable option. Coal ash from power plants is already an example of this concept of recycling from coal plants. Coal ash has been used in concrete, dry wall and other products for many years. CO₂ recycling and reuse could create new jobs as well as new products.

Others believe coal's future may include diversification. A Carbondale-based company called Thermaqtica

is developing what it calls a novel, environmentally-friendly method of converting coal and other biomass resources into polymers that can be further processed into plastics for water bottles and other products.

There is plenty of coal available in Illinois. Gonet points to Illinois State Geographical Survey data that nearly 200 billion tons of coal still lies beneath the Illinois prairie and estimates are that more than half of it is recoverable.

“It gives me real optimism that in Illinois we have a lot of coal,” he says. Gulley of the Southern Illinois Power Cooperative agrees and says Illinois coal will continue to come first for his facility.

“Without Southern Illinois coal, we would struggle and it would hurt the local economy, plus electricity rates would go up for all of our members. Our plans are for our plant to continue to burn Illinois coal while meeting or exceeding environmental regulations,” he says. “Coal will continue to be a viable option for the future.”

Empower yourself when the lights go off

High winds and winter storms can unfortunately cause power outages. With colder temperatures during the winter months, preparation is important in being able to stay safe and warm should the electricity go out. Safe Electricity shares tips to help you prepare for winter power outages.

If power lines go down because of a winter storm, you may be in for a prolonged power outage as utility crews work to get the lights back on. Have an emergency kit prepared to help you and your family weather the storm and the outage safely and comfortably. Some of the items this kit should include are bottled water, non-perishable food, flashlights, a weather radio, and extra batteries.

Before a storm ever begins, tune into your local weather service for the weather forecast. It is important to know the differences between various watches and warnings.

- **Winter Storm Watches** signify that a winter storm event, including heavy snow, heavy sleet, or ice, are likely within the next few days. You should be alert, as this means adverse conditions could begin within the next 24 to 72 hours.
- **Winter Storm Warnings** call for a winter storm event to begin within the next 12 to 36 hours. Those in the range of the warning should be mindful of the impending conditions and consider canceling plans to travel outside of the home.

If bad weather is headed your way, it is a good idea to keep your cell phones and other electronic devices charged and ready for use.

When power is lost, notify your utility of the outage. Unplug all sensitive electronics to avoid a surge when electricity is restored. Leave one light switched on as a quick reminder that the power is restored.

Stay inside. Dress in warm, dry



layers and wear a hat, which can help keep in heat. Be aware of the temperature in your home. Cover windows at night, close off unneeded rooms, and place draft blocks at the bottom of doors to minimize cold air entering the house.

If you use a standby generator for temporary power, make sure it has a transfer safety switch. If you use a portable generator, never plug it into a wall outlet. These precautions prevent backfeed, which occurs when electricity travels from the generator back through the power lines. Backfeed creates danger for anyone near the lines, including the crews working to restore power. Also, never run a generator inside your home or garage as the carbon monoxide gas it produces can be deadly.

If you are using an alternative heating source during an outage, know how to use it safely and have all supplies for it gathered. Never heat your home with stoves or grills.

According to USA Today, 80 million Americans were impacted by a severe winter storm in January 2016. Hundreds of thousands were left without power as the severe weather conditions prevented electrical repair

efforts. The high winds that accompanied blizzard conditions brought down many power lines, and through the storm, disaster crews urged residents to stay sheltered inside.

During an outage, only venture outside if absolutely necessary. Be on the lookout for downed electrical equipment. Snow can obscure such an electrical hazard, so take caution when driving.

“Never drive over a downed line because that could pull down the pole and other equipment, causing additional hazards,” advises Natalie Hemmer, Safe Electricity Advisory Board member. “If you see a downed line, do not get out of your car. The safest place is inside the vehicle. Contact the utility immediately.”

For more winter electrical safety tips, visit SafeElectricity.org.



Molly Hall is Director of Safe Electricity. E-mail molly-hall@SafeElectricity.org. Safe Electricity is a public awareness program of the Energy Education Council. www.EnergyEdCouncil.org





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Keeping gardening resolutions

A new year brings new perspective to gardening, or at least the opportunity to say you're going to try something new and different. Or you may just make that resolution to keep plugging along the same way.

Gardening is one of those few joys that is different yearly. There are no identical years. Winter can be mild or seem like Hades is freezing over forever. Spring can arrive at the end of February, or stay hidden beneath a white blanket until April. And, when spring does arrive, she may draw it out like an opera singer's note, or truncate it quickly allowing summer to take hold in a matter of weeks.

If you garden by the seat of your pants figuratively, your garden may suffer but you probably don't fret that much. But, if you think through your planning and plantings, things tend to work out better. True, you may be fretting the season more and wringing your hands and sweating it out, figuratively and literally.

Gardening resolutions, like most, are easier to make than to keep, especially when gardening starts outdoors at least two to three months from January 1. It's better off not making them and concentrating on some potential new gardening practices, if you can remember. If not, write them down and try to remember where you put them.

If you were to ask me, the following are four practices you should consider for 2017. Ideally, implementing them would be great.

1. Cut down on fertilizer use, or at least time and apply the fertilizer where it is the best.

We tend to equate fertilizer with food and growth. Plants can only take in so much so fast. While some of the excess may stay around, much of it moves through the soil profile and gets into the groundwater, or it could just wash away.



New Year Resolutions

1. Cut down on fertilizer use
2. Consider alternatives to pesticides
3. Plant more trees
4. Try something new

Slow-release or water-insoluble fertilizers break down slowly and stay around longer. They provide feeding bit by bit; so do compost and well-composted manures.

But more importantly, do you need the fertilizer? Are the plants growing enough? You will need fertilizer for annual vegetables and flowers.

And do you need every part of the fertilizer? A soil test can tell you if phosphorus and potassium are really needed. In many cases, they aren't. Excess phosphorus can also wreak havoc with water supplies.

2. Think "do I really need to spray that pesticide?"

Decades ago, we walked bean fields in the summer. It was hot and crummy work, especially getting up at 5 a.m. to beat the heat. We pulled weeds out of lawns using a dandelion fork, which still makes one of the most glorious sounds as it does its job. We picked off rotting fruit.

In other words, think cultural and physical control options. Think about them strongly!

3. Can I plant more trees?

Of course, the answer is always yes,

though planting the trees may not occur in your yard. If you can plant them on your property, that's great. If you have to plant them in a park, school yard, or someplace else, that's okay.

Trees are the backbones of a landscape, but they also bring in lots of wildlife that can help control insects. They can cool the yard and house during the winter and shelter buildings from winter winds. They are an investment in the future, not the present.

4. Don't be afraid to tear out something old and try something new.

Change can be hard, but it can bring so much unanticipated wonder. If it doesn't work, well at least you tried something new in 2017. ♡



David Robson is Extension Specialist, Pesticide Safety for the University of Illinois. drobson@illinois.edu



Eye Doctor Helps Illinois Legally Blind To See

High Technology For Low Vision Patients Allows Many To Drive Again



For many patients with macular degeneration and other vision-related conditions, the loss of central visual detail also signals the end to one of the last bastions of independence: driving. A Mascoutah optometrist, Dr. Marianne McDaniel, is using miniaturized telescopes that are mounted in glasses to help people who have lost vision from macular degeneration and other eye conditions.

"Some of my patients consider me the last stop for people who have vision loss," said Dr. McDaniel, one of only a few doctors in the world who specialize in fitting bioptic telescopes to help those who have lost vision due to macular degeneration, diabetic retinopathy, and other debilitating eye diseases.

Imagine a pair of glasses that can improve your vision enough to change your life. If you're a low vision patient, you've probably not only imagined them, but have been searching for them. Bioptic telescopes may be the

breakthrough in optical technology that will give you the independence you've been looking for. Patients with vision in the 20/200 range can many times be improved to 20/50 or better.

Macular degeneration is the leading cause of blindness and vision loss in people over 50. Despite this, most adults are not familiar with the condition. As many as 25% of those over the age of 50 have some degree



A scene as it might be viewed by a person with age-related macular degeneration.

of macular degeneration. The macula is only one small part of the retina; however, it is the most sensitive and gives us sharp central vision. When it degenerates, macular degeneration leaves a blind spot right in the center of vision, making it difficult or impossible to recognize faces, read a book, or pass the driver's vision test.

Nine out of 10 people who have macular degeneration have the dry form. New research suggests vitamins can help. The British medical journal

BMC Ophthalmology recently reported that 56% of patients treated with a high-dose combination of vitamins experienced improved vision after six months.

While age is the most significant risk factor for developing the disease, heredity, smoking, cardiovascular disease, and high blood pressure have also been identified as risk factors.

Macular degeneration accounts for 90% of new legal blindness in the U.S. While there is currently no cure, promising research is being done on many fronts. "My job is to figure out everything and anything possible to keep a person functioning, especially driving," says Dr. McDaniel.

"Bioptic telescopes can cost over \$2,000," said Dr. McDaniel, "especially if we build them with an automatic sunglass."

"The major benefit of the bioptic telescope is that the lens automatically focuses on whatever you're looking at," said Dr. McDaniel. "It's like a self-focusing camera, but much more precise."

To learn more about bioptic telescopes or to schedule a consultation with Dr. McDaniel, give us a call at 1-802-350-6599. You can also visit our website at:

www.lowvisionofsouthil.com

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Cost: Donation of \$25 includes shipping

Details: Soft-backed, spiral bound

Pages of recipes: 316

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Aunt Hilda's Biscuits >

- | | |
|------------------------|-------------------|
| 2 c. flour | 2 T. sugar |
| 4 t. baking powder | 1/2 c. shortening |
| 1/2 t. cream of tartar | 1 egg, unbeaten |
| 1/2 t. salt | 2/3 c. milk |

Combine the flour, baking powder, cream of tartar, salt and sugar. Cut in the shortening until mixture resembles small peas. Stir in the egg and milk until mixture is a stiff dough. Knead about 5 times. Roll to 1/2-inch thick. Cut out shapes with a 2-inch round biscuit cutter. Place on ungreased cookie sheet and bake at 450 degrees for 10-15 minutes.



BLT Salad

- | | |
|----------------------------|--|
| 1 lb. bacon | Salt to taste |
| 3/4 c. mayonnaise | 1 head romaine lettuce, rinsed, dried and shredded |
| 1/4 c. milk | 2 large tomatoes, chopped |
| 1 t. garlic powder | 2 c. seasoned croutons |
| 1/8 t. ground black pepper | |

Place bacon in a large, deep skillet. Cook over medium heat, turning frequently, until evenly browned. Drain, crumble and set aside. In a blender or food processor, combine mayonnaise, milk, garlic powder, and black pepper. Blend until smooth. Season the dressing with salt. Combine lettuce, tomatoes, bacon and croutons in a large salad bowl. Toss with dressing and serve immediately.

White Cheddar Beer Cheese Soup

- | | |
|----------------------------|--|
| 1/2 c. flour | 1/8 t. white pepper |
| 1/3 c. butter or margarine | 3 c. chicken broth |
| 1 garlic clove, pressed | 1-1/2 c. half and half |
| 1 T. onion, grated | 1 c. beer |
| 1 t. Worcestershire sauce | 1 - 16 oz. bag shredded sharp white cheddar cheese |
| 1/2 t. salt | Buttered croutons |
| 1/2 t. dry mustard | |

In a large saucepan, melt the butter and stir in the flour. Cook 1 minute stirring constantly until smooth and bubbly. Add garlic, onion, Worcestershire sauce, salt, mustard and pepper. Blend well. Gradually stir in the chicken broth, half and half and beer. Cook until thickened, stirring constantly. Add cheese, stir until melted. Heat gently, stirring frequently, DO NOT BOIL. Garnish with croutons.

Kielbasa Casserole >

- | | |
|---|-------------------------------------|
| 1 Kielbasa link, cut into bite-sized pieces | 1 small jar banana peppers, drained |
| 6-8 small red potatoes, cut into chunks | 1/4 stick of butter |
| 1 jar sauerkraut, drained | Dash of salt |
| 4-6 mini sweet peppers, diced | Dash of pepper |
| | 1 to 2 c. white rice, prepared |

Preheat oven to 375 degrees. Mix all ingredients, except the rice, together and pour into baking dish. Cover with foil. Bake for 1-1/2 hours. Remove from oven and stir in rice. Serve.





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Roasted Vegetables ^

- | | |
|---------------------------------------|---|
| 1 sm. butternut squash, cubed | 1 T. fresh thyme, chopped |
| 2 red bell peppers, diced | 2 T. fresh rosemary, chopped |
| 1 sweet potato, peeled and cubed | 1/2 c. olive oil |
| 3 Yukon Gold (baking) potatoes, cubed | 2 T. balsamic vinegar (or substitute lemon juice) |
| 1 red onion, quartered | Salt and fresh ground pepper to taste |

Preheat oven to 450 degrees. In a large bowl, combine squash, red peppers, sweet potato and Yukon Gold potatoes. Separate the red onion quarters into pieces and add to mixture. In a small bowl, stir together thyme, rosemary, olive oil, vinegar, salt and pepper. Toss with vegetables until coated. Spread evenly in a large roasting pan sprayed with non-stick coating. Roast for approximately 40 minutes, stirring every 10 minutes, until vegetables are cooked through and browned.

Lemon Brownies

- | | |
|--------------------------|-----------------------|
| 3/4 c. flour | Zest from 1/2 lemon |
| 3/4 c. sugar | |
| 1/4 t. salt | Glaze: |
| 1 stick butter, softened | 1/2 c. powdered sugar |
| 2 eggs | 1 T. lemon juice |
| 1 T. lemon juice | Lemon zest |

Preheat oven to 350 degrees. Combine the flour, sugar and salt. Mix in softened butter. In a separate bowl, whisk together the eggs, lemon juice and zest. Add to the flour mixture and mix well. Pour into a greased 8x8-inch pan. Bake for 25 minutes. (You can double the recipe and bake in a 9x13-inch pan for 30 minutes). Remove from oven and let cool. Combine all glaze ingredients and spread over cooked brownies.



Recipes prepared, tasted and photographed by Valerie Cheatham. For more recipes and photos go to www.icl.coop. Questions? Email finestcooking@aiec.coop.



Visit www.icl.coop to see more Illinois Country Living recipes.

Sicilian Sausage Soup v

- | | |
|--|--------------------------|
| 1/2 lb. sweet Italian sausage, casings removed | 2 cloves garlic, chopped |
| 1 lg. onion, chopped | 1/2 c. Orzo pasta |
| 1 lg. can crushed tomatoes | 1/4 t. salt |
| 1 reg. sized can stewed tomatoes | 1/8 t. pepper |
| 3-1/2 c. chicken broth | 1 t. sugar |
| 1 t. sweet basil | 1/2 c. Parmesan cheese |

Cook sausage, drain. Saute onion and garlic in small amount of the drippings. Add to tomatoes in a large sauce pan. Add sausage, broth and basil. Bring to a boil and cook for 5 minutes. Stir in Orzo, salt, pepper and sugar, reduce heat. Simmer for 30 minutes or until Orzo is tender. Sprinkle individual servings with Parmesan cheese. Serve with garlic bread.



Remodeling the heart of your home

Tips for an efficient kitchen remodel

By Pat Keegan and Amy Wheelless

Dear Pat: My family is planning to remodel our kitchen in the coming months. The remodel will be pricey, but we hope to incorporate energy efficient features that will help reduce our energy costs. What are some things we can do to make sure our kitchen is as energy efficient as it can be? - Carlos

Dear Carlos: Undertaking a remodeling project in any part of your home gives you the chance to make a space work better for your needs—including reducing your energy use. For many households, the kitchen is the heart of the home—meaning it is used the most—so incorporating energy efficiency measures here can have a real impact on your energy bills.

Before starting a remodel, consider having a home energy audit completed by a certified professional. This energy assessment can help you identify major efficiency issues in your kitchen that you can address as you remodel. The audit can also identify other large efficiency investments your home may need that could make sense to invest in at the same time. For example, upgrading your heating and cooling system and ductwork during the same time as your kitchen remodel could be more cost-efficient than completing two separate projects.

Below are some additional tips and thoughts to consider while you go through your kitchen remodel:

Kitchen layout and design

During a remodel, homeowners often want to expand the kitchen. However, bigger isn't always better—and enlarging the footprint of your kitchen will likely mean higher heating and cooling bills. Consider whether a more efficient layout in your kitchen could prevent a need for expansion.

The design phase of your project is also when you will decide on placement



Natural lighting, combined with overhead and task lighting, can make a kitchen functional and energy efficient.

Flickr user: angryfrench (https://lic.kr/9sg6zr)

of your major appliances and kitchen features. There may be opportunities to shorten plumbing runs to make hot water delivery to your sink and dishwasher more efficient and to add plumbing insulation to reduce heat loss. Also think about heat sources in your kitchen and how they will affect your refrigerator—placing your refrigerator in a very sunny spot or next to your oven will make this appliance work harder and use more energy.

Appliances

If you are replacing any kitchen appliances, look for ENERGY STAR-certified refrigerators, dishwashers and freezers to help save energy. In particular, refrigerators that are ENERGY STAR-certified will use about 10 percent less energy than standard models—and up to 40 percent less energy than a refrigerator from 2001. Once it is replaced, rather than moving your old refrigerator into the garage where it could use even more energy, ask your electric co-op how you can recycle it. They may even offer a program that hauls away your older appliance.

Lighting

Many remodeled kitchens incorporate lots of windows to ensure a bright, naturally-lit kitchen. Using natural light can make your kitchen feel more open and reduce reliance on overhead lights, but beware of overheating the room in

the summer. When thinking about your windows and lighting, consider your home's climate and orientation and how to use natural light strategically.

In addition to overall lighting, a kitchen needs bright task lighting. Installing individual task lights on separate switches can help minimize the energy you use for lighting. Throughout your kitchen, install ENERGY STAR light fixtures and bulbs,

which are certified for energy savings, high quality and performance.

Kitchen ventilation

Increasingly, homeowners are installing professional-looking hoods above stoves in their remodeled kitchens. Be sure to pick a high-efficiency model sized for your needs and install it so that it vents directly to the outside. Remember that running a hood exhaust fan more frequently than needed can make your heating and cooling system work harder, as conditioned air is pulled outside.

Overall comfort

The kitchen is often a family's gathering place, so installing zonal heat in this space could make sense—you could turn up the thermostat for the kitchen without warming the entire home.

Other ways to ensure that the kitchen is a comfortable room for your family are to address any building envelope issues noted in your energy audit: for example, increase wall and attic insulation, address duct and air sealing needs, invest in efficient windows and install window coverings that help block hot summer sun and blustery winter wind.

This column was co-written by Pat Keegan and Amy Wheelless of Collaborative Efficiency. For more ideas on energy efficient kitchen remodeling, please visit: www.collaborativeefficiency.com/energytips.

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LIGHTS OUT!

50 years after the northeast blackout, challenges remain for the electric blacktop

By Richard G. Biever

Where were you when the lights went out?" became a catch phrase more than 50 years ago, when The Great Northeast Blackout occurred. It was joked about in popular TV shows of the day like "Green Acres" and "Bewitched." But to utilities and policy makers on both sides of the Great Lakes, the blackout was no laughing matter. It exposed issues in the humongous North American electrical highway called "the grid," the largest machine mankind ever built, that interconnects power generators, power lines and the electric consumers.

"That was the first blackout of that scale in the United States and really got the attention of our government," said Barry Lawson, Associate Director of Power Delivery and Reliability with the National Rural Electric Cooperative Association.

Soon after, Congress demanded improvements. Utilities that generated and transmitted electricity came together to create a voluntary organization — the National Electric Reliability Council (NERC) — to establish standards and policies and provide peer oversight. "It put into place a lot of practices and policies that the industry agreed to do," Lawson said.

Since then, innovations in technology have allowed for better gathering of data and monitoring of the flow of power across the grid. But at the same time, changing laws and regulations fundamentally shifted the way the grid and utilities operate. A whole new set of challenges has arisen — affecting the largest power producers down to the smallest distribution cooperatives.

A PATCHWORK OF DESIGN

North America's electric grid is truly a marvel of engineering, but it wasn't initially designed to be an interconnected grid. It was created as needed — over the course of 100 years — one section at a time.

The traditional utility model was vertically integrated. In a given service territory, one utility owned and operated the power plants and the transmission and distribution power lines to meet the needs of the consumers in that territory.

Over time, utilities connected with neighboring utilities for mutual benefits — like backup power when needed during planned or unplanned outages. The networks grew. Today's grid includes 3,360 utilities and other entities operating 7,677 power plants sending energy across 450,000 miles of transmission lines and 5.5 million miles of distribution.

There are actually three power grids in the 48 contiguous states: the Eastern Interconnection (generally for states east of the Rocky Mountains); the Western Interconnection

Understanding 'The GRID'

Getting electricity from a power plant to your home, farm, business or industry requires a series of coordinated processes across many miles of interconnected wires. This massive system of generation, transmission and distribution is simply called "the Grid," the largest, most complicated machine ever built by man.

GENERATION

Electricity starts at a generator which can be powered by a burning fossil fuel, like coal or natural gas, by maintaining a nuclear reaction, or by collecting wind, solar or water energy.

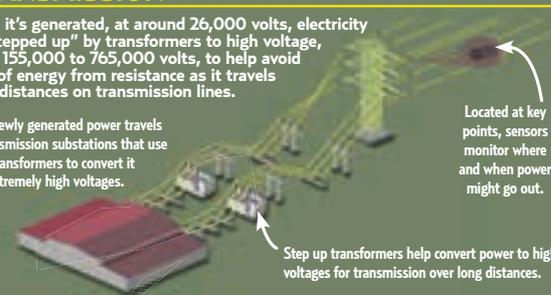


TRANSMISSION

After it's generated, at around 26,000 volts, electricity is "stepped up" by transformers to high voltage, from 155,000 to 765,000 volts, to help avoid loss of energy from resistance as it travels long distances on transmission lines.

The newly generated power travels to transmission substations that use transformers to convert it to extremely high voltages.

Located at key points, sensors monitor where and when power might go out.



Step up transformers help convert power to high voltages for transmission over long distances.

DISTRIBUTION

Transmitted electricity is then stepped down to lower voltages, typically 7,200 volts, at distribution substations and is sent out over the local power lines and poles owned and maintained by your electric cooperative.

Step down transformers convert the voltage carried on distribution lines outside your home to 240/120 volts for your home or business use.



INTERCONNECTIONS

The electric grid operates in three sections: the Western Interconnection, the Eastern Interconnection, and the Electric Reliability Council of Texas (ERCOT). The grid includes approximately 3,000 utilities and other entities, 7,000 power plants and 450,000 miles of transmission lines.



SOURCES: U.S. DEPARTMENT OF ENERGY; NRECA

(for states from the Rockies to the Pacific Ocean); and the Electric Reliability Council of Texas (which covers approximately 85 percent of Texas). The three grids operate as islands, independent of each other for the most part.

GIRDING OF THE GRID

After NERC came along in 1968, overall reliability improved for 30 years. “It worked well in the vertically-integrated industry-owned transmission model,” said Lawson.

Congress tossed the monkey wrench of unintended consequences into the already complicated grid works in 1992 when it deregulated the generation of electricity. The “vertical” began to break down as competitive independent generators, with no transmission operations or obligations to serve a given territory of consumers, entered the wholesale marketplace. Owners of existing transmission lines were required by law to allow open access to the network.

By the late 1990s, with all comers allowed to enter the fray, voluntary compliance with NERC standards and policies became inconsistent. New reliability problems began showing with outages in the Western grid. Lawmakers and utility industry folks talked about establishing additional oversight.

“It was not clear if this voluntary regulatory group using peer pressure would be able to continue to ensure the high level of grid reliability that the utility industry provided,” Lawson said.

That answer became clearer Aug. 14, 2003.

During that hot afternoon when power use was high, a series of malfunctions, mishaps and mistakes escalated into the worst blackout in North American history.

It started when heavily loaded transmission lines sagged into overgrown trees in Northern Ohio, causing those lines to fail. Alarms malfunctioned, and the severity of the situation went unrecognized until it was too late. Just as in 1965, a blackout cascaded across the Northeast. Some 300 transmission lines failed. Well over 50 million people were affected throughout Ohio, Michigan, Pennsylvania, New York, Massachusetts, Connecticut and Vermont. The outage also spread into Ontario, Canada.

An estimated \$10 billion economic loss was attributed to the blackout. While the vast majority of consumers had electricity restored within 48 hours, some parts of the United States did not have power for four days.

The 2003 blackout pushed reforms into “hyper-speed mode,” Lawson said. “Congress finally said, ‘We need something with teeth that’s mandatory and enforceable.’”

The ensuing Energy Policy Act of 2005 gave the Federal Energy Regulatory Commission authority over reliability. FERC chose NERC as the oversight organization, giving it new powers. In 2007, NERC’s 83 Reliability Standards were approved by FERC as the first set of legally enforceable standards for the U.S. bulk power system.

COMING DOWN THE LINES

Even though electricity is at our fingertips almost 100 percent of the time, getting it to our homes and workplaces from where it’s generated is a challenging process. Because large amounts of energy cannot be stored, electricity must be produced as it is used.

The grid must respond quickly to shifting demand and continuously generate and route electricity to where it’s needed the most. But significant changes and challenges are coming down the line. Issues affecting the grid include:

- **AGE.** Parts of the electrical transmission facilities in the United States are many decades old. Given the age, some existing lines have to be replaced or upgraded and new lines may need to be constructed to maintain the electrical system’s overall reliability.
- **NEW TECHNOLOGY.** Upgrades in technology now let consumers connect their own home-generated electricity to the grid — using solar panels or wind generators. Investments are being made in smart grid digital technology to more efficiently manage energy resources. A smarter grid will be needed to integrate intermittent renewable energy like solar and wind.
- **COST.** The smart grid and better reliability will not be free. According to a study done by the Electric Power Research Institute, creating a smart grid could cost up to \$476 billion over the next 20 years. But EPRI noted the country is likely to recoup those costs — and then some. The report said the smart grid could provide up to \$2 trillion in benefits over a 20-year period, such as power reliability, integration of renewable energy, stronger cybersecurity and better management of electricity demand.
- **RENEWABLES.** Federal climate change policy will rely on boosting energy efficiency and developing more sources of renewable energy. Both will impact the grid. Renewable energy resources will likely require construction of entirely new transmission lines. Wind, solar, geothermal, and other forms of renewable energy typically share a common problem. The areas where the power can be generated best are not near population centers. New transmission lines must be built to move the power.
- **SECURITY.** The grid may be vulnerable to both physical and cyber attacks that could cause blackouts.

Are these new challenges capable of creating a cascading blackout on the scale of the one in 2003 or 1965? “You can’t say it could never happen again. There are still things we haven’t planned for or have protections for, or are too costly to plan for,” Lawson said.

This article and accompanying sidebars were compiled, written in most part, and edited by Richard G. Biever, senior editor of Electric Consumer. Contributions were edited from articles by the National Rural Electric Cooperative Association, U.S. Department of Energy, the U.S. Energy Information Administration. Other sources of information included Wikipedia, the American Public Power Association and NERC.

How to spot a scam

In just a few easy steps, you too can become a millionaire! If you follow these simple instructions, and pay a low monthly price of \$29.95, you will be on your way to turning your life around! Sound too good to be true? How about this one? Hello sir/ma'am, this is your electric utility calling to collect an overdue payment. Unless you make a payment of \$326.56 in the next hour, we will be disconnecting your power. Does it sound believable? Would you want to take the chance of having your power cut?

It is unfortunate but true in today's world that we constantly need to be on the lookout for fraud or scams. As attackers increase their skills, it is becoming more difficult to spot a scam and I want to give you some things to be on the lookout for that may prevent you from becoming a victim.

There seems to be more and more scams that hit my email inbox on a weekly and sometimes daily basis, not to mention all the fraudulent phone calls I receive despite adding my number to the "Do Not Call List." At the core of every scam is some type of "bait." It is the part of the scam that makes us pause for a moment and ask ourselves, could this be true? To make matters worse, websites today are tracking our browsing and purchasing history. Therefore, you will often see advertisements for products that you are interested in while browsing the web. Attackers can leverage this information to create personalized scams which make the "bait" more enticing.

Everything on the internet is true, right? We all know this isn't the case but everyone likes a good story. We are seeing an abundance of fake news on social media these days and it was especially true with the recent elections. These stories were fabricated to get you to click on them and in turn would return a profit to the advertiser. These are just some of the tactics used

by scammers. With so many different methods, how does a person identify if something is real or a scam?

Is this too good to be true? This is one of the first questions I ask myself when determining if something is a scam. Often, if it sounds too good to be true, it probably is. Is there an undue sense of urgency? In other words, scammers will try to "rush" you into making a decision so that you can't give it adequate thought. This should be a red flag indicating that you need to take a closer look and verify the facts. Another thing to look for are ultimatums. If you don't do "this," then this "bad thing" will happen to you. This is the case with the delinquent utility scams that are still circulating. Someone pretending to be from your local electric cooperative calls and tells you that if you don't pay your bill they are going to shut off your power. Oftentimes they will request you purchase a prepaid debit card to make payment and avoid disconnection. They will also give you a very short amount of time to make the payment.

Let's be clear, your electric cooperative will NEVER require you to pay your bill with a prepaid debit card. Members with delinquent accounts WILL receive an

advance disconnection notification. Unfortunately, there is no magical formula I can give you to tell if something is a scam, but a little common sense goes a long way. Also, taking the time to slow down and digest what is in front of you, before making any decisions, will help bring clarity into any situation. When in doubt, error on the side of caution. Sometimes it is a good idea to do a search for the company in question and simply call and verify. Just be sure you look up the number yourself. Don't call the number listed on caller id or the one given to you.

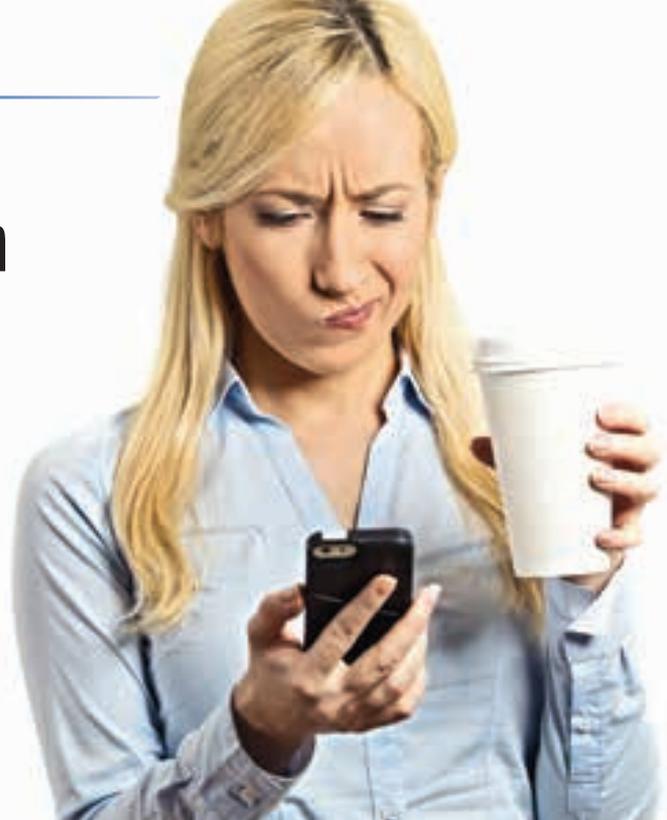
The next time you find yourself questioning whether something is a scam, take a moment to slow down and assess the situation. When in doubt, error on the side of caution. Chances are good that life WILL continue if you DON'T click on that link.

 **Comment on this column**

Visit icl.coop and click on Powered Up to respond. Your response might even be included in a future column.



Dan Gerard, CISSP, is the IT Manager for the Association of Illinois Electric Cooperatives in Springfield.



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12,000 LB. ELECTRIC WINCH WITH REMOTE CONTROL AND AUTOMATIC BRAKE

BADLAND ITEM 61256
61889
60813 shown

SAVE \$453

\$299⁹⁹

Customer Rating **★★★★**

~~\$309⁹⁹~~ comp at \$752.99

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SUPER COUPON

SOLAR ROPE LIGHT

one stop gardens
ITEM 62533/68353 shown

Customer Rating **★★★★**

SAVE 66%

\$9⁹⁹

~~\$13⁹⁹~~ comp at \$29.97

16 ft. lit, 22 ft. long

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SUPER COUPON

RAPID PUMP® 4 TON HEAVY DUTY STEEL FLOOR JACK

PITTSBURGH AUTOMOTIVE
ITEM 60706/62319
68056 shown

Customer Rating **★★★★**

SAVE \$80

\$119⁹⁹

~~\$129⁹⁹~~ comp at \$199.99 • Weighs 105 lbs.

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SUPER COUPON

MOVER'S DOLLY

1000 lb. capacity
Customer Rating **★★★★**

HaulMaster
ITEM 60497/93888 shown
61899/62399/63095/63096
63098/63097

SAVE 59%

\$7⁹⁹

~~\$10⁹⁹~~ comp at \$19.97

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WOW SUPER COUPON

4-1/2" ANGLE GRINDER

Customer Rating **★★★★**

drillmaster

ITEM 60625 shown
69645

SAVE 50%

\$9⁹⁹

~~\$14⁹⁹~~ comp at \$20.13

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SUPER COUPON

6.5 HP (212 CC) OHV HORIZONTAL SHAFT GAS ENGINES

ITEM 60363/69730

Customer Rating **★★★★**

ITEM 68121/69727 shown
CALIFORNIA ONLY

SAVE \$228

\$99⁹⁹

~~\$119⁹⁹~~ comp at \$328

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SUPER COUPON

20 TON SHOP PRESS

Pair of Arbor Plates Included
Customer Rating **★★★★**

SAVE \$215

\$154⁹⁹

~~\$109⁹⁹~~ comp at \$369.99

ITEM 32879
60603 shown

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WOW SUPER COUPON

12 VOLT MAGNETIC TOWING LIGHT KIT

Customer Rating **★★★★**

HaulMaster
ITEM 63100

SAVE 71%

\$9⁹⁹

~~\$10⁹⁹~~ comp at \$34.95

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VALUE

ITEM 69031/69030 shown

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WOW SUPER COUPON

3 GALLON, 100 PSI OILLESS AIR COMPRESSORS

A. HOT DOG
ITEM 69269/97080 shown

B. PANCAKE
ITEM 95275 shown
60637/61615

CENTRAL PNEUMATIC

SAVE 59%

Customer Rating **★★★★**

YOUR CHOICE

\$39⁹⁹

~~\$59⁹⁹~~ comp at \$98.62

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WOW SUPER COUPON

US* GENERAL PRO

26" 16 DRAWER ROLLER CABINET

ITEM 61609/67831 shown

Customer Rating **★★★★**

1060 lb. capacity
14,600 cu. in. of storage

SAVE \$633

\$319⁹⁹

~~\$369⁹⁹~~ comp at \$952.99

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SUPER COUPON

1500 LB. CAPACITY MOTORCYCLE LIFT

Lift range: 5-1/4" to 17"

PITTSBURGH

ITEM 69995 shown
60536/61632

Customer Rating **★★★★**

SAVE \$65

\$69⁹⁹

~~\$89⁹⁹~~ comp at \$135

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SUPER COUPON

3/8" x 14 FT. GRADE 43 TOWING CHAIN

5400 lb. capacity
Not for overhead lifting.

HaulMaster

ITEM 60658
97711 shown

Customer Rating **★★★★**

SAVE 63%

\$21⁹⁹

~~\$29⁹⁹~~ comp at \$60.95

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SUPER COUPON

CENTECH AUTOMATIC BATTERY FLOAT CHARGER

ITEM 42292 shown
69594/69955

Customer Rating **★★★★**

SAVE 82%

\$5⁹⁹

~~\$8⁹⁹~~ comp at \$34.99

LIMIT 9 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 5/1/17. Limit one coupon per customer per day.

SUPER COUPON

RETRACTABLE AIR HOSE REEL WITH 3/8" x 50 FT. HOSE

Customer Rating **★★★★**

ITEM 93897 shown
69265/62344

SAVE \$129

\$59⁹⁹

~~\$89⁹⁹~~ comp at \$189

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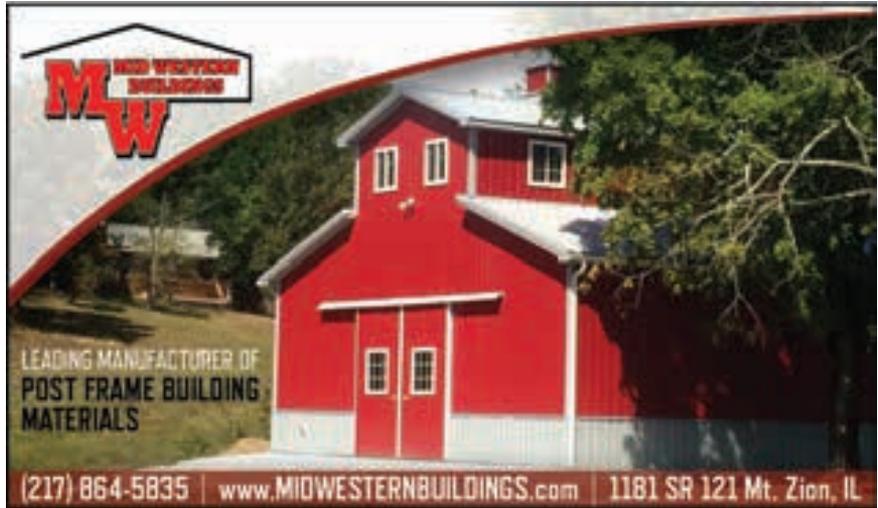
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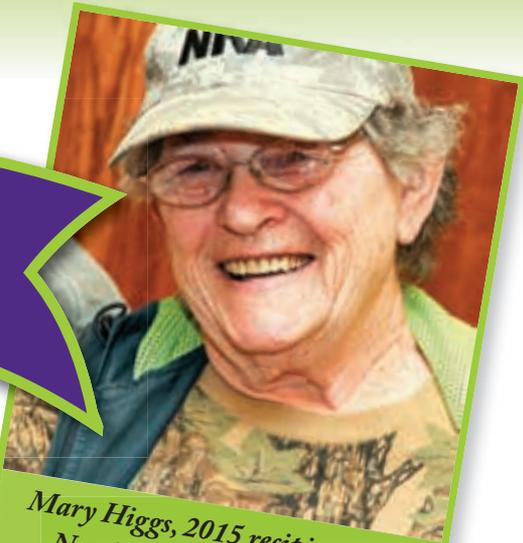


Nominate a Mother for

Illinois
Country Living 

Mother of the Year

2017



Mary Higgs, 2015 recipient from
Norris Electric Cooperative.

What will the
Illinois Country Living
Mother of the Year win?

\$100

gift certificate
and other prizes

While every mother is special, some are just extraordinary in their willingness to help their families and others. If your mom or another woman in your community is deserving of this honor, nominate her. Tell us in 500 words about that special mom, what she does and why she deserves to win the title.

Just go to our website at www.icl.coop to fill out an entry form and essay. Or complete the form below and send it along with your essay to the address at the bottom of this page.

Rules - The contest is open to any mother served by an Illinois electric cooperative. No purchase is necessary. The winner will be selected by committee, and featured in the May edition of Illinois Country Living magazine.

All nomination letters submitted will be published on Illinois Country Living's website at www.icl.coop.

Her name

Address

City

State

Zip

In which Illinois electric cooperative territory she resides

Organizations to which she belongs

Person nominating her

Relationship to the nominee

Your phone number with area code

Nominee's phone number with area code (we would contact her only if she wins)

DEADLINE TO SUBMIT:

Entries must be emailed or postmarked by March 1, 2017

Valerie Cheatham, Illinois Country Living • P.O. Box 3787, Springfield, IL 62708-3787 • vcheatham@aiec.coop

Take two pets, and call me in the morning

As you approach your house, you hear the familiar taps of nails on the tile floor. When you slowly open the door, you hear excited squeaks, yips and yaps, and see a tail wagging as if it could propel the animal into flight. This is the greeting your dog gives you every time you arrive home. There is nothing like the unconditional love a dog gives, but did you know that it can also benefit your health?

According to the National Center for Health Research, over 71 million American households have pets, and many consider their pets to be members of the family.

There are any number of proven health benefits to owning a pet including physical, mental and emotional

"Petting, scratching and cuddling a dog could be as soothing to the mind and heart as deep meditation and almost as good for the soul as prayer." -Dean Koontz

improvements. In fact, the Centers for Disease Control and Prevention and the National Institute of Health have conducted studies that show that pet owners can exhibit decreases in blood pressure, cholesterol and triglyceride levels. The benefits may be connected to a pet's tendency to help lower anxiety levels.

During the past 25 years, an increasing number of studies have been conducted regarding the health benefits of pets. The simple act of petting a dog or cat can help lower blood pressure and reduce anxiety. If you've ever owned a furry friend, you know how affectionate they can be. This helps ease depression and loneliness and fulfills that basic need to touch. Stroking or hugging an animal can calm nerves and soothe us when we're stressed. Some dogs seem to be able to read our moods, and act accordingly. Dogs, more than any other animal, appear to be acutely aware of our behavior and emotions.

Some evidence has even shown that dog owners tend to be healthier than the average person. The basic need of a dog to be walked

can prompt the owner to be more physically active, and increase the opportunities to socialize with other pet owners. There are reports of dogs sniffing out certain cancers. According to Live Science, "Dogs are not only good at sniffing out skin cancer, some can also detect bladder, lung, breast, ovarian and colon cancer." Some have been trained to detect low blood sugar levels in diabetics, even before the owner has noticed the symptoms, and nudged them into eating.

Seizure dogs, similar to seeing-eye dogs, help their owners navigate daily activities and keep them safe.

The dogs learn to recognize subtle behavior changes and warn their owners of an upcoming attack so that they can get

to a safe place or call for help.

There are a variety of groups that provide vigorous training for service animals. Many people think of seeing-eye dogs, but some service dogs can be trained to detect trace amounts of allergens, such as peanuts, to assist those who suffer from severe life-threatening allergies.

Walter Reed Army Medical Center uses dogs to help soldiers dealing with post-traumatic stress disorder (PTSD). Service dogs, many of which are rescued from shelters, can be trained to help veterans with PTSD or other disabilities in a variety of ways, such as waking them from nightmares, helping calm them during panic attacks, reminding them to take medications, redirecting them from a source of anger, and helping them sit or stand.

Project Chance, a non-profit organization based in Florida, is just one organization that provides service dogs trained to help autistic children and those with developmental disabilities. An autism assistance dog is there for emotional support, and helps reassure

the child and ease sensory overload. Because many autistic children do not understand personal safety, the dogs also steer the children away from traffic and other dangerous situations.

Recently, many assisted living facilities have realized the benefits pets have in the lives of senior adults. The animals can help ease loneliness and stress, and give seniors a renewed interest in life. Some facilities have a pet care coordinator who ensures the pets are well taken care of, groomed and have up-to-date vaccinations. The pets can give the elderly a sense of purpose. And, the unconditional love of a dog or cat helps seniors socialize more with others.

Although pets provide a great amount of benefits, adopting one should not be taken lightly. You must be willing and able to take on a commitment that can last for years. However, the years of loving them will be rewarding, and who doesn't like being treated like a rockstar every time you come home?



Sources:
Web MD, Animal Planet, Womans Day 2/28/11, Harvard Health Publications



WHEN: JANUARY 14, 2017 @ 11:00 A.M. – 8:30 P.M.

Third Annual Galena LitFest

WHERE: Desoto House Hotel – Ballroom
230 S. Main St. | Galena, IL 61036

COST: \$0-\$22

CONTACT: Galena Public Library | 815-777-0200

Galena LitFest, sponsored by the Friends of the Galena Public Library, Inc. and the Galena Public Library, will host all day events at the Desoto House Hotel. The event includes a discussion with author, Stacey Kade, a question and answer panel and Online Marketing 101. The event concludes with “Dining with the Authors.” The opening speaker, GERALYN HESSLAU MAGRADY, is 2016’s Soon to be Famous Illinois Author, an honor given by the Illinois Library Association. The keynote speaker, Bestselling Author Mary Kubica, writer of the thriller/suspense novels *The Good Girl*, *Pretty Baby*, and *Don’t You Cry*. Tickets for the dinner can be purchased at the Desoto House Hotel, the Galena Public Library, or online at GalenaLitFest2017.eventbrite.com.

WHEN: FEBRUARY 10, 2017 @ 4:00 PM – FEBRUARY 12, 2017 @ 11:00 AM

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Loves Park, IL 61111

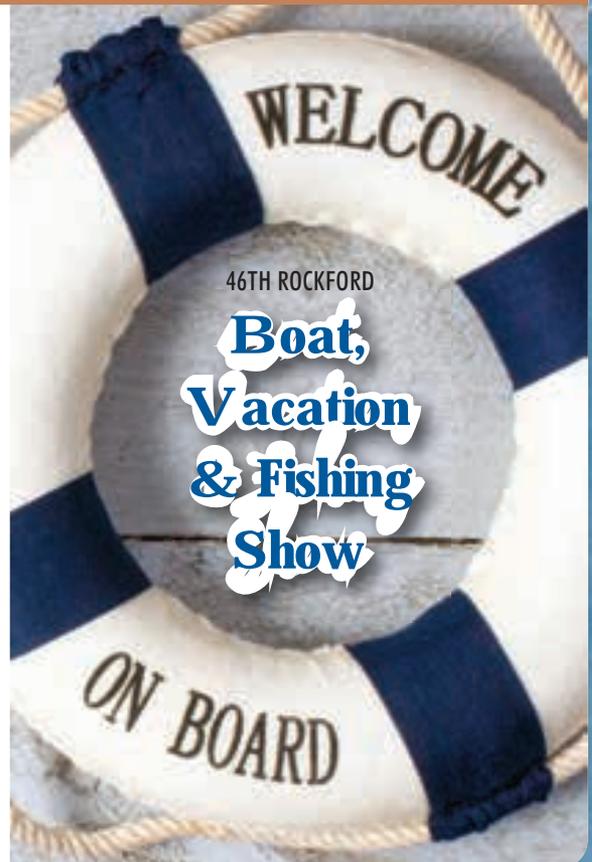
ADMISSION: Adults (12 & older), \$6.00 for a one day pass or \$10.00 for a three day pass. A child (under 12) is free.

PARKING: Free

CONTACT: Laci Rotolo | 815-997-1744

WEBSITE: <http://www.landroproductions.com/>

New 2017 boats, boating equipment, motors, and trailers will be exhibited at the 46th annual show. Everything from GO-Float to pro-fishing boats, sleek high powered runabouts and pontoons will be shown with manufacturer representatives on hand to answer any questions, along with representatives from fishing and vacation resorts to plan the perfect getaway. Fishermen will have their choice of the latest tackle, guides, charters, and more. Be sure to bring the whole family as there will be plenty for them to see and do. Let them catch a fish in the trout pond, check out the Hawg Trough aquarium filled with fish, and bring them by the United States Power Squadrons and U.S. Coast Guard booths to learn about boating safety.





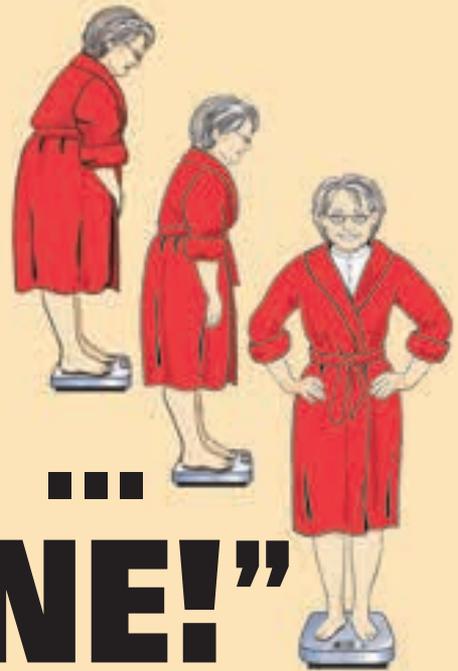
End high cholesterol ... with apples!



Boost your energy levels ... with breakfast!



Reverse bone loss ... with plums!



“Belly fat going ... going ... GONE!”

(By Frank K. Wood)

If you want to discover natural solutions to an expanding waistline, low energy, and slow metabolism, you need *The Senior's Guide to Metabolism*, an informative new book just released to the public by FC&A Medical Publishing® in Peachtree City, Georgia.

Discover the foods that control your hunger for hours and hours; the 4 ways you can prevent cancer, heart disease, and diabetes; 10 easy steps to boosting your energy; and more! Before running to the doctor, grab this book!

The authors provide many health tips with full explanations.

- ▶ Improve your sleep, energy, mood, and memory — in just 11 minutes.
- ▶ Good news! The most dangerous fat on your body is actually the easiest to lose!
- ▶ Remember when ... you could remember more? How to revitalize your memory!
- ▶ One simple snack food can help lower your blood pressure and cholesterol!
- ▶ This one thing is proven to fight the fat around your middle — helping you stay thinner and healthier — for life!
- ▶ The Biblical food that actually triggers your body to release a hunger-squashing hormone, so you eat less and feel full.
- ▶ This 50-cent meal can keep your arteries clear, provide your first line of defense against stroke, help you lose weight, and more!
- ▶ Just 2 glasses a day of (you won't believe this — but it's true!) lowers your cholesterol — and prevents heart attacks, too!
- ▶ One easy thing you can do every day to lower your cholesterol! It's not taking drugs or seeing a doctor!
- ▶ Belly fat melts away... arteries clear... blood sugar drops... and you're invigorated with more energy than you ever thought possible!
- ▶ Quick ... which food helps you reduce belly fat, protects against major illnesses,

keeps blood sugar stable, and protects your eyesight in old age?

- ▶ Want to keep your mind sharp? Evidence is mounting that you really can prevent mental decline.
- ▶ The next super food of the fruit world! It's cheap. It's sweet. It has disease-fighting power. And you may already have it in your fridge!
- ▶ How your pillow can relieve backache, leg cramps, heartburn, and neck pain!
- ▶ The best breakfast food ever! Lowers cholesterol and protects against weight gain, high blood pressure, and type 2 diabetes!
- ▶ Can't resist that extra dessert? Learn from the Amish. Their diet is rich in fatty foods and sweets, yet they have fewer weight problems than most other people.
- ▶ Four must-have items for your spice rack protect you against almost all diseases of aging!
- ▶ When losing the weight around the middle, it's often not how much you eat, but what you eat!
- ▶ Just 2 glasses a day of this delicious, inexpensive, low-calorie juice is enough to help keep dangerous artery-clogging cholesterol from forming.
- ▶ Keep arteries slick as a whistle with 5 delicious, low-cost foods!
- ▶ The hidden factor behind Alzheimer's, cancer, diabetes, irritable bowel, heart disease, and more — and what you can do about it now!
- ▶ Weight-loss stunner: Eating one kind of fruit before meals stimulates weight loss!
- ▶ The simple touch cure that boosts immune response, eases pain, reduces fatigue, and lowers blood pressure.
- ▶ Don't accelerate aging! You can slow it down simply by getting enough of one thing.
- ▶ What to do, eat, and drink before bed — 5 simple steps to a perfect night's sleep!
- ▶ Significantly lowered total cholesterol,

triglycerides, insulin, and blood sugar levels! Just a handful of these dried fruits could do it!

- ▶ 5 all-star artery-clearing foods that hit cholesterol right out of the ballpark.
- ▶ Take this powerful nutrient at the first sign of memory loss, and you may help prevent brain-clogging plaques from forming.
- ▶ Slash heart disease risk by an astounding 90%! Works even if you're already over 40!
- ▶ Burn up to 500 extra calories a day — without breaking a sweat — and lose all the weight you want!
- ▶ Take control of your blood pressure with these 3 minerals and you'll also say “bye-bye” to your high risk of heart disease and stroke.
- ▶ 7 secrets to staying slim for life. How you can keep the weight off for good!
- ▶ Improve your arteries today! Adding just one thing to your meals can increase the flexibility of your blood vessels.
- ▶ 40% less likely to get Alzheimer's. Did a drug make this remarkable difference? Nope. It was food.

Learn all these amazing secrets and more. To order a copy, just return this coupon with your name and address and a check for \$9.99 plus \$3.00 shipping and handling to: **FC&A, Dept. VM-4587**, 103 Clover Green, Peachtree City, GA 30269. We will send you a copy of *The Senior's Guide to Metabolism*.

You get a no-time-limit guarantee of satisfaction or your money back.

You must cut out and return this coupon with your order. Copies will not be accepted!

IMPORTANT — FREE GIFT OFFER EXPIRES FEBRUARY 15, 2017

All orders mailed by February 15, 2017 will receive a free gift, *Super Health Secrets: 101 Things You Should Never Do*, guaranteed. Order right away!

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Chicago Doctor Invents Affordable Hearing Aid

New nearly invisible digital hearing aid breaks price barrier in affordability - **90% LESS**

Reported by J. Page

Chicago: Board-certified physician Dr. S. Cherukuri has done it once again with his newest invention of a medical-grade, **ALL-DIGITAL, affordable hearing aid.**

This new digital hearing aid is packed with all the features of \$3,500 competitors at a mere fraction of the cost. Now, most people with hearing loss are able to enjoy crystal clear, natural sound—in a crowd, on the phone, in the wind—without suffering through “whistling” and annoying background noise.

Digital Hearing Aid Outperforms Expensive Competitors

This sleek, fully programmed, light-weight, hearing aid is the outgrowth of the digital revolution that is changing our world. While demand for “all things digital” caused most prices to plunge (consider DVD players and computers, which originally sold for thousands of dollars and today can be purchased for less), the cost of a digital medical-grade hearing aid remains out of reach. Dr. Cherukuri knew that many of his patients would benefit but couldn't afford the expense of these new digital hearing aids. Generally they are not covered by Medicare and most private health insurance plans.



Nearly Invisible!

SAME FEATURES AS EXPENSIVE HEARING AID COMPETITORS

- ✓ Mini Behind-the-Ear hearing aid with thin tubing for a nearly invisible profile
- ✓ Advanced Noise Reduction to make speech clearer
- ✓ Feedback Cancellation eliminates whistling
- ✓ Wide Dynamic Range Compression makes soft sounds audible and loud sounds comfortable
- ✓ Telecoil setting for use with compatible phones, and looped environments like churches
- ✓ 3 Programs and Volume Dial accommodate most common types of hearing loss even in challenging listening environments

The doctor evaluated the high priced digital hearing aids on the market, broke them down to their base components, and then created his own affordable version - called the **MDHearingAid AIR** for its virtually invisible, lightweight appearance.

Affordable Digital Technology

Using advanced digital technology, the **MDHearingAid AIR** automatically adjusts to your listening environment — prioritizing speech and de-emphasizing background noise. Experience all of the sounds you've been missing at a price you can afford. This doctor designed and approved hearing aid comes with a full year's supply of long-life batteries. It delivers crisp, clear sound all day long and the soft flexible ear domes are so comfortable you won't realize you're wearing them.

Try it Yourself at Home With Our 45-Day RISK-FREE Trial

Of course, hearing is believing and we invite you to try it for yourself with our **RISK-FREE 45-DAY HOME TRIAL.** If you are not completely satisfied, simply return it within that time period for a full refund of your purchase price.



Can a hearing aid delay or prevent dementia?

A study by Johns Hopkins and the National Institute on Aging suggests older individuals with hearing loss are significantly more likely to develop dementia over time than those who retain their hearing. They suggest that an intervention—such as a hearing aid—could delay or prevent dementia by improving hearing!

“Satisfied Buyers Agree AIR is the Best Digital Value!”

“I am hearing things I didn't know I was missing. Really amazing. I'm wearing them all the time.” —Larry I., Indiana

“Almost work too well. I am a teacher and hearing much better now.” —Lillian B., California

“I have used many expensive hearing aids, some over \$5,000. The AIRs have greatly improved my enjoyment of life.” —Sam Y., Michigan

“I would definitely recommend them to my patients with hearing loss.” —Amy S., Audiologist, Indiana



For the Lowest Price

800-798-3016

Buy a Pair and SAVE \$50

Use Code **CZ15** to get

FREE BATTERIES for a Full Year!

Plus FREE SHIPPING

GetMDHearingAid.com

MDHearingAid® >>>