

Michigan

COUNTRY LINES



Making a Difference

**SPECIAL
GARDENING
EDITION**

2 Service, Rate
Increases Approved

3 Three Districts To
Elect Directors

18 Energy Efficiency
Tips & Rebates

Some choices are clear.

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Change of Address: Please notify your electric cooperative. See page 4 for contact information.



Michigan COUNTRY LINES



12



15



24

DEPARTMENTS

4 Readers' Pages
Letters, mystery photo,
Youth Leadership
Council member

16 Home Cooking
Brunch recipes
*Christin McKamey &
Our readers*

20 Wolverine Power*
Improving transmission
reliability a priority
Nancy Tanner

22 Safety
Watch out for downed
power lines!

COLUMNS

12 Gardening
The garden "buddy
system"
Kris Wetherbee

14 Family
Networking tips for
college grads
Linda Wacyk

21 House & Home
Get the facts before
installing a solar
water heater
James Dulley

24 Ramblings
Blood and rumors
Mike Buda

FEATURES

8 Our Energy
Your grassroots power
Megan McKoy-Noe

10 Cover Story
A co-op member and
her relatives make a
difference in Africa
Kevin Cragg

15 Michigan-made
Jewelry with a past
Kath Usitalo

YOUR CO-OP

Pages specific to your
electric cooperative: 1,
2-3, 6-7, 18-19, 22-23,
back cover

*Not in all editions

On the Cover

Residents from the African village of Morrumbala carry blackwood, which is especially valued for making musical instruments. A Cherryland Electric Co-op member and her family have boosted the village's economy by helping to market blackwood and starting a sawmill.

Photo Courtesy – Rachel Stivani





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OTHER INFORMATION

Date of Incorporation: Sept. 30, 1937

Fiscal year-end: Dec. 31

countrylines.com/coops/ontonagon

MANAGER'S MESSAGE

Service, Rate Increases Approved

An increase to your co-op's service charge and rates is necessary to keep your electric service reliable.

Ontonagon County REA funds its operations with low-interest loans from the Rural Utilities Service (RUS), CoBank, and the National Rural Utilities Cooperative Finance Corporation (CFC). (CoBank and CFC are banks formed specifically to service co-ops, and RUS is part of the U.S. Department of Agriculture). These financial institutions measure the health of our electric co-op by a factor called the times interest earned ratio (TIER).

A healthy TIER rating is crucial to funding Ontonagon's operations, including maintenance and system improvements that keep the lights coming on at the flip of a switch.

However, based on the current TIER, it has been determined that the co-op needs additional revenue of \$454,000. Therefore, your co-op's board of directors has voted on an overall increase of 8.4 percent, which is required to obtain a healthy TIER.

The board voted after hearing comments from the eight members that attended their Feb. 26 meeting.

The changes include a rise in the monthly service charge from \$15 to \$20 for residential members, and from \$20 to \$25 for seasonal members. Each member has been sent a notice by first-class mail that details all rate and miscellaneous increases to become effective with the bill rendered on May 2, 2013.

A long-standing problem with your co-op's current rate structure—which is not unique to Ontonagon and affects a number of electric co-ops that are faced with raising costs—is that our monthly service charge does not fully cover our fixed costs. Fixed costs, which do not include the cost of power, exist regardless of how much electricity each member uses. The

biggest share of these costs are for the poles, wires, labor, right-of-way clearing and other programs and actions necessary to assure service reliability.



Debbie Miles
General Manager

Even though the residential and seasonal service charges are rising to \$20 and \$25, the co-op's latest cost-of-service study supports a \$38 service charge. This inequity is currently recovered through the energy charge (per kilowatt-hour) listed on your bill, which means that residential members who use more electricity pay a higher share of the fixed costs than those who

use less, yet the fixed costs to serve each residential member are the same regardless of the amount of electricity used.

To provide a little more history, you may remember that the co-op had actually filed a rate case with the Michigan Public Service Commission (MPSC) asking for these changes as early as April 2012. While that rate case was pending, Ontonagon was also transitioning

Fixed costs exist regardless of how much electricity each member uses—it assures your service will always be there.

to member regulation. The board, along with its consultants, determined it more prudent to defer the rate case because by the time the MPSC was scheduled to rule on the request the co-op would no longer be under MPSC jurisdiction. Last year's rate case was therefore terminated and the vote delayed until this year.

At Ontonagon County REA, we are continuously working to contain costs without jeopardizing the reliability of your electric service. These rate changes will help us keep that reliability and spread the fixed costs of doing so equally among all the co-op's members.

Fuel Mix Report

The fuel mix characteristics of Ontonagon County REA as required by Public Act 141 of 2000 for the 12-month period ended 12/31/12.

COMPARISON OF FUEL SOURCES USED

Regional average fuel mix used		
Your co-op's fuel mix		
FUEL SOURCE		
Coal	61.1%	57.9%
Oil	0.1%	0.4%
Gas	6.9%	12.2%
Hydroelectric	3.6%	0.9%
Nuclear	24.5%	25.0%
Renewable Fuels	3.7%	3.6%
Biofuel	0.0%	0.1%
Biomass	0.0%	0.4%
Solar	0.0%	0.0%
Solid Waste Incineration	0.7%	0.5%
Wind	2.8%	2.2%
Wood	0.1%	0.5%

NOTE: Biomass above excludes wood; solid waste incineration includes landfill gas.

Your Co-op's Fuel Mix



Regional Avg. Fuel Mix



EMISSIONS AND WASTE COMPARISON

TYPE OF EMISSION/WASTE	lbs/MWh	
	Your Co-op	Regional Average*
Sulfur Dioxide	1.9	7.6
Carbon Dioxide	1,585	2,170
Oxides of Nitrogen	1.1	2.0
High-level nuclear waste	0.0000	0.0083

*Regional average information was obtained from MPSC website and is for the twelve-month period ending 12/31/12.

Figures for Ontonagon County REA are based on those of its principle power suppliers, WPS and We Energies.

Three Districts To Elect Directors

The Ontonagon County Rural Electrification Association is comprised of seven districts, with directors elected for three-year terms.

This year, terms will expire for directors representing **District 1**—Lake Mine/Toivola, **District 5**—Pelkie/Keweenaw Bay/Herman, and **District 6**—Chassell. Incumbents are Frances Wiideman, Wayne Heikkinen and George Rajala, respectively.

If you are interested in running for these open positions on the board of directors, you must call or stop by the co-op's office to request a nominating petition. A petition must be returned to Ontonagon's office by *May 3, 2013*. Due to a change in co-op bylaws enacted at the 2002 annual

meeting, nominating petitions will no longer be sent to each member residing in these districts.

In order to be valid, a nominating petition requires the signature of five active members of the co-op that receive electric service in that district (husband and wife are considered one member so either may sign, but not both). The member who is being nominated must also sign the petition.

Election voting ballots will be mailed to each member of the district 30 days before the annual meeting, which is scheduled for June 15. Ballots must be returned to the co-op office no later than noon on Monday, June 10, (election votes will be counted and results shared at that meeting).

Plugged-In Kids

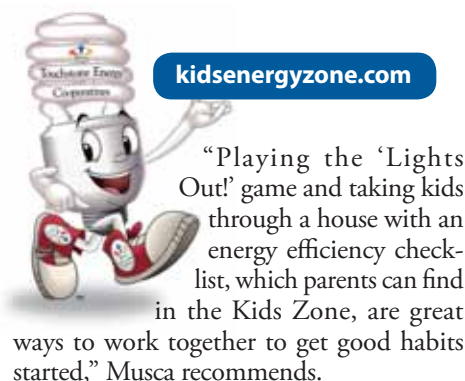
Website offers fun ways to "switch on" youth to energy efficiency.

Getting kids excited about energy efficiency may seem hard—for some parents, it's enough of a challenge getting them to do chores. But there's a website designed with young energy savers in mind.

Touchstone Energy® Cooperatives, the brand "ID" of the nation's nonprofit, consumer-owned electric co-ops, offers Kids Energy Zone (site address shown in graphic), featuring a spunky mascot, CFL Charlie. The site teaches kids in kindergarten through fifth grade how to be Super Energy Savers in their homes, and includes interactive games, videos, activity sheets and surprises.

"The website is all about engagement," explains Ruben Musca, Touchstone's senior ad and marketing manager. "This is a way for parents to interact with children so the family can focus on energy efficiency together, and help everyone develop energy efficient habits that will last a lifetime. Through fun activities, students and their parents learn about energy, electrical safety, and energy savings."

For example, "Lights Out!"—an energy-saving game in the Kids Zone—challenges kids to speed through a virtual house, replacing traditional incandescent lightbulbs with energy efficient compact fluorescent lightbulbs (CFLs) and turning off lights and appliances as fast as possible. The less energy a player uses by the time everything's off, the better the score.



Teachers searching for ways to help students focus on energy efficiency have several resources available at kidsenergyzone.com.

"Each kit includes a checklist that children can use to help guide their parents on an 'energy efficiency expedition,'" Musca explains. "In the exercise, kids walk through the house with their mom and dad to make sure the refrigerator door is closed, and they discuss switching out incandescent bulbs with CFLs, turning off all lights after leaving a room, and shutting off computers when not in use."

Finished checklists signed by children and parents are submitted to teachers for a certificate declaring the student "an official Touchstone Energy Cooperatives Super Energy Saver." Certificates carry the image and signature of CFL Charlie.

"The kits also contain classroom activities such as connect-the-dots and word search games," Musca adds. The latest addition to the kit is an educational 10-page coloring book to keep kids entertained and educate them about energy savings at the same time.

—Megan McKoy-Noe

ATTENTION READERS:

The publisher of *Michigan Country Lines* magazine is working with Marketing Resource Group (MRG), a reputable public opinion research company, to conduct a confidential survey for Michigan's electric cooperatives. If MRG contacts you by phone or email, please be assured they are not selling anything. The short, confidential survey will help your co-op serve you better.

Changing Careers & Education

Thank you very much for the interesting education articles in *Michigan Country Lines* (Feb., "Education in 30 Years," p. 4; "Changing Hats at Half-time," p. 8). Through these, you increased public awareness of opportunities for creative improvement and positive thinking, both within the K-16 educational systems and for individuals considering new professions.

At the University Center Gaylord, through our partnership of two community colleges and seven universities, we strive to offer excellence for students to achieve post-high school academic goals...from technical trades to associate, bachelor, master and doctoral degrees. With a stronger educational base, individuals are better equipped to provide for themselves, their families, and to help their communities thrive, which enhances economic growth for all.

We are among the few state locations offering GED completion, with an advisor to help students learn

about financial aid and college options to help them build on their achievement. We also offer community education for adult life-long learners and special summer hands-on programs for kids to strengthen their interest in science, technology, engineering and math (STEM). Such programs include Lego Robotics, the Natural World Explored Through Technology and Introduction to DC Electronics.

With the above information, you can see why we appreciate your magazine's educational focus in February!

— Sheila Simpson, MA
Advising & Marketing Coordinator, University Center Gaylord

'Tortured Text' Column

Your column on cursive handwriting (Mike Buda/Jan. *Ramblings*) was an enjoyable read. I, too, find that the more I depend on keyboards to communicate, the less muscle memory I have in my hands for penmanship. I'm trying calligraphy.

I thought you might get a kick out of these "Save Cur-

sive" items by beanforest (see sample, below), a Grand Rapids-based Etsy entrepreneur. I'm not connected with beanforest or The Calamity Collective, except as a happy customer.

— Teresa Fowler, Naubinway
Cloverland Electric Co-op

Mike Buda's column appeared at an opportune time, as I just discovered in the last three months that cursive was no longer being taught in the public schools. I realize that some people may suffer from motor



skills that prevent legible handwriting, and I also realize one must prioritize the curriculum, but I wonder what criteria was applied when making this decision, and what replaced the instruction time.

There is no question that cursive writing is much faster at recording thoughts and is necessary many times when computers or other processors are unavailable. During the 20th century, many people (including even some of the most primitively educated, such as George Elson) journaled life experiences that have added much to our recorded history.

I find it a shame that our

young people today are denied this useful development in communicative skills.

— Phillip Kenney, Presque Isle
Electric & Gas Co-op

I greatly enjoyed your article in *Michigan Country Lines*. I have always been interested in the art of handwriting. In fact, I am a left-handed calligrapher and I think about today's young adults who text-only and are now permitted to print rather write their schoolwork. When they apply for a job and must affix a signature to a contract or employment papers, will they text?

I was the U.S. vice-president for a German writing instrument company. We manufactured writing and drawing instruments and did a large business in fountain pens. Children in Europe are very familiar with fountain pens, but children in the U.S. have, for the most part, grown up with ballpoint pens. We contacted over 200 school systems in the States, offering instruction in cursive writing and free pens and inks. We received one reply.

I have serious concerns about the future of our youth. Thanks for your input.

— Patt Hopkins, Atlanta,
Presque Isle Electric & Gas Co-op

I read your article in *Country Lines* with interest, as my handwriting is also unreadable. When I mentioned it to my doctor, he diagnosed Parkinson's disease, as many PWP's (people with



◀ DO YOU KNOW WHERE THIS IS?

Every co-op member who identifies the correct location of the photo at left by **April 10** will be entered in a drawing for a \$50 credit for electricity from their electric cooperative.

We do not accept Mystery Photo guesses by phone! Email mysteryphoto@countrylines.com, or send by mail to *Country Lines Mystery Photo*, 2859 W. Jolly Rd., Okemos, 48864. Include your name, address, phone number and name of your co-op. Only those sending complete information will be entered in the drawing. The winner will be announced in the May 2013 issue.

The January contest winner is Kathy Sparr of Byron, who correctly identified the photo from Grand River Ave., between Portland and Eagle.



St. Joseph Student Represents Michigan at National Co-op Meeting

Drew Graeber, a junior at Lake Michigan Catholic High School in St. Joseph, and a Great Lakes Energy Cooperative member, represented Michigan electric co-ops at the National Rural Electric Cooperative Association (NRECA) annual meeting in New Orleans, LA, recently.

As part of his year-long service on the NRECA Youth Leadership Council (YLC), Drew joined over 40 students from co-ops across the country to assist at the convention that brought together over 12,000 co-op directors, managers and staff. Shown above, YLC stu-



dents each carried their state's flag in a procession to kick-off the huge event, where industry issues affecting electric co-ops and their member-owners were discussed and voted on.

Drew was elected by his peers to serve on the Youth Leadership Council during

the Rural Electric Cooperative Youth Tour to Washington, D.C., where each June electric co-op students from across the country join together to meet their legislators and see the sights.

Learn more about co-op youth programs at miYLS.com.



Drew Graeber

Letters, continued

Parkinson's) develop tiny or unreadable handwriting. I enjoyed your article, and thank heavens for computers.

— Belinda Garvon

Plasma Converter Better Than Nuclear?

Have the many Michigan electric co-ops ever considered a shared electrical generation project? In particular, have you considered StarTech's Plasma Converter System? (See theplasmasolution.com)

Until nuclear fusion becomes possible, this is the next best thing with none of the dangers of nuclear power. It's the solution for clean electric power, pure water, 100 percent recycling, greenhouse gases, industrial pollution, municipal trash, and emptying landfills. Although, gold

and silver deposits have to be occasionally scraped off the bottom of the plasma chamber. Thanks for answering my question.

— Beth Clemensen, Scottville
Great Lakes Energy

Editor's Note: Michigan co-ops are involved in shared electrical generation. Examples are Wolverine Power Cooperative, which has seven member co-ops, a 15-megawatt interest in Campbell 3, a coal-fired, base load facility primarily owned by Consumers Energy, and Presque Isle & Gas Co-op also participates in shared generation.

About the StarTech Plasma Converter, here's what Brian Sloboda, of the Cooperative Research Network says: "Co-ops have been looking at this technology since the 1990s. The main issue is that it has

never proven to be economical. It must operate at a very high temperature, which takes a lot of energy, so it's highly unlikely the process produces significantly more energy than it uses. Also, StarTech's website is incomplete and doesn't indicate that an independent test was conducted.

Many technologies claim to create gold and silver byproducts, which is often used to get people excited, but the real focus needs to be on efficiency and economics. This technology doesn't currently pass those tests. Also, their website says they are under Chapter 11 bankruptcy protection.

Fusion energy may have a bright future, though. A group of electric co-ops recently toured The National Ignition Facility at Lawrence Livermore National Lab, which is using lasers to create energy. In fact, they are on the verge of a major

breakthrough that has been 50 years in the making. The technology promises a new way to generate electricity with no long-term radioactive waste or dependency on foreign energy sources. The U.S. leads the world in this technology and co-ops are closely monitoring its progress.

Mystery Photo

The New Era Potato Chip silo (Mystery Photo/January) is located on Grand River, Portland, Michigan. This is at my Aunt Esther Schrauben's home.

When she turned 100 years young, they repainted the silo for her birthday. She is going to be 103 years young in July 2013 and still enjoys tying quilts to keep her company.

— Trish Martens, St. Johns
HomeWorks Tri-County
Electric Co-op

Changing Hats at Halftime (or Before!)

What is the best way to reinvent yourself and your career?

Education is the best answer to the question above, and it's proven that with corresponding increases in education, there is a distinctive rise in salary coupled with a decrease in unemployment—a pattern that has stayed consistent for decades (see chart). The difference in the typical earnings of those with a high school education versus a college degree is substantial in just one year, and over a lifetime that gap can be breathtaking.

Consider Brad Essenmacher. A master electrician with an associate's degree in business, he started his own electrical contracting business back in 1998. After 12 years, he left it to work as a member services representative (MSR) for Thumb Electric Cooperative (TEC), in Ubly, MI.

"I decided to make the change because of several factors," Essenmacher explains. "The main reason is that it was a great opportunity I didn't know if I would ever get again. The construction industry was also slow at the time, so if I did make the move I wouldn't negatively affect too many people." It was tough to leave a lot of good customers, he adds, but it proved to be the best move for him.

Essenmacher has since been promoted to TEC's member services and marketing manager, and is also working on his bachelor's in business administration (BBA). "I could have remained an MSR with the education I had, but to be in the position I am now, I had to get my BBA," he says.

"My words of wisdom for anyone consider-

ing a career change would be that going back to school as an adult isn't as difficult as I thought it would be," he adds. "You pick up a lot of knowledge through the years that are things they are teaching younger students, and that knowledge makes it easier in your class work."

Take a Chance—Do What You Love

In changing careers, it's also crucial to have your family's support since they will need to make some sacrifices and support you through the process. Career counselors say to "consider it an investment in you."

Trevor Doublestein can relate. In the late '90s, he studied film and video production at Columbia College in Chicago. After graduation, he worked in sound effects for major motion pictures in Hollywood, but soon tired of spending his days indoors. The Michigan native, a natural outdoorsman, moved to Petoskey in 2001, where he took over the family general contracting business. For that, he needed to earn a General Contractor license and take a rigorous exam. To prepare, he got a study pack and worked with his field crew to gain comprehensive knowledge of the industry.

Like the rest of the country, northern Michigan's building industry began declining right after Doublestein and his wife, Lisa, had two children. "That's when we started talking about a career change," he says. It wasn't easy, he adds, as the construction industry was thinning out more every day and technological advances were outdating

his knowledge.

As the couple considered Trevor's desire to switch careers, they realized a move to west Michigan would offer more business prospects and bring them closer to their families. The prospect of change in both location and careers led to more heart-to-heart talks. "And what finally surfaced," he says, "was that I wanted to own a microbrewery." Among many things, it would mean completing a state-required food and alcohol safety training program and certification exam.

Lisa, however, was unconvinced. "I understood that she would have reservations," Trevor explains. "But I put together a business plan, found a location, and brought on a friend as an interested partner. Eventually, we began to get excited about the prospect of something completely new."

The Doublesteins, along with longtime friends Dane and Brynne Sexton, opened Our Brewing Company in Holland, MI, in October 2012.

Trevor admits starting a new business takes a lot of time and energy. "I'm certainly busier than I ever was with our contracting company, and I often miss sleep and outings with the kids. But I'm more happy with my career than ever, and I'm proud that my kids will grow up seeing their father work hard at what he enjoys."

The move closer to family has empowered Lisa to grow her own career. She's working on a master of fine arts in fiction and literature at Bennington College, and during her 10-day stretches of residency in Vermont, grandparents, aunts and uncles help Trevor with the kids.

"It wasn't a fast or easy decision to change our location or our jobs," Trevor says. "And we're certainly not on easy street after doing so. But the difference is that we're thrilled and happy to be doing what we want to do."

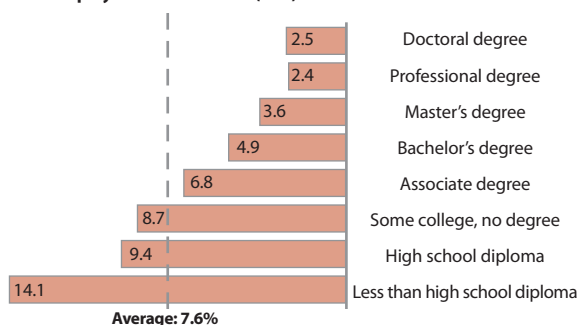
Grab Unexpected Opportunities

Sometimes, keeping your eyes open for opportunities, and just a little more education in a related field, can also give you new credentials and expanded options.

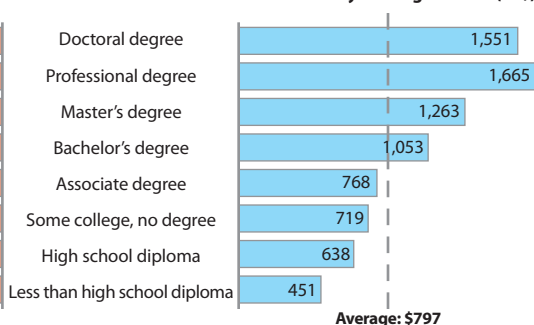
Linda Wacyk started out pursuing a career in early childhood education back in the 70s, earning the equivalent of an associ-

Education Pays ... in higher earnings and lower unemployment rates.

Unemployment rate in 2011 (in%)



Median weekly earnings in 2011 (in \$)



Source: Bureau of Labor Statistics, Current Population Survey

Note: Data are for persons age 25 and older. Earnings are for full-time wage and salary workers. Source: Bureau of Labor Statistics, Current Population Curve.

ate's degree before a job opportunity for her husband necessitated a move to northern Michigan, putting her education on hold. "I put my learning to good use, however, during a 12-year stretch of full-time parenting, supplemented by stints as a child-care provider for several preschools and private families over the years," Wacyk says.

In the '90s, she taught herself computer skills and started a home-based business providing communications services for schools and nonprofit groups. When her youngest child started school, she returned to college and completed her bachelor's degree—this time in communications and writing.

Today, the Grand Ledge resident puts all her interests and experiences to work as communications director for an education-related nonprofit association. "In my 'free' time, I also do some writing and editing about early childhood and other topics related to parenting—or more accurately, grandparenting," she chuckles.

"None of this would have been possible without taking some risks and imagining myself doing new tasks in new ways," she shares. "Career changers have to seek out lots of learning opportunities such as conferences, online courses, college classes and seminars."

Wacyk's advice is to watch for opportunities that emerge in unexpected places. When she started her home-based business, desktop publishing was a brand new field. "I could apply my writing and design skills using software that until then only a handful of people had mastered," she recalls. "This opened lots of doors to clients who appreciated good design, but were previously priced out of the professional publishing market."

Consider the Market

Debra Veryser, a suburban Detroit at-home mom for nearly 30 years, knows firsthand how the job market has changed.

As the last of her five kids reached middle school, she decided to launch a new career. Besides her need for a fresh challenge, the economy had taken a toll on her husband's

automotive manufacturing company, so Deb was ready to contribute financially.

Her bachelor's degree from Hillsdale College was musty and her pre-marriage job as a researcher was ancient history, so she knew that returning to campus was necessary to boost her skills. Since Deb is artistic, she considered graphic arts, but looked realistically at the young, tech-savvy competition, the market, and her situation when planning her course of action. "I weighed the time investment and marketability and looked for a field that would hire an older woman," she says, "I didn't have time to waste."

After some research, she decided on an associate's degree as a registered health information technician at nearby Baker College, partly because of its intern program. "I knew in my heart that was the best way I could get hired." After two and one-half years of classes and achieving certification, she is now happily employed handling medical records at Henry Ford Health System, where she interned.

As her new career began, Deb's husband left the auto supply field to launch a business building and installing his patented, energy-saving EZ Storm Panels.

The youthful, 58-year-old grandmother says the shake-up in her household was good. "You shouldn't be afraid of going back to school," she advises. "And take fish oil. It really works."

Education Required

If there is one key to reinventing your career, education is it, agrees Ron Crouch, research and statistics director for Workforce Kentucky. A highly respected demographer, Crouch has followed the correlation between education and jobs for decades.

This remains true in today's quirky economy, although Crouch says the real difference today is in the stability of the jobs.

"Education still pays," Crouch says, "but the real news is that the less-educated are less likely to be working, and when they do find a job, they may find the salary for that job has dropped. Salaries are more stable in jobs

that require more education."

Computer jobs are the darlings of the information age and remain firmly in the top five growth areas. But Crouch warns there may be some rain in the forecast for tech jobs.

"There are issues of automation and outsourcing connected to computer jobs today," he says. "...I know a lot of people with high skills who are searching for jobs."

Conversely, manufacturing jobs may eventually make a comeback, he adds. "China and India both have some serious issues. China has kept labor costs down by not having a social security or health care system. Soon they will have an aging population with no resources put aside to care for them."

To do well economically, he says the U.S. has to get people back to producing durable goods. "We have had a financialized economy," he notes, "but we need plumbers, electricians and carpenters, too. We need to build things and create things."

Geography, Gender and Jobs

Whatever your career choice, Crouch advises examining potential jobs from many perspectives, including geography, especially if you want to live in a more rural area. The U.S. Labor Department's Bureau of Labor Statistics posts occupational employment and wage estimates by state, including how many jobs per 1,000 are available, mean and median hourly wages, and the annual mean wage. To choose by state, go to bls.gov/oes/current/oesrcst.htm.

"Health care jobs are available most places," he adds, "but right now teaching jobs are not. When the economy improves, we will need teachers, but those jobs may not be as plentiful in some areas."

Another consideration is gender, and Crouch says many in-demand jobs are in traditionally female occupations (nursing and health care technicians). Men are just as capable, of course, and male nurses are now in demand.

Most career re-inventions require additional education, but many colleges and universities now have programs specifically for adults, and you can often choose a broad degree that rounds out your life experiences. It's also critical to shop around, since there are many varied schooling options with unique differences in each program.

Back in Grand Ledge, veteran Wacyk's final suggestion is, "Listen carefully to people in your network who are breaking new ground in business, health care or technology, because your next career might not have even existed two years ago."

Who are you? The key to a satisfying job is finding one that matches your interests and personality. Here are a few websites to help determine a good match for you.

An interest survey: onetcenter.org/CIP.html

Mini Myers-Briggs, which is a personality-type indicator:

humanmetrics.com/cgi-win/JTypes2.asp

What job titles are out there and the types of qualifications needed for jobs:

wave.net/upg/immigration/dot_index.html

Also, find free online classes: Created by a Harvard Business School graduate, the Kahn Academy (kahnacademy.org) is a nonprofit organization and website that offers free classes to anyone.

The Power of Grassroots

Electric co-op consumer-members can help shape rules and laws that keep electricity reliable, affordable and environmentally responsible.

Electric co-ops often ask their consumer-members to get involved when it comes to laws and regulations that affect the affordability or reliability of electric service. But what does it really mean for you to be part of this “grassroots” movement?

This grassroots groundwork has already paid off for electric co-op members and Michiganders who want renewable energy, but in an affordable, responsible manner. Last year, co-op members and many other groups, such as the Michigan Farm Bureau, chambers of commerce, churches and labor unions campaigned against Proposal 3. The proposal would have amended the state’s constitution to require that 25 percent of electricity be generated by in-state renewable sources by 2025. It was defeated by 63 percent of the voters because of its estimated \$12 billion price tag, and the state already had renewable standards requiring electric utilities and suppliers to have 10 percent renewables in their generation mix by 2015. Another reason is they agreed the constitution is not the right place for enacting ever-changing energy policy.

“The defeat of Proposal 3 is just one recent example of the electric co-op network working with its members to ensure an affordable, reliable and environmentally responsible energy future and improved rural quality of life,” explains Craig Borr, president/CEO of the Michigan Electric Cooperative Association (MECA).

“At MECA, we do our part to work with lawmakers on policies that are fair to electric co-op consumer-members,” Borr says. “But our consumer-members provide the real legislative muscle, and we need them to flex it now more than ever.”

Nationwide, electric co-ops boast one of the largest potential grassroots bases, with 42 million people spread across 75 percent of the U.S. receiving electric service.

Mobilizing Consumer-members

It’s easy to see why electric co-op consumer-members should be involved, says Randy Dwyer, grassroots director at the National Rural Electric Cooperative Association (NRECA), the trade organization that represents over 900 nonprofit, member-owned electric co-ops.

“Electric co-ops should include their members in the political process because members provide the real voice,” Dwyer stresses. “The co-op looks out for them, but if they’re going to speak on behalf of their members, members must be engaged in the process.”

To that end, MECA and other electric co-op statewide associations work with their member co-ops to create political action plans and help them engage legislatively. For example, the MECA team coordinates and participates in hundreds of outreach efforts with its member co-ops throughout the year. This includes everything from supporting local fundraising events to hosting elected officials at local co-op offices and organizing six to eight outreach visits to Washington, D.C., with its members. All of these efforts are possible because of the close working relationship MECA has built with elected officials over the years.

“We want consumer-members to get used to receiving political information from their local co-op, so they’re familiar with the issues when it’s time to take action,” Borr adds.

As a result, co-op member-consumers will sometimes see policy-related articles in *this* magazine, and through other media from their local co-op. When necessary, they’ll see a call to action, as happened with Proposal 3.

“Our consumer-members can make a difference,” Borr says. “They can help shape the laws and rules that affect their electric service and their wallets.”

Why Co-ops Care

Since electric co-ops have members, not customers, and they are nonprofit—it means your electric co-op isn’t creating excess revenue for far-away investors. All the money stays local, and when revenues exceed operating costs, members receive allocations called “capital credits.” The co-op business model also requires them to enhance the quality of life in the communities they serve, and that naturally extends to statehouses and Washington, D.C.

Lobbying—aka “advocacy”—involves citizens talking directly with legislators. It’s one of the five freedoms enshrined by the First



Left: Craig Borr, MECA President/CEO, greets U.S. Sen. Debbie Stabenow at an electric co-op meeting in Lansing. MECA and its electric co-op members work to build a close working relationship with elected officials on behalf of the co-ops’ consumer members.



Michigan high school students talk with U.S. Rep. Bill Huizenga (R-Zeeland) on the Capitol steps in Washington, D.C. Every June, over 1,200 students nationwide are sponsored by their electric co-ops to attend the Rural Electric Youth Tour of Washington to learn about our nation's capital, tour historic sites, and meet with their Congressional representatives as electric co-op ambassadors and members.

Amendment: "Congress shall make no law abridging the right of the people to petition the government for a redress of grievances."

That's why MECA works with both the Michigan Legislature and Congress. The NRECA headquarters is in Arlington, VA—just across the river from the capital—and maintains a staff of lobbyists that spend most of their time on Capitol Hill and working with various agencies on the co-ops' behalf.

NRECA was formed in 1942 specifically to overcome World War II shortages of electric construction materials, obtain insurance coverage for the new electric co-ops, and rectify wholesale power supply problems. Since those early days, NRECA has advocated for consumer-owned co-ops on energy and operational issues as well as community and economic development.

Today, these lobbyists actively deal with two-thirds of U.S. House and Senate committees and subcommittees. Each year, hundreds of bills are introduced that could directly affect electric co-op members—issues ranging from energy and climate change policy to disaster relief, endangered species protection, and railroad reform.

The NRECA lobbyists get their "marching orders" from your electric co-op's board of directors, who are elected by you and your neighbors. Each year, electric co-op representatives also meet to vote on resolutions that direct NRECA's policy agenda.

To help MECA and their co-ops set legislative policies and determine which political candidates to support, members of the

NRECA Government Relations staff meet weekly to discuss contributions to candidates, fundraising and political party events, grassroots electric co-op participation in Washington, D.C., and state political events. Then, NRECA's staff, statewide managers and state political action committees reach an agreement on which candidates should get contributions. NRECA and MECA work very closely to ensure all funds are invested wisely and support candidates based solely on their record and support for electric co-op issues, regardless of political party.

Where You Come In

Dwyer echoes Borr in that co-ops can't go it alone. "CEOs and co-op boards are doing everything they can to keep electric costs affordable," Dwyer says. "And they do a great job of it. But there are things outside their control, like rules and regulations, that affect prices and service. By having a strong political action plan, a dedicated workforce, and engaged members, each co-op can help drive these concerns home. And when lawmakers hear from the folks—voters—back home, they listen."

How To Get Involved

The national platform for electric co-op consumers to voice their concerns to Congress is the "Our Energy, Our Future®" campaign. To learn more about the issues facing your electric co-op and sign up to make your voice heard, visit:



Our Energy, Our Future
A Dialogue With America

OurEnergy.coop



Making a Difference: From Leelanau to Africa

A Michigan logger makes life better in a small town a world away. **Kevin Cragg**

When Jim Kirt left the family farm in Leelanau County, he chose a path less travelled. Like his old home, his new one sat in close proximity to water. The similarities, however, abruptly ended there.

After logging across Michigan for 15 years, Jim yearned for something bigger than himself. He felt called to be a Christian missionary, and what better place to serve than Africa?

In early 1999, Jim relocated his sawmill business to central Mozambique on the banks of the mighty Zambezi River, which gathers water dropped by the magnificent Victoria Falls upstream in Zimbabwe.

On the outskirts of a small village called Morrumbala, Jim lived in a tent for five months with his wife Eileen, whom he had recently met and married in Africa. Together, they built a house, and with the aid of Jim's sawmill, they would bring the gospel and employment to the people of Morrumbala.

The area around the mission resembles a stereotypical snapshot of African bush country—subsistence farming, mud huts, few shoes, and fewer government services and schools.

The mill, known as Kalibu Timbers,

changed all that. It was a catalyst for economic activity in the area, and provided employment for 25 men.

Soon, carpenter “shops”—one man with a handsaw and planer huddled under the shade of a mango tree—sprang up around the village, where wood from the mill was transformed into simple furniture, doors and window frames. Employment also brought income and trade. The mission provided training and educational opportunities in support of economic development.

For the first four years, operating the saw mill was a labor of love for the Kirts'. Diesel-powered generation made it possible to run a saw and keep saw blades sharp, plus provide about two hours of electricity to the house each night. The rest of the work was manual.

Electricity was available in the village on a limited basis, but had not yet extended to the mill site. All that changed in 2003 when government inspectors, noticing the positive economic impact the mill was having on the local economy, offered to extend electric service in the village and out to the saw mill for free.

Reliability has been surprisingly good since then, although frequent power surges

required the installation of protective gear around new electric power tools at the mill. The utility also has a “maintenance day” every three months, when it cuts off all power for an entire day—usually a Sunday.

Just like the arrival of electricity to rural electric co-op members 75 years ago, electricity brought rapid changes to Morrumbala's economy and service infrastructure as gas pumps, a bank, cell phone towers and even internet service soon appeared.

The mission also benefited, with the building of a new fully-electric church, complete with a projector, copier and computer. The sawmill followed by adding new equipment. Sanders, table saws, joiners, and a new electric-powered mill helped boost productivity and capability. The Kirts' also acquired a few electric appliances in their home and started to feel like they had returned to at least the 20th century.

While the mill and mission don't have power outages resulting from heavy wet snowstorms like we see in northern Michigan, the business of electricity in rural Africa has its own unique challenges. For instance, industrious locals once drained oil from the primary transformer serving the area, and power was not restored for six weeks. On another occasion, the mill lost power and called in the outage to the utility. After getting no response, the Kirts' discovered that



Photos Courtesy—Rachel Striani



Far left: Frank, a “wood-turner” in the village of Morrumbala, uses an electric lathe to make furniture in the sawmill started by Michigander Jim Kirt and his wife Eileen. Frank's original lathe was powered manually by his wife, who had to wrap the lathe belt around her back and literally twist back and forth. **Left:** A local “ladies conference” in the church the Kirts helped build in Morrumbala.



Above: Jim Kirt and Morrumbala residents he employed to work in the sawmill he built in their African village. **Top, right:** Rachel Stivani, a Cherryland Electric Co-op member from Traverse City, MI, with Elijah, who works at the sawmill. **Right:** Jim Kirts' sawmill helped jump-start the village's economy, including expanded electric service that brought more rapid change, including a church and bank.



a utility employee had removed a number of fuses to re-sell. After a lengthy discussion, the employee returned the fuses. Just this past Christmas, a transformer failure resulted in a week-long power outage that ran through the holidays.

Electricity brought another exciting change to mill operations. The new electric table saws enabled expansion into the harvesting and processing of exotic African blackwood, a highly desirable wood prized by artisans and woodworkers worldwide.

A relatively small, long-lived and slow-growing tree, this blackwood has an esteemed place in history that dates to antiquity. Egyptians were so fond of it they sealed blackwood artifacts in their tombs. Ancients called it the "musical tree" because the dense, oily heartwood produces a beautiful sound when used for wind instruments. It's a favorite for clarinets and bagpipes, and Luthiers treasure it for making stringed instruments, such as guitars. It's also the wood of choice for custom billiard cues, knife handles, and fine turnings such as extremely thin finials and executive ink pens. In Africa, hand-carved blackwood figurines are a tourist favorite to this day.

This brings our story full circle. In need of a distributor for their blackwood and other

exotic woods harvested around Morrumbala, such as Panga Panga and African mahogany, the Kirts' turned to their niece, Cherryland Electric Co-op member Rachel Stivani.

Like her uncle, Rachel took a leap of faith. She knew little about wood and less about running a business, but given the niche market served and small order sizes, Rachel helped her aunt and uncle launch a web-based business named "Blackwood Source."

To keep overhead costs down, she keeps inventory in her garage and at a small storage shed south of Traverse City. Since launching the business, Rachel has filled orders from all but two states and shipped wood to every continent except Antarctica.

Though web-based, Rachel has developed many personal relationships with customers who are eager to share stories and samples of their woodworking projects. Popular uses for the wood she supplies include game calls, bagpipes and executive ink pens.

Given its natural beauty, it's almost impossible not to become mesmerized by the blackwood species—especially when carefully worked by a master craftsman, and Rachel has not been immune from catching the bug. She recently completed an introductory wood-turning class and joined a local club.

Back in Africa, strong worldwide demand coupled with agricultural expansion has raised concerns about the future sustainability of blackwood. Mill operators, like Kalibu Timbers, conservation groups, and governments across Africa are implementing practices that will allow the trees to flourish while maintaining an important source of revenue.

As for Jim and Eileen Kirt, they are ready to start a new chapter in their lives and plan to relocate stateside early this year. Their departure will mean the end of Kalibu Timbers, but not the mission, as a new couple has stepped in to continue the good work started by the Kirts. Eventually, when existing inventories have run out, Blackwood Source will shut down, too.

The Kirts' do plan to return to Mozambique for short visits in the coming years and stay connected to the mission they began so many years ago. For them, it's been a fascinating and rewarding journey that has touched many lives, which is what often happens when you choose a path less-travelled.

Visit cherrylandelectric.com to see more pictures of the mission, sawmill, and people of Morrumbala.

The Garden Buddy System

Some vegetables, herbs and flowers protect and feed each other when grown side-by-side.

Have you ever noticed how one vegetable plant can fail in one location yet thrive in another? Given the same soil, water and light, the two plants don't seem to grow the same. The difference may be a plant that's growing next door.

This plant compatibility is the foundation of a gardening technique called "companion planting." Basically, it's a partnership formed by growing plants next to each other that are different but also enhance each other's ability to grow and increase productivity in five ways.

Plants That Nourish

Certain plant allies improve the flavor of neighboring vegetables by providing nutrients. For example, comfrey (an important herb in organic gardening, used as a fertilizer and herbal medicine), buckwheat and other deep-root plants can mine nutrients by bringing them to the surface and making them more available to other plants. Various cover crops, such as alfalfa, clover and vetch (a scrambling, herbaceous plant of the pea family that is used as silage or fodder) also nourish neighboring plants with essential nutrients and trace minerals, including nitrogen, phosphorus, potassium, calcium, magnesium, and iron.

Other plants—such as peas, beans, lupines and clover—can transport nitrogen from the air we breathe down into their roots, where

bacteria converts it into a friendly form for their neighbors. In this case, corn, peas and other nitrogen-hungry plants make great companions, as they will benefit from the "nitrogen-fixing ability" of these legume-type plants.

Plants That Protect

Other plants can improve their neighbors' health through a network of defensive chemicals that help ward off pests and disease. Marigolds are a classic example, as both the French and African varieties contain thiopene, which is toxic to certain soil-dwelling worms. As such, they are great companions for tomatoes, beans and other plants susceptible to nematode damage.

Plants that use similar chemicals for protection against disease include garlic, onions and chives—commonly-known compatibles that prevent black spot on roses and scab on apples. Likewise, brassica roots release chemicals that suppress some soil-borne diseases. Equally important are silica-rich plants such as comfrey and borage (herbaceous, used medicinally and as salad), which can neutralize rust, fungal attacks and other water-borne diseases. And, dandelions in a tomato patch are a good thing since their presence may deter fusarium wilt, a soil-borne fungus that reduces plant health and yields.

Other ways companion plants protect is by keeping things cool. Summer heat can take a

Companion planting can benefit your garden and increase its yield by providing nutrients, protecting against disease, repelling pest insects while attracting beneficial ones, and attracting bug-eating birds.

toll on radishes, spinach, lettuce and turnips. Larger plants, such as pole beans and tomatoes, provide needed shade that conserves moisture and reduces heat that causes these vegetables to become woody or bolt.

Plants That Repel Pests

Most pests locate their next meal from their host plant's chemical odors or color. A diversified garden boasts a complexity of plant odors, colors and textures, thereby composing a natural barrier that makes it harder for pests to locate their target meal. How easy it would be for the cabbage moth to attack an area growing only broccoli and cabbage. By surrounding and interplanting that same area with carrots and onions, you confuse the moth by masking the scent of broccoli and cabbage.

Strong-scented plants also benefit their neighbors by masking their scent, especially for pests that rely on scent to locate good eats. Rosemary, sage, lavender, oregano and other aromatics often foil aphid attacks on susceptible neighbors. Another idea is to plant the garden perimeter with garlic and marigolds to repel aphids and beetles.

Other plants contain phytotoxins that lure,



Photos - Rick Wetherbee

then sicken or kill dining pests. Mustard oils found in cabbage and similar plants often poison unsuspecting spider mites, mosquitoes, and Mexican bean beetles. Therefore cabbage, broccoli and kale make good companion plants for beans.

Some plants repel bugs simply by creating a physical barrier between the critter and the plant it wants to eat. If raccoons are raiding your corn, try surrounding it with a scratchy barrier of squash vines. Or, consider the fact that flea beetles love to devour cabbage and cauliflower, but never seem to bother the sticky, hairy leaves of tomatoes. Catnip is another that repels flea beetles, but also Colorado potato beetles and green peach aphids. However, you don't necessarily have to plant catnip in your garden to benefit from its protection. Catnip easily self-seeds, and if you grow it outside the garden it can then be cut and used as a protecting mulch.

Additional repellent plants are leeks, onions, and rosemary against the carrot fly; parsley and tomatoes against the asparagus beetle; geraniums and petunias against leafhoppers; southernwood against cabbage moths; and nasturtiums against whiteflies.

Plants That Attract 'Good' Insects

There are some bugs you want to attract because they prey on pesty ones. These insatiable insects seek out and destroy pests such as aphids, slugs and snails, cucumber beetles, caterpillars, and other nasty bugs that wreak havoc in your garden.

Adult beneficials and their larvae feed on insects, however these hard-working adults also need pollen- and nectar-rich flowers to survive. Begin with spring-flowering plants such as sweet alyssum and sweet woodruff. Include long-blooming plants like marigolds, coreopsis and petunias, and extend the season with later-blooming asters, chrysanthemums and salvias.

Attract parasitic wasps, lacewings and syrphid flies with

flowering members of the umbel family, including yarrow, parsley, dill and chamomile. This will greatly reduce pest populations of caterpillars, aphids, leafhoppers and thrips. Sunflowers, echinacea, cosmos, zinnias and others in the composite/daisy family are prime flowers for luring large predatory insects that dine on cucumber beetles, grasshopper eggs, slugs and caterpillar pests. And, when you get behind on harvesting the broccoli and lettuce, leave them be—their flowers provide food for beneficials.

Plants That Attract Bug-Eating Birds

Another way to keep bad bugs in check is to attract birds that feast on insects. Bugs from soil-dwelling grubs to codling moths provide a feast for chickadees, robins, wrens, swallows and other bug-eating birds.

Attract these beneficial birds by growing a mix of nectar, seed and fruit-bearing plants.

For example, cosmos, asters, zinnias, sunflowers and other seed-bearing annuals or perennials attract a variety of songbirds that feast on insects. And tubular- or bell-shaped flowers rich in nectar—such as bee balm, pineapple sage, nicotiana, verbena and salvia—lure in hummingbirds, which also dine on caterpillars and small insects.

Companion planting is all about diversity, which is key to any healthy garden. So, go ahead and experiment with your own neighborly plantings. Grow flowers and herbs among your vegetables, and tuck a variety of vegetables in your flower bed. The result is bound to be a more beautiful, sustainable and bountiful garden.

Kris Wetherbee specializes in writing about gardening, food and outdoor living. Her publishing credits include over 60 regional, national and international magazines.



Marigolds, shown with parsley, contain thiopene, which is toxic to certain soil-dwelling nematodes (roundworms).

A Sampling of Beneficial Garden Companions

Basil — lettuce, peppers, tomatoes; enhances growth, repels flying insects

Beans — cabbage family, corn, eggplant, lettuce, marigolds, petunias, potatoes; deters potato beetles, fixes nitrogen

Calendula — cabbage family, corn, lettuce; attracts minute pirate bugs and lacewings

Carrots — lettuce, marigolds, onions, parsley, tomatoes; keep away from dill

Cabbage family — aromatic herbs, chamomile, marigolds, onions, nasturtiums, potatoes; keep away from strawberries and tomatoes

Cucumbers — lettuce, nasturtiums, onions, peas, petunias, radish; keep away from sunflowers and potatoes

Lettuce — compatible with most garden plants

Marigolds — all garden plants; repels aphids, potato and squash bugs, massings kill nematodes

Onions — most garden plants, except peas and beans; deters many pests, masks plant odors

Petunias — eggplant, grapes, greens, squash; plant with any vegetable bothered by leaf hoppers

Peas — carrots, corn, cucumbers, potatoes; keep away from onions; fixes nitrogen

Peppers — basil, carrots, onions, parsley; keep away from fennel

Radish — especially carrots, cucumbers, squash; repels cucumber beetles

Squash — nasturtiums, onions, petunias, radish; keep away from cucumbers and melons

Tomatoes — basil, carrots, chamomile, marigolds; keep away from fennel and potatoes

College, Connections, Career!

Networking tips to help college grads land their first job.

College graduation season is coming, launching a new crop of young adults seeking their first “real” job. But, today’s high unemployment rates make that search a daunting challenge.

There is both good and bad news for recent grads looking for work, says Maribeth Kuzmeski, author of “The Connectors: How the World’s Most Successful Businesspeople Build Relationships and Win Clients for Life” (theconnectorsbook.com).

The good news: They’re more adept than their older counterparts at using the internet and social media to find job opportunities. The bad news: They lack the networking and communication skills that older job seekers have honed over the years.

Kuzmeski helps clients develop communication and relationship skills and offers advice for how new grads can network their way to a great new job.

Rejuvenate your résumé. Consider including some eye-catching, informative headlines, and make the most of every college experience by including information on internships, relevant class assignments, and club leadership positions. “Make sure your résumé is something an employer would want to read,” she says.

Use social media. According to a 2012 Social Job Seeker Survey by Jobvite.com, 88 percent of job seekers have at least one social networking profile, and 44 percent have them on all three: Facebook, LinkedIn, and Twitter.

Get face-to-face with potential employers! At a time when so much of the pre-hiring process is online, it is essential that you find a way to communicate with potential employers face-to-face. Drop off a follow-up note or a résumé in person, or stop by an interviewer’s office the next day with an interesting article. “Establishing this face time is sure to set you apart from your competition,” Kuzmeski says.



Make an impact by using video. Use a video to get an interview or as a follow-up. Carefully script and record a message (1 to 2 minutes) using a smart phone camera or webcam. Post it on YouTube and include the link when emailing a résumé or a post-interview thank-you note. Some extra tips:

1. Introduce yourself, and identify the job you want to be interviewed for.
2. Tell three things about your background that might tempt the employer to interview you.
3. Thank them for watching, and ask for the interview!
4. Focus on professionalism—not entertainment. Make sure both you and your background appear professional.

Focus on connectors. The goal of networking is to build mutually beneficial relationships with people who might never be able to give you a job, but may know someone who can. List the contacts who are the most important or closest to you. Don’t rule out family members, friends and neighbors that may be the most willing to help. Of those contacts, highlight those who know the people you want to know. “By connecting with other great connectors, you are able to widen your reach,” Kuzmeski says.

Let others do the talking. Don’t indulge in nervous chatter. Be prepared to listen and arm yourself with a (mental) list of questions to help you get conversations going. For example, you might ask, “What’s the best thing that happened to your business this year?” or “What’s one thing you’ve done that has really changed your career?”

Pitch yourself in 15 seconds. No one (except your mom!) wants to hear a long list of your accomplishments. Instead, prepare a short pitch that hits your high points and top skills. Include what’s unique about what you’ve done and what will help you stand out from other job seekers.

Get involved in professional groups. Attend trade shows and seminars and join organizations connected to the profession you want to enter. Take hard copies of your résumé to events. The more people within your profession that know you, the better.

Volunteer. If you want a marketing job, volunteer to work with the PR director at a nonprofit, or if accounting is your thing, volunteer your financial expertise. Volunteering allows you to learn from professionals and show potential employers that you’re a motivated worker.

Be a mover and shaker. Force yourself outside your comfort zone. Don’t just hang out with the people you already know; introduce yourself to new people and find out as much as you can about them. The more you move around, the more connections you will make.

Always network. Capitalize on all the connections you make in everyday life—network on airplanes, at social gatherings, and in the grocery store line.

Pick up the phone. While communicating by email may be your preferred method, a good rule is to match whatever method of communication your potential connection is using. Ask interviewers if it is okay to call with questions after the interview. You might also call after-hours to leave a thank-you voicemail—a nice way to let employers hear your enthusiasm without taking up too much time.

“By focusing on networking, you open yourself up to many more opportunities than just the ones you see on job boards or at job fairs,” says Kuzmeski. Every time you make a new connection, you get that much closer to getting your dream job.”

Linda Wacyk is a regular Country Lines freelance writer, educator, grandmother and content empty-nester.



Jewelry With a Past

Creative keepsakes made from broken dishes.

In a thick binder filled with photos of Lois Miller's work, every pitcher tells a story. As does every dinner plate, serving platter, cup and saucer that she transforms from a piece of china with sentimental value into wearable art.

"I could sit and tell you stories for an hour," Lois says about the Vintage Keepsake Jewelry she and her husband Keith create in a pole barn studio at their southwest Michigan home in Edwardsburg.

One grandmother delivered to Lois the remains of a Belleek bowl and asked her to turn bits of the Irish serving dish into jewelry as gifts for all her grandchildren—including the youngster who accidentally shattered it. An especially moving custom order was from a Hurricane Katrina victim who found some of her wedding china in the rubble. Lois preserved it as jewelry that would help the woman recover from her tremendous loss.

Using a diamond grinder and diamond-blade bandsaw, Lois cuts sections of porcelain, pottery, bone china and other tableware into hearts, ovals and rectangular or free-form shapes. Then, with a soldering iron she frames each piece in a fine thread of silver and adds the findings to create pendants, earrings, bracelets, brooches, cuff links and key rings.

beautiful jewelry. For collectors who recognize the design, there's a "Wow!" factor, Lois says. "It really stands out." And, while using Flow Blue is one of her trademarks, the china pieces are increasingly difficult to find and, "Now they are out-of-this world expensive."

Lois hunts for other unusual patterns on eBay, including horse images, which make in-demand pieces at an art show she participates in just prior to the Kentucky Derby in Louisville. She is also known for making jewelry from calendar plates, and her stock of that specialty china currently spans about 20 years. A specific month framed in silver as a pendant or charm is a commemorative piece, she says, "Perfect for a wedding anniversary, birthday or other special date."

Lois says she's always been creative. "I have the kind of mind that is always thinking of things to do," including quilting, sewing, decoupage, refinishing furniture, and making one-of-a-kind gifts for her grandchildren. But many years ago, when she first saw jewelry that incorporated china, "I was spellbound," she says. "I thought it was the most beautiful thing."

Soon she learned to craft the jewelry herself. In designing each piece she studies the



Lois Miller



Keepsake Jewelry made for Alison Jones from pieces of her china broken during the Katrina hurricane, September 2005.



Fiesta Ware bracelets

Austrian handpainted violet china



Grandmother's wedding teacup



Blue Rose wedding plate set



Blue ashtray

Lois has been making jewelry for 16 years and a decade ago Keith, who worked for Whirlpool, joined her with his own line of antique silverware bracelets. He sometimes includes charms that Lois has made, and also turns silver knife handles into handsome writing utensils.

Besides making custom jewelry from family treasures, Lois scours the internet for interesting patterns and tableware, including English Flow Blue China. The cobalt blue-on-white pieces were popular in the 1800s and the dreamy designs make strikingly

china pattern, sketches possible interpretations, and decides on the look of the silver frame: A sleek silver outline is compatible with a modern design, but for more old-fashioned or flowery designs she adds a beaded, decorative trim.

Although Lois participates in occasional art fairs and shows, the main outlet for the couples' work is their website at VintageKeepsakeJewelry.com. Pendants are

the most popular items, and her jewelry ranges in price from \$20 to \$70. Special orders (269-663-3061) vary, and usually take about two weeks.

It is the custom pieces and the stories behind them that Lois really treasures. As she transforms broken dishes into attractive accessories, she is also preserving history and memories "for all those people that ate off their china and everybody in the family that sat at the table."

Brunch

If you can't decide between breakfast and lunch, have both! With these sweet and savory recipes, there's a little something for everyone, giving you the perfect combination of breakfast and lunch ingredients.



Overnight Caramel Apple French Toast

Overnight Caramel Apple French Toast

1 c. brown sugar
1/2 c. butter
3 T. corn syrup
8 apples, peeled and chopped
1/2 t. cinnamon
10-12 slices French bread
2 c. milk
2 t. vanilla
1/3 c. sugar
5 eggs, beaten

Bring brown sugar, butter and corn syrup to a boil, stirring constantly; add apples and cinnamon. Cook until it begins to thicken. Pour into a greased 9x13-inch pan. Place bread slices in another pan. Combine milk, vanilla, sugar and eggs, and pour over bread. Refrigerate both pans overnight. Remove from refrigerator 30 minutes before baking. Place bread slices over caramel apple mixture. Bake at 375° for 35-40 minutes, or until a knife inserted in center comes out clean.

Ellen Yoder, Scottville

Sweet Sausage Rolls

1 8-oz. tube crescent rolls
24 miniature smoked sausages
1/2 c. melted butter
1/2 c. chopped pecans
3 T. honey
3 T. brown sugar

Cut each roll into three triangles. Roll a sausage tightly into each triangle. Combine remaining ingredients and pour into a 11x7x2-inch baking dish. Put sausage rolls seam-side down in butter mixture. Bake at 400° for 15-20 minutes, uncovered, until golden brown.

Bonnie Bourn, Constantine

Fancy Brunch Sprouts

1½ lbs. brussel sprouts, trimmed and halved
1½ T. margarine or butter
1 shallot, finely chopped
1 clove garlic, crushed
1/4 t. pepper
1 t. sugar
2 T. white vinegar
1/2 c. low sodium broth
1 lb. bacon, fried and crumbled
1/2 c. slivered almonds

Cover sprouts with water in large pan. Boil 5 minutes; remove and drain. In same pan, combine butter, shallot, garlic, pepper, sugar, vinegar and broth. Add bacon and sprouts to pan and boil until almost dry. Top with almonds; serve hot. Goes well with scrambled eggs. Serves 8.

Fred Black, Sandusky

Broccoli Quiche

2 10-oz. pkgs. frozen, chopped broccoli
4 beaten eggs
1/4 c. half-and-half
3 T. melted butter
1/4 t. minced onion
3/4 c. grated parmesan cheese, divided
1 9-in. deep dish unbaked pie shell

Cook broccoli for 4 minutes in water; drain. Combine with eggs, half-and-half, butter, minced onion and 1/2 cup cheese; mix well and pour into pie shell. Sprinkle top with remaining cheese. Place on cookie sheet and bake at 350° for 30 minutes, or until knife inserted in middle comes out clean. Cool at least 5 minutes before cutting.

Cora Kuiper, Grand Rapids

My Favorite Scones

1¼ c. whole wheat flour
2 c. all purpose flour
¾ c. sugar
1 t. baking soda
2½ t. baking powder
2½ c. rolled oats (old fashioned, not instant)
1 c. chopped dried cherries
1 c. roasted pecans (optional)
2½ sticks chilled butter, cut into 1½-inch squares
2/3 c. buttermilk
heavy cream or half-and-half
sugar

Mix the first five ingredients together. Add oats, cherries and pecans; cut in butter, then add buttermilk. On counter or waxed paper, form heavy dough into rectangle (16 x 3½ x 1½ inches). Wrap in plastic wrap and chill in freezer for two hours. Cut into smaller rectangles, then in half to make triangles; place on parchment lined baking sheet. Brush with heavy cream or half-and-half and sprinkle with sugar. Bake at 350° for 30 minutes, until beginning to brown on top and bottom.

Lois Barnum Phelps, Stanwood

Cheesy Amish Breakfast Brunch

3 c. frozen hash browns, thawed
1 c. cottage cheese
1 small sweet onion, chopped
9 eggs, lightly beaten
1 lb. bacon, cooked and chopped
2½ c. cheddar cheese, shredded
1 c. Swiss cheese, shredded

Mix all ingredients together and pour into greased 9x13-inch glass baking dish. Bake at 350° for 45 minutes. Serves 8 to 10.

Carole Buskirk, Dowagiac

Photography by: 831 Creative

Spinach Pie

1 lb. feta cheese, crumbled
1 lb. cottage cheese, small curd
4 pkgs. frozen chopped spinach, defrosted and drained very well
1/2 t. nutmeg
8 eggs, beaten
1 box phyllo dough
1 stick butter, melted

Mix feta cheese, cottage cheese, spinach, and nutmeg; add eggs and mix well. Keep damp cloth over phyllo while making pie. Brush bottom of a 14x10-inch pan with butter. Place seven layers of phyllo into pan, brushing each layer with butter. Spread filling over bottom layers. Place seven more layers of phyllo on top, again brushing each layer with butter. Bake at 350° for 40-45 minutes. Cut into squares. Serve warm or at room temp.

Leigh Gaskin, Grawn

Brunch Enchiladas

2 c. ham, cubed
1/2 c. chopped green onions
10 8-in. flour tortillas
2 c. cheddar cheese, shredded, divided
1 T. all purpose flour
2 c. half-and-half
6 eggs, beaten
1/4 t. salt

Combine ham and onions; place 1/3 cup down the center of each tortilla and top each with 2 tablespoons cheese. Roll up and place seam-side down in a greased 13x9-inch baking dish. In a bowl, combine flour, cream, eggs and salt until smooth; pour over tortillas. Cover and refrigerate for 8 hours or overnight. Remove from fridge 30 minutes before baking. Cover and bake at 350° for 25 minutes; uncover and bake for 10 minutes. Sprinkle with remaining cheese; bake for 3 more minutes, or until cheese melts. Let stand 10 minutes before serving. Makes 10 enchiladas.

Janice L. Thompson, Martin

Sausage Bread

1 loaf frozen bread dough
2 eggs, whipped
1 lb. sausage in tube, cooked, drained and crumbled
1/2 c. parmesan cheese

Thaw bread according to package. Allow it to double rise. Roll out to about 1/2-inch thick circle on a floured surface. Mix cooled sausage, eggs and cheese together and spread on bread dough, making sure sausage mixture is all the way to the edge of the circle. Roll-up and place on greased cookie sheet. Cover lightly with foil. Bake at 350° for about 30 minutes. Remove

foil and bake for an additional 10 minutes, or until golden brown. Remove from oven and spread top and sides with butter or margarine, if desired. Slice and enjoy!

Mary Ann Schultz, Scottville

Asparagus Fritters

2 lbs. asparagus, blanched and cut into 1-inch pieces
1 1/2 c. flour
4 T. parmesan cheese
1 c. milk
pinch of salt
4 eggs

Blend all ingredients together, adding asparagus last. Fry in butter or oil, like pancakes. Serve with applesauce or sour cream.

Marcia Scully, Atlanta

Baked French Toast with Maple Praline Topping

1 loaf day-old French bread
8 large eggs
2 c. half-and-half
1 c. milk
2 T. granulated sugar
1 t. pure vanilla extract
1/4 t. ground cinnamon
1/4 t. nutmeg
dash salt

Maple Praline Topping:

1 c. butter, room temperature
1 c. light brown sugar
1 c. chopped pecans
3 T. pure maple syrup
1/2 t. ground cinnamon
1/2 t. ground nutmeg

Cut bread into 16 1-inch thick slices, ends discarded. Lay slices in a 13x9-inch baking dish in two rows lengthwise, overlapping as necessary. In a large bowl, whisk eggs until blended but not frothy; add half-and-half, milk, sugar, vanilla extract, cinnamon, nutmeg, and salt; whisk to blend well. Pour egg mixture over bread; cover and refrigerate overnight. For topping, cream butter and brown sugar together; add pecans, maple syrup, cinnamon, and nutmeg; stir until ingredients are well combined. Cover and refrigerate overnight. To bake, place topping in a microwave-safe bowl and microcook on high (100 percent power) for 20 seconds. Stir mixture and spoon over French bread and egg mixture. Bake at 350°, uncovered, for 40 minutes or until golden. Serve with additional warmed maple syrup.

Marilyn Partington Frame, Traverse City

Hash Brown Quiche

4 c. frozen hash browns, thawed
5 T. butter, melted
2 large eggs, beaten
1/2 c. half-and-half
1 t. seasoned salt
1/2 t. black pepper
1 c. mozzarella cheese, shredded
1 c. Swiss, colby or cheddar cheese, shredded
1 c. diced ham

Preheat oven to 425°. Press hash browns into a 9-inch quiche or pie pan. Blot with paper towel to remove all moisture. Brush with melted butter. Bake for 25 minutes, or until crust just begins to brown; remove from oven. Reduce heat to 350°. Combine

eggs, half-and-half, salt and pepper in a bowl and whisk well. Place cheese and ham into the potato crust and pour egg mixture over top. Bake another 40 minutes, or until eggs have set; remove from oven. Cool and cut into wedges to serve.

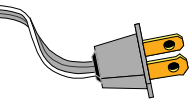
Marcia Leroue, Conway



SUBMIT YOUR RECIPE! Contributors whose recipes we print in 2013 will be entered in a drawing to win a prize: *Country Lines* will pay their January 2014 electric bill (up to \$200)! The 2013 winner will be announced in the Jan. 2014 issue.

Thanks to all who sent in recipes! Upcoming: Please send **BERRY** recipes by April 10 and **UNDER THE SEA** recipes by May 10. Mail to: *Country Lines Recipes*, 2859 W. Jolly Rd., Okemos, MI 48864; or email recipes@countrylines.com.

Energy Efficiency 101: All-American Edition



Why saving energy makes sense for anyone.

You plug things in and they work. You flip the switch and the lights come on. We all tend to take electricity for granted. As a result, saving energy may be the last thing on your list of priorities. Well, stay tuned. You're about to see energy efficiency in a new light.

First, let's define energy efficiency—it means using less energy to do the same job without losing features or functionality. In other words, energy efficiency doesn't mean sacrifice.

More Control

Mindful energy use gives you more control over your electric bill. For example, according to the "Energy Pulse" report, reprogramming your thermostat can reduce the energy your furnace uses by 10 percent. **(Tip:** In winter and spring, set your thermostat to automatically dip 8 degrees below your normal temperature preference when you're gone or

sleeping. This is not applicable to air source or ground source heat pumps).

Bottom line: Brainstorm ways you can roll back your energy use. Common energy hogs include inefficient furnaces, lighting and leaving appliances/computers plugged in.

What does it mean to be energy efficient?

Saving energy is easier than you may think. Here are a few low-cost, low-commitment ways to curb your energy use—and get Energy Optimization rebates, too!:

- **Buy ENERGY STAR® products:** When your water heater dies or your furnace goes out, replace it with an energy-saving model. **Bonus:** Rebate available.

- **Get a smart power strip:** Plug your TV and all related equipment (DVD player, VCR, speakers, etc.) into a smart power strip. It

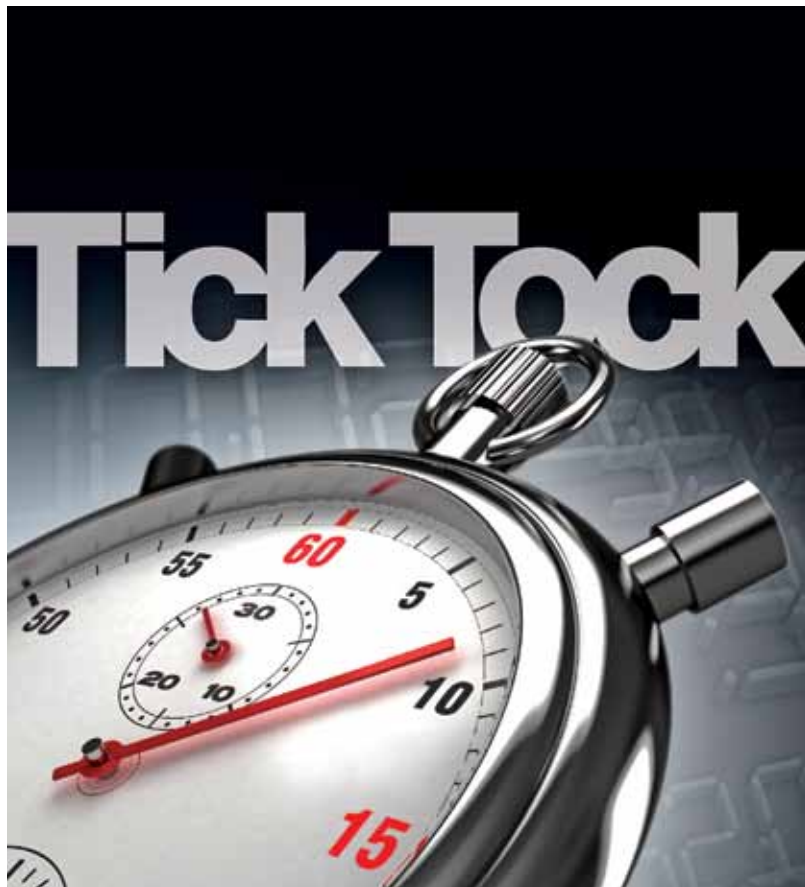
knows when your TV is off and turns everything else off, too. **Bonus:** Rebate available.

- **Change a light:** Switch to a light-emitting diode (LED) bulb in your favorite light fixture—these lights contain zero mercury and may last decades. **Bonus:** In-store discount.

- **Try a smarter Electronically Commutated Motor (ECM) furnace:** Using a fan motor that doesn't run all the time cuts down on energy use and noise. **Bonus:** Rebate available.

Resources & More Energy-saving Ideas

Ontonagon County REA is proud to offer Energy Optimization rebates for homeowners, businesses and farms. Save energy, get rewarded. Visit michigan-energy.org or call 877-296-4319 to learn more about rebates that will work best for you.



Energy Optimization rebates going fast

At home, work or on the farm, saving energy is easy: change a bulb, choose an ENERGY STAR® qualified appliance or upgrade your furnace. But don't wait to nab your rebate. Energy Optimization (EO) funds are limited and rebates are given on a first-come, first-served basis.

Claim your rebate today!

ENERGY TIP: Use EO rebates and federal tax credits to reward yourself for smart, energy-saving choices.

ONLINE: michigan-energy.org PHONE: 877.296.4319



Energy Optimization programs and incentives are applicable to Michigan service locations only. Other restrictions may apply. For a complete list of participating utilities, visit michigan-energy.org.

Celebrated Art May Be As Close As Your Post Office

A busy post office isn't where you'd expect to see wall murals and other artwork, but if the building was constructed during the 1930s and early '40s, you may find works created by some of the best artists of that time. The art, and construction of the post offices where it resides, were part of Franklin D. Roosevelt's promise when he accepted the Democratic nomination for president in 1932: "I pledge myself to a new deal for the American people. This is more than a political campaign. It is a call to arms."

Philadelphia artist George Biddle was the first to suggest commissioning artists to decorate federal buildings under the New Deal Post Office Works.

In 1933, a pilot program—the Public Works of Art Project—was created. Although it lasted only six months, the program employed thousands of artists and later became the Section of Fine Art within the Treasury Department. Artists were chosen through anonymous competitions. Some had national reputations, such as Jackson Pollock and Mark Rothko, and others were young unknowns receiving their first public exposure.

Well-known or novice, only the best artists were selected, and the art created had to reflect the town's heritage. Artists visited communities for weeks on end, actively engaging citizens and resident historians in dialog to discover the history, traditions and stories that shaped their communities. To make this happen, the artist had to meet with the postmaster and local residents, the Post Office Department's approval had to be obtained, and finally, plans were submitted for final approval by the Section of Fine Art. The project was meant to provide average Americans with a public outlet to view professional art, including many Michigan cities and towns.

In Clare, for example, the mural depicts

a man walking in a field behind a team of plow horses while his wife hoes the broken earth nearby. Entitled "Extending the Frontier in Northwest Territory," it was painted



Photo—Chris LaVigne

Michigan New Deal Post Office Art:

Alma • Belding • Birmingham • Blissfield • Bronson • Buchanan • Calumet • Caro • Chelsea • Clare • Crystal Falls • Dearborn (now in Henry Ford Community College Library) • Detroit Hamtramck Branch • Detroit Highland Park Branch (stone eagle sculpture, **pictured top right**) • Detroit Northwestern Branch (now in Wayne State Student Union building) • East Detroit • East Lansing (now in Michigan State Library) • Eaton Rapids • Fenton • Frankfort • Fremont • Grand Ledge • Grayling • Greenville • Hart • Howell • Iron Mountain (**pictured above**) • Iron River • Lowell • Manistique • Marquette • Mason (terracotta) • Midland • Monroe (now in Monroe County Community College) • Munising (plaster) • Paw Paw • Plymouth • River Rouge (stone façade) • Rochester (cast stone) • Rockford • Rogers City • Saint Clair • Sandusky • Traverse City (wood relief).

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by Allan Thomas in 1938.

Thomas was born in Jackson, MI, and studied art in England, France and the United States. Jaroslav Brozik painted the mural in Howell. Born in Czechoslovakia, his family immigrated to Illinois when he was young, and he studied at the Art Institute of Chicago. His "Rural Delivery" mural depicts neighbors interacting—women talking, children playing, and a man reading a newspaper, with a lake and church in the background. At the mural's center are three mailboxes and a man on horseback reading a picture postcard.

From 1934 to 1943, artists were chosen for the 46 post office projects in Michigan, and nationwide, over 1,300 murals and 300 sculptures were commissioned. One percent of the funds appropriated for a building proj-



Artist—Erwin Springer; Photo—Ed Moore

ect were set aside for these embellishments; the larger the project, the more money was budgeted for art. The standard New Deal Post Office carried a decorative allotment of \$650 to \$750, usually covering a space about 12 by 5 feet above the postmaster's door.

There was controversy, of course. The argument was: how could the government spend money on artwork at a time when money was short? As Harry Hopkins, Roosevelt's relief administrator, said in response to criticism of federal support for the arts, "[Artists] have got to eat just like other people."

When touring the state to view New Deal artwork, however, you'll find mostly positive images—the hard realities of American life during the Depression are not illustrated on post office walls or exteriors. Rather, the art offers a snapshot of history and hope.

Every piece of post office art has its own story: a window into the artistic tastes of the 1930s and '40s, what subject matter residents felt best reflected their community, and the artists' successes before and after this art was created.

A few pieces have disappeared over time, others need repair, and some of these masterpieces have been moved from their original locations.

By understanding this art's value and importance to Michigan and American history, it can be saved and cared for in the manner it deserves, and its preservation ensured for future generations.

These treasures are located throughout our state. If you haven't visited any of the Depression-era postal facilities, take the time—it's everyone's heritage.

— Marilyn Jones

Growing Up!

Increase garden space by using the third dimension to grow vegetables and other edibles.

When garden space is limited, you can still grow space-hungry vegetables such as squash, melons and prolific tomatoes.

Growing vegetables and vining fruits on an arbor or vertical trellis is the most efficient way to add space in a smaller garden. Not only will you grow more in less space, but the added sun and air can bring a superior quality to your produce.

Growing vertically improves air circulation, which helps minimize mildew and other plant diseases. Trellising also eliminates soil contact so produce stays cleaner and is less likely to rot. Fruits ripen quicker and are often more flavorful due to the additional sunlight. And, since the fruit and veggies are more visible and not hidden under lush growth, they can be harvested at their peak.

Trellising also saves strain on your back, with minimal stooping or bending needed to harvest. And, imagine the extra watering, weeding and feeding to grow enough bush beans or peas to equal the yield that pole varieties produce on vertical supports.

Getting Started

Before setting up a trellis system and planting, amend the soil with lots of rich compost or well-rotted manure. This is key to producing optimum yields in a smaller space. By enriching the soil, you improve its condition, fertility and help the plants get a good start.

Where and how you situate your trellis is equally important. Remember that vertically-grown plants will cast a shadow. Running the trellis in an east-to-west direction on the north side of your garden will create optimal light exposure while casting the least amount of shadow. Shadows cast over neighboring sun-loving crops can be minimized by running the trellis in a north-to-south direction, though vertical plants on the northern end will get less light than those on the southern end.

A few shadows are inevitable but can become an asset if you plant shade-tolerant crops such as lettuce, spinach and other heat-sensitive vegetables, flowers and herbs near a plant-laden trellis.

Top: This wall of beans is supported by a vertical trellis that is anchored by wood on either end and rows of hand-strung twine offering an easy path to sunlight. **Below:** Trellising eliminates soil contact so vegetables and fruits stay cleaner and are less likely to rot. Fruits ripen quicker and are often more flavorful due to the additional sun exposure.



Photos - Rick Wetherbee

Standing Tall

A variety of trellis systems can be used to grow vegetables vertically, from cages and hog panels to poles, stakes and strings, and store-bought trellises and arbors. Plants are typically grown up plastic or string mesh, chicken wire, hog panels, or hand-strung twine or wire attached to trellis supports made of metal, wood, bamboo, plastic or PVC pipe.

The hog and cattle panels used for trellising are basically sections of fencing made of heavy, galvanized wire. Cattle panels are usually about 5 feet tall with square openings about 6x6 inches across. Hog panels are about 3 feet tall, with top square openings about 6x6 inches across that get progressively smaller lower to the ground. Available at farm supply stores, they are an inexpensive way to create a long-lasting, rust-resistant trellis.

You can position panels to form an A-frame secured at the top, or upright and secured to metal posts spaced about 5 feet apart in a row. Sink the posts about 12- to 24-inches deep. Attach a panel to each post with heavy-duty wire or zip ties. To raise the trellis height to 6 feet, simply attach the panel 2 feet off the ground.

Whether your trellis is horizontal or vertical, growing certain crops off the ground will expand your gardening options for space-hungry fruits and vegetables. Either way, your garden bounty will soar to new heights of satisfaction.

Get the Facts Before Installing Solar Water Heater

Harnessing sunshine may reduce your water heating bill, but visit the options first to find the best system.

Q: *With two teenage daughters who take long showers, our water heating costs are high. Does using solar water heating make sense? What are my solar options, and is there a system I can make myself?*

A: For a typical family of four, water heating can account for about 20 percent of annual utility bills. With family members taking long showers, yours may be a bit higher, but don't expect a solar system to cut your costs to zero. A target savings of 50 percent often provides a good economic payback.

Before considering solar or any other efficient water heating, install low-flow shower heads with shut-off tickle (lathering) valves, and talk with your family about taking shorter showers.

The two basic systems are "active" and "passive." Active systems need a storage tank and electric pumps and controls to function. Sometimes 12-volt pumps can be powered by a photovoltaic solar panel located near solar water heating collectors on the roof.

In cold climates, the system must have some type of antifreeze fluid and a heat exchanger so it doesn't freeze in winter. Other systems that circulate actual potable water through the collector need a draining system to empty the collectors at night during winter.

Passive systems rely on the natural upward flow of less-dense warm water to move the water through the solar collector. With these systems, the warm water storage tank is located above the collector—usually on the roof or in the attic, so there are structural considerations. These cost less than more sophisticated active systems, but they tend to be less efficient, especially in cold weather.

There are many types of solar collectors. The best one for your house depends on your climate, hot water needs, and budget. They can be as simple as black copper tubes in an insulated box with a glass top, to those with vacuum tubes, concentrating reflectors and heat pipe technology. Discuss the various types with a solar contractor.

Unless you are an accomplished craftsman, I suggest building a passive system. Trying to build an active system—with collectors on the roof, plumbing and control systems, and storage tanks—is beyond the skill level of most homeowners. I am a design mechanical engineer, and I doubt I could build a system myself from scratch.

If you do choose the active system, get one with an OG-300 rating from the Solar Rating and Certification Corporation (solar-rating.org). A knowledgeable, qualified installer is important, too—look for contractors certified by the North American Board of Certified Energy Practitioners (nabcep.org). Also check the Database of State Incentives for Renewables and Efficiency (dsireusa.org) for local solar installation incentives, in addition to the federal tax credit. Be sure to review the requirements on system types, size, certifications, installers, and other details to make sure yours qualifies.

Otherwise, try building a passive "batch" system, which is a pre-heater for your existing water heater, with the simplest design called a "breadbox." It uses a horizontal metal water tank inside a box with a clear top. The sun shines through to heat the water. A slightly more efficient option uses a tall box angled toward the sun. This allows the warmer water to be drawn first from the top of the tank.

You can buy a stainless steel water tank that's designed for this application with inlet and outlet water fittings. If you can find an older water heater that's not leaky, strip off the metal skin and insulation to use the inner tank. Paint it flat black to absorb more of the sun's heat.

It also helps to insulate the solid sides and

If you have a question for Jim, please email jdulley@countrylines.com, or mail to James Dulley, Michigan Country Lines, 2859 W. Jolly Rd., Okemos, MI 48864. Be sure to let us know which electric co-op you receive service from.

Visit dulley.com for more home improvement and do-it-yourself tips.



Photo - James Dulley

This do-it-yourself solar water heating kit uses a batch design to preheat incoming cold water.

For more details:

▲ find-solar.org for an installer directory and calculator to estimate solar and PV system performance.

▲ energy.gov/energysaver/articles/solar-water-heaters has graphics showing various designs.

▲ energy.gov/energysaver/articles/siting-your-solar-water-heating-system has other resource links.

These companies offer solar kits and components:

▼ **Alternative Energy Store**
877-211-8192, altestore.com

▼ **Build It Solar**, builditsolar.com

▼ **Solar Components**, 603-668-8186,
solar-components.com

bottom of the box, especially if you plan to use it most of the year. Very heavy insulation is not needed, as the tank will not get extremely warm, especially if you use hot water throughout the day. One-inch-thick foil-faced rigid foam sheets should be fine. Attach them inside the box to reflect the sun's heat to the tank.

Install water valves and plumbing so the tank can be drained and bypassed during cold weather. Install heavy insulation around any exposed pipes and bury as much as possible underground.

James Dulley is a nationally recognized mechanical engineer writing about home energy issues for the National Rural Electric Cooperative Association.





Photo – iStockphoto.com

FOLLOW THESE SAFETY TIPS FROM YOUR ELECTRIC CO-OP:

- ▼ **Assume all power lines are energized and dangerous.** Even downed lines that seem “dead” can be re-energized at any time during power restoration efforts or improper use of generators. Lines do not have to be sparking to be live!
- ▼ **Any utility wire, including sagging or downed telephone or cable lines could be in contact with an energized power line, making them very dangerous, too.**
- ▼ **Never touch a downed line – or a person or object that is touching it!** A downed line can cause things around it to become energized, traveling through the ground to chain link fences or other objects.
- ▼ **If someone is injured from electrical contact, do not try to assist. You could be injured or killed, too. Call 911.**
- ▼ **If lines fall on your vehicle, do not drive away or get out.** Stay inside until utility workers say it’s okay. Warn others to stay away. If you must leave the vehicle—only in the case of fire—jump free without touching the ground and auto at the same time, keeping both feet together, and hop to safety. A live wire touching the ground causes electricity to fan out, and walking or running allows one foot to move from one voltage zone to another. Your body then becomes the electricity’s path, and electrocution results.
- ▼ **Never drive over a downed line,** it could cause poles or other equipment to come crashing down.
- ▼ **Call 911 immediately to report a downed power line.** Then call your electric co-op or the local utility.

Visit **SafeElectricity.org** for other electrical safety tips.

Protect Against Power Surges

Power surges are responsible for millions of dollars of property damage each year, and over time they can cause cumulative damage while decreasing the lifespan of TVs, computers, stereo equipment, and anything else plugged into a wall outlet. Being educated is the key to choosing the best surge protection for your home.

How does a power surge cause damage?

First, what is a surge?

“A surge is a boost in the electrical charge over a power line,” explains Art Thayer, energy efficiency programs director for the Michigan Electric Cooperative Association. “This can be caused by lightning, but it’s more commonly caused by motor-driven electrical devices, such as air conditioners and refrigerators, that require a lot of energy for starting and stopping compressors. Some surges can also be caused by faulty wiring.”

Frequent, small power surges tend to shorten the life of home appliances and electronics. “Power surges come in all shapes and sizes—the most extreme case being a lightning strike because it can destroy equipment and sometimes set your house on fire,” comments Alan Shedd, residential/commercial energy programs director for Touchstone Energy® Cooperatives, the national brand for America’s electric co-ops. “But less severe power surges are rooted in hundreds of different causes.”

“The severity of a surge depends not only on the voltage and current involved but how long the event lasts,” Shedd continues. Most surges are very short in duration. It’s important for people to realize that surges can happen through any connection on your equipment. If there is a wire connected to your equipment, then it provides a path for a surge.”

How can I protect my property?

A surge protection device mounted at your home’s main electrical panel or the base of your electric meter protects equipment inside your house or business from surges coming through “ports of entry,” such as an outside electric, telephone, and cable TV or satellite dish line.

Point-of-use surge protection devices do not suppress or arrest a surge, but divert it to the ground. They’re designed to protect your sensitive electronic appliances, like a computer, and resemble a regular plug strip. However, don’t assume your plug strip offers surge protection unless it specifically says so. You can also install special electrical outlets that offer surge protection, which can be helpful in places like kitchen countertops.

“My computer is plugged into an uninterruptible power supply with surge protection,” Shedd notes. “We had a lightning strike, and a surge came in over the phone line. But the surge protector stopped it.”

One of the most effective ways to protect your property is a two-tiered approach. A service entrance surge protection device reduces power surges to a lower level that protects large appliances, such as your stove or clothes dryer, while point-of-use surge protectors defend



Photo - Jim Duley

Some surge protection devices can be mounted at the base of your electric meter or main electrical panel. Others resemble a simple power strip that you plug into the wall and then plug your appliance or electrical device into the strip. But your power strip doesn’t provide surge protection unless it specifically says so.

your sensitive electronics.

Remember to be cautious when shopping for surge protection equipment. “Some items claim that they can save energy, and these claims are generally false,” Shedd concludes. “Surge protection is a valuable tool for protecting your home or business but not for saving energy.”



Photo - iStockphoto.com



Energy Efficiency

Tip of the Month

Did you know a computer can draw as much electricity as a new refrigerator? Turn it off when not in use or switch on its energy-saving mode. Also, cell phone and MP3 player chargers as well as plasma TVs and entertainment centers pull power even when they’re off. Unplug these and other appliances to save on your electric bill. Find more ways to save at TogetherWeSave.com.

Source: Touchstone Energy® Cooperatives

Blood and Rumors

I give blood when I can. I'm not going to set any records for donations, but the drops and pints are adding up, and I feel good about doing something good.

For men, there is a lifesaving benefit to this modern bloodletting. We are at higher risk for "iron overload," a potentially deadly problem where too much iron builds up in the blood. It can lead to heart disease and other major health problems. Donating blood regularly—the Red Cross lets you donate whole blood every 56 days—reduces that iron buildup, which women experience naturally through their periods. That could partly explain why women tend to live longer than men.

Donating blood is safe and healthy. You'll drop about a pound, and get a free mini physical, including blood pressure check, heart rate, temperature and iron levels.

Ironically, I once found out I was anemic through a pre-bloodgiving physical.

I admire the Red Cross, so I was upset when someone told me it sells my blood for \$500 or more to keep its staff highly paid. That didn't seem right to me. Why should the Red Cross make money off the blood I donated? I meant it to be given to people who need it—at no charge. If they sell it, they might as well pay me for it, right?

It turns out that the Red Cross doesn't charge for my blood, nor do they pay people to donate. The misinformation, which continues to circulate like an old joke, is dispelled on their website, redcrossblood.org, where it clearly states:

Since 1960, the Red Cross has been reimbursed by hospitals for the costs associated with providing blood to hospital patients. The Red Cross does not charge for the blood itself that you have so generously donated. The Red Cross only recovers the costs associated with the recruitment and screening of potential donors, the collection of blood by trained staff, the processing and testing of each unit of blood in state-of-the-art laboratories, and the labeling, storage and distribution of blood components. Hospitals may have their own additional charges.

Now that we have the internet and can find the news and information we want to believe, rather than facts that are uncomfortably true, this kind of misinformation is rampant. We're often too ready to believe any goofy

report that somehow validates our preconceived notions of how the world works.

As another example, a friend recently forwarded an email from another friend about an article supposedly printed in the Marquette Mining Journal a few years ago. The article, with all of the weird punctuation and grammar intact, went as follows:

"Up here in the Northern part of Michigan we just recovered from a Historic event --- may I even say a "Weather Event" of "Biblical Proportions" --- with a historic blizzard of up to 44" inches of snow and winds to 90 MPH that broke trees in half, knocked down utility poles, stranded hundreds of motorists in lethal snow banks, closed ALL roads, isolated scores of communities and cut power to 10's of thousands. And guess what; no one howled for the government. FEMA was not called on to send assistance. Our Mayor's did not blame the President or anyone else. Our Governor did not blame anyone either. CNN, ABC, CBS, FOX, or NBC did not visit -- or even report on this category 5 snow storm.

"No one looted. Nobody -- I mean Nobody demanded the government do something. Nope, we just melted the snow for water. Sent out caravans of SUV's to pluck people out of snow engulfed cars. The truck drivers pulled people out of snow banks and didn't ask for a penny."

If that tortured text didn't convince you, the email had amazing photos of snow drifts that towered over road crews.

A little research showed that versions of the story have been circulating on the internet for several years.

The "facts" are that the weather report did not come from northern Michigan, nor was it reported in the *Mining Journal*. It can be traced back to an October 2005 snowstorm that hit the Dakotas, Montana and Wyoming. A national weather service report stated the storm was the earliest to hit the area on record. A request did in fact go to FEMA seeking assistance. As for hearty citizens plucking stranded motorists from their cars, that probably did happen, but



Most of us can afford to give up a pint of blood a few times a year. It's good for others and the donor.

the bulk of the digging out fell to police, emergency workers and the National Guard, which were mobilized to help, as often happens following serious weather events. As for the pictures, it turns out they were from the opening of the Trans Labrador Highway in northeastern Canada and were circulating the internet in 2004.

As with many of these shared emails, the combination of distorted fact, exaggeration and government put-down took on a life of its own. It bothers me that we seem eager to embrace this pseudo-journalism and put down the mainstream media, which at least has the virtue of checking facts before reporting them—even if the public doesn't like them.

Here's a fact for you to chew on: 60 percent of the population will need blood at some time in their lives, yet less than 5 percent of the population donates. If discredited rumors about Red Cross mischief is the reason you don't donate blood, please ignore them. One donation can help four people live. I'd say that's a good investment.

Mike Buda is editor emeritus of *Country Lines*. Email Mike at mike.f.buda@gmail.com or comment on his columns at countrylines.com/column/ramblings.





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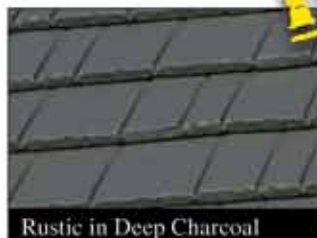
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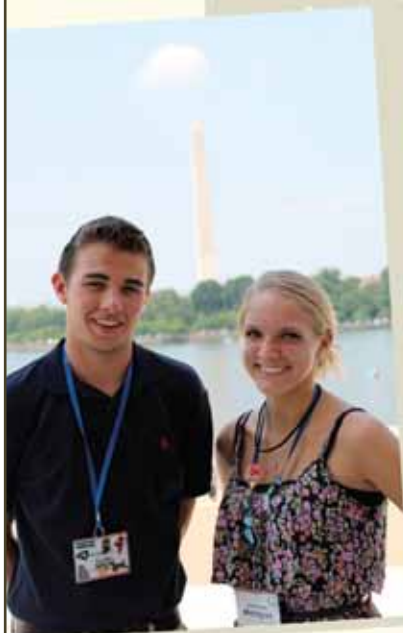
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