

A Service of **Midwest Energy Cooperative**

March 2012

Michigan COUNTRY LINES

Valerie Donn's

Garden Art

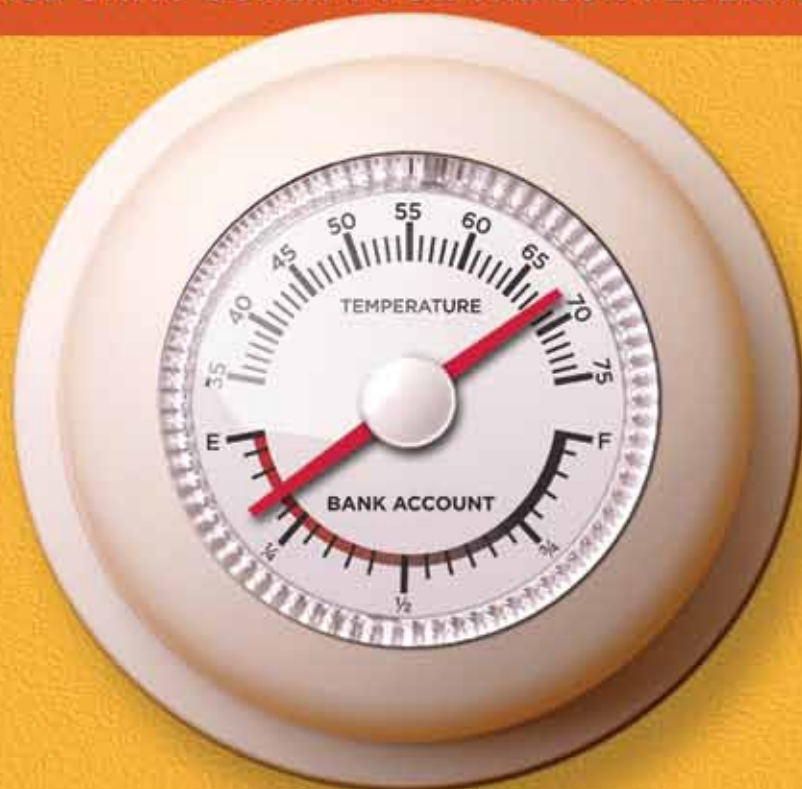
SPECIAL
GARDENING
EDITION



4 Maintaining A
Reliable System

8 Your Electric Bill:
What Does It All Mean?

20 Need A New
Water Heater?



WATERFURNACE HAS A SMARTER WAY TO HEAT YOUR HOME

Wouldn't it be nice to set the temperature of your house based more on comfort and less on your bank account? As the temperatures drop and the price of fossil fuels skyrocket, homeowners around the world are finding that a WaterFurnace geothermal system is a smart way to **reduce your carbon footprint and utility bills at the same time**. WaterFurnace units use the **clean, renewable energy found in your own backyard** to provide **savings up to 70% on heating, cooling and hot water**. It's good for the environment, great for your budget and thanks to a **30% federal tax credit**, now's the best time to act. Visit us at waterfurnace.com to learn more and to find a local dealer.

YOUR LOCAL WATERFURNACE DEALERS

Bad Axe
B & D Heating
(989) 269-5280

Berrien Springs
WaterFurnace Michiana
(269) 473-5667

Big Rapids
Stratz Heating & Cooling
(231) 796-3717

Caro
AllTemp Comfort, Inc.
(866) 844-HEAT (4328)

Carsonville
Certified Temperature Innovations
(810) 300-7748

Charlotte
Applegate Home Comfort
(517) 541-8013

Cheboygan
Jim's Handyman
(231) 627-7533

Clifford
Orton Refrigeration & Htg
(989) 761-7691

DeWitt
S & J Htg & Clg
(517) 669-3705

Gaylord
Family Htg & Clg
(989) 732-8099

Grand Rapids
Montgomery Htg & Clg
(616) 459-0261

Total Comfort Resource, LLC
(616) 406-3182

Hart
Adams Htg & Clg
(231) 873-2665

Ionia
Home Experts
(800) 457-4554

Kalkaska
Kalkaska Plumbing & Htg
(231) 258-3588

Lapeer
Porter & Heckman
(810) 664-8576

Michigan Center
Comfort 1 Heating/
Lenawee Heating
(517) 764-1500

Mount Pleasant
Walton's Htg & Clg
(989) 772-4822

Muskegon
Geofurnace Htg & Clg
(800) 922-3045

Onaway
Standard Heating
(989) 733-8309

Palms
Lakeshore Improvements
(989) 864-3833

Traverse City
Geofurnace Htg & Clg
(231) 943-1000

D&W Mechanical
(231) 941-1215

Webberville
Applegate Home Comfort
(800) 377-2272



waterfurnace.com
(800) GEO-SAVE



Editor
Gail Knudtson

Associate Editor
Doug Snitgen

Design Editor
Cindy Zuker

Publisher
Craig Borr

Michigan Country Lines, USPS-591-710, is published monthly, except August and December, with periodicals postage paid at Okemos, MI, and additional offices. It is the official publication of the Michigan Electric Cooperative Association, 2859 W. Jolly Rd., Okemos, MI 48864.

Subscriptions are authorized for members of Alger Delta, Cherryland, Cloverland, Great Lakes, HomeWorks Tri-County, Midwest Energy, Ontonagon, Presque Isle, and Thumb electric cooperatives by their boards of directors. Subscriptions are \$6 per year.

Postmaster: send address changes to Country Lines, 2859 W. Jolly Rd., Okemos, MI 48864.

Letters to the editor should be sent to the same address. Phone 517-351-6322. Email: gknudtson@meca.coop.

Association officers are **Brian Burns**, PIE&G, chairman; **Ken Swope**, Midwest Energy, 1st vice chairman; **Tony Anderson**, Cherryland, 2nd vice chairman; **Eric Baker**, Wolverine Power, secretary-treasurer; and **Steve Boeckman**, Great Lakes Energy, past chairman. **Craig Borr** is president and CEO.

Unsolicited letters, photos and manuscripts are welcome. *Country Lines*, however, will not be responsible for their safe keeping or return.

The appearance of advertising does not constitute an endorsement of the products or services advertised.

Display advertising:
Doug Snitgen
517-913-3535

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



Michigan COUNTRY LINES



Photo - USDA

17



Photo - 831 Creative

18



Photo - Harjala Family

26

DEPARTMENTS

6 Readers' Pages
Letters, scholarships,
co-op shopping

15 Michigan-made
FarmBoyTortillaChips
Jodi Bollaert

18 Home Cooking
Make it meatless
*Christin Russman &
Our readers*

22 Wolverine Power*
Focus shifts for WCEV;
Baseload opportunity
in Marquette
Nancy Tanner

YOUR CO-OP

Pages specific to your
electric cooperative: 1,
4-5, 8-9, 20-21, 24-25, 28

*Not in all editions

COLUMNS

11 Comment
7 answers from
MDARD's Keith Creagh
Gail Knudtson

16 Family
Tech tips for tots
Linda Wacyk

17 Gardening
Guarding the honey bee
Tim Tucker

23 House & Home
Bow and bay windows
James Dulley

26 Ramblings
The old man and the ski
Jerry Harpt

FEATURES

10 Our Energy
Higher power costs on
the horizon
Megan McKoy-Noe

12 Cover Story
Valerie's garden art
Kandace Chapple

14 Gardening
Corn is king
Neil Moran

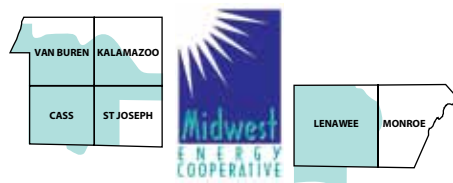
On the Cover*

Valerie Donn, of Williamsburg, MI, is an artist gifted with the vision to paint and create on a variety of canvases—especially those related to gardening.

Photo - Sarah Brown/Traverse City
sarahbrown-photography.com/

Michigan's Electric
Cooperatives
countrylines.com





PRESIDENT & CEO

Robert Hance

CASSOPOLIS OFFICE

P.O. Box 127 (901 E. State Street)

Cassopolis, MI 49031-0127

M-F, 8 a.m. – 5 p.m.

Drive-up window: M-F, 8 a.m. – 5 p.m.

TELEPHONE

269-445-1000 or 800-492-5989

Fax: 269-445-3792

PAW PAW OFFICE

59825 S. LaGrave

Paw Paw, MI 49079

M-F, 8 a.m. – 1 p.m. and 1:30 – 4:30 p.m.

ADRIAN OFFICE

1610 E. Maumee St.

Adrian, MI 49221

M-F, 8 a.m. – 5 p.m.

TELEPHONE

517-263-1808 or 800-492-5989

INTERNET TeamMidwest.com

E-MAIL info@teammidwest.com

EDITOR

Patty Nowlin

BOARD OF DIRECTORS

Clarence (Topper) Barth *Chairman*
Three Rivers

Kenneth Swope *Vice Chairman*
Adrian

Colyne Sorsby *Secretary*
Cassopolis

John Green *Treasurer*
Dowagiac

Ron Armstrong, Lawton

Jerry Campbell, Decatur

James W. Dickerson, Bloomington

Harry Gentz, Blissfield

Ben Russell, Constantine

More than Pruning to Maintain a Reliable System

I saw the first signs of spring over the weekend—daffodils already peeking out of the ground. So far, Mother Nature has largely spared us the effects of a nasty winter, and the flowers apparently are confused by that! If you've lived in this part of the country for any length of time, you know that winter can sometimes start as early as October and rear its ugly head as late as May.

In spite of the poor timing, the mild weather is making me eager to get out and work in the yard. I started thinking about gardening plans for the year, and some of the trimming and pruning I'll face in my early spring clean-up.

It's interesting for me to think about my version of trimming and pruning, and how many of our co-op members have a similar vision about the tree work we do at Midwest Energy related to our line clearance efforts. And, with good reason. For many years, that was pretty much our approach. We cleared branches off and away from the lines, then moved on to the next section. It made the lines look better, but did little to improve your service experience.

Nearly a decade ago we changed that approach. Our goal as your electric utility is to provide reliable and safe electricity, and the chief obstacle is trees. With the goal of improving your service experience, we implemented an aggressive, proactive line clearance program. This was, and remains, very different from our previous trimming and pruning efforts, and has significantly reduced outage hours related to our distribution system.

We employ a ground-to-sky approach by clearing 15 feet on either side of the primary line. It's a planned, consistent and comprehensive method that provides long-term results related to your service. Nothing can prevent all outages; we deal with a largely overhead infrastructure and system that is extremely vulnerable to many different elements. However, everything we do to keep trees, branches and

animals off of the power lines and poles helps to greatly reduce blinks and outages and improve reliability.

In all our efforts, we strive to balance preserving the beauty that trees offer to the landscape and environment while pursuing our mission of providing reliable, safe electricity. We understand not everyone approves of this approach, but in order to ensure that your lights come on at the flip of a switch, we must control the growth of trees and other vegetation around power lines and other energized equipment. Our contracted tree crews are threatened, cursed at, and

chased off property regularly. However, we know the approach works and believe we are best fulfilling our responsibility to our members by using this method.

Our 2012 line clearance program is under way (see details on page 5). If you are in one of the areas to be cleared, you will receive telephone notification,

Everything we do to keep trees, branches and animals off of power lines and poles helps to greatly reduce blinks and outages and improve reliability.

followed by a flyer in the mail that will prompt you to contact us prior to the start of the work if you have questions or concerns. It is your responsibility to call for more information or alternatives that might be available. We don't expect members to love what we do, although many have expressed deep appreciation for the improved service experience that results. We do, however, hope members will attempt to understand the reasons behind the approach and support what we are trying to accomplish.

We don't just trim or prune trees; we maintain a comprehensive electric distribution system that allows us to provide a reliable source of electric energy to our members. It's planned, aggressive and proven. Thank you for supporting our efforts to keep your electric service on.



Robert Hance
President/CEO

Clearing For Reliability

Our goal as your electric cooperative is to provide a reliable and safe system of electric distribution to our members, and one of our biggest obstacles is trees. With a goal of improving your service experience, we employ an aggressive, proactive line clearance program that has been proven to significantly reduce outage hours related to our distribution system. Following is some important information about our line clearance program.

Line Clearance

We have a comprehensive program in place to control the growth of vegetation around power lines and other energized equipment. Our experienced team understands both line clearance requirements and tree growth patterns, allowing us to spot hazards and potential problems.

Prior to beginning any tree work, a member of our team surveys the area and determines the work to be done by looking for trees growing under power lines, overhanging branches and limbs, hazardous trees, or trees with the potential to contact power lines in the near future. Our goal is to obtain a ground-to-sky clearance of 15 feet, free from all obstructions, from each side of the line.

Once a plan is in place, we mail notices to all customers in the area to alert them that tree work is planned. It is the responsibility of the member to contact us if there are any questions or concerns about the project.

Our Commitment to Safety

Our chief priority is safety, and any tree in close proximity to a power line can present a safety hazard and will be removed. Other circumstances may also require tree removal. Midwest will work with the property owner and/or community prior to removal, and may be able to offer other alternatives, such as burying or relocating the line at the member's cost. If you are interested in alternatives to tree removal, please complete and return the "Request for Contact" form on the mailer.

Always be aware of downed power lines, as they pose a serious safety hazard. It is impossible to look at a downed wire and determine if it is energized. Also, cable TV and telephone lines may become energized if

they come in contact with an electrical line. If you ever see any downed line, consider it dangerous, stay away, and call Midwest at 800-492-5989.

Planning Guide

Trees and power lines do not mix, which is why careful planning is important before you plant your new tree. Outages and personal injury can result when trees come in contact with electrical conductors. We strongly encourage members to avoid planting trees near or under power lines. Small variety trees should be planted at least 15 feet away from power lines; medium variety trees, at least 30 feet away; and large variety trees, at least 40 feet away.

Never plant a tree or shrub on an underground right-of-way, and always maintain a clear area of at least 20 feet around any utility pole or padmount transformer. And, as always, call before you dig. The Miss Dig program is Michigan's one-call utility notification service and can be reached at 800-482-7171. Member utilities will mark the approximate location of their underground public utility lines at no charge.

Service Line Trimming

Midwest Energy Cooperative will trim along the service line running from the transformer to your home when the tree is in contact with the power line. We do not remove trees located near service lines. If you would like a tree removed, we would be happy to drop the line so that you can have the tree safely removed. Please contact the co-op office at 800-492-5989 and provide at least a 24-hour notice before any work is to begin.

Job Site Clean up

Our contract crews will dispose of branches and limbs in the most economic and practical manner possible. During regular line clearing activity, crews will remove branches and limbs within maintained or landscaped areas and leave wood for use by the homeowner or resident. In non-maintained areas, crews will leave wood, branches and limbs for use by the homeowner or resident or to decompose naturally. Midwest does not remove stumps after tree removal. During emergency power restoration, crews clear trees from our facilities and move on to the next location. Midwest does not return to remove wood, branches and limbs.

For more information about our line clearance procedures, please contact our Customer Care Department at 800-492-5989.



Before ▲ and after ▼ shots of a line circuit in Dowagiac. A newly cleared right-of-way can look extreme at first, but as the growth returns the landscape regains its natural beauty.



▼ The ground-to-sky approach to line clearance helps to make sure that trees don't form a canopy over the lines.



During 2012, we will be clearing 115 miles of line in the following Michigan townships:

- ▶ **Almena**
- ▶ **Antwerp**
- ▶ **Calvin**
- ▶ **Mason**
- ▶ **Oshtemo**
- ▶ **Portage**
- ▶ **Prairie Ronde**
- ▶ **Texas**

All members on the circuits to be cleared will receive telephone notification, followed by a flyer in the mail that will prompt you to contact us prior to the start of the work if you have questions or concerns. It is your responsibility to call for more information or alternatives that might be available prior to the start of work.

Letters

Praise for Barb Barton's natural living, Mystery Photo follow-ups, classified ads, and your thoughts on apples. It's all here in your reader letters.

In Tune With Nature

Barb Barton (*February*) is absolutely the most talented person I have ever known. Not only is she a musician, singer and song writer, she is a biologist to boot! She is a defender of nature, the earth, and human rights. If you have a chance to go to her "gathering," GO! You will learn so much about the earth, food, nature, music and compassion—the list is endless. Thank you so much for publishing this article.

— Diann King, *Three Rivers*

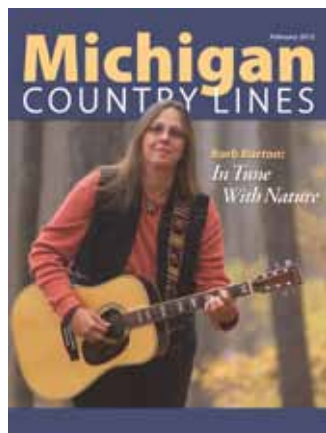
I have the privilege of knowing and have worked with Barb Barton. I didn't realize how much she taught me about nature and the woods until I was in the woods without her, telling someone else about what was there. Barb is truly a woman of the earth with great knowledge, and a big heart to boot! Her music? You'll be addicted!

— Nahnie, *Haslett*

Woolsey Photo Is No Real Mystery

I know the January *Michigan Country Lines* Mystery Photo VERY WELL!!! It is Clinton F. Woolsey Memorial Airport, and at one time the building was a creamery for cows.

My mother painted a picture of this building for my son, and he has it hanging in his bed-



Barb is an amazing woman and an inspiration to people to live closer to Mother Earth whether they live in Michigan or another part of the country! Please give more articles like this.

— Eddie, *Gainsville*

room. My sister and her husband own a cottage near this airport.

FYI: Charles Lindbergh and Amelia Earhart both flew here!

— Maureen Buchel, *Howell*

My husband proposed to me there [Woolsey Airport]. As of

Feb. 24, we've been married 23 years.

— Elizabeth Chapelle, *Honor*

Woolsey Memorial Field is one of the most unique airport buildings in the country—it's a classic grass field that has the flavor of a World War II airfield in England. It's a great place to fly into in the summer and use one of the bicycles that are stored there for private pilots and passengers to ride into town. A real throwback to the good ol' days!

— Mark Wilke, *Ellsworth*

The airport, with its grass runway, is the scene every summer for a 'Fly-in Pancake Breakfast' (this year, July 28). The fly-in also hosts a car show and the two events draw a nice crowd.

— Roger & Sandra Parkins, *Suttons Bay*

The Northport Pilots Association and other groups sponsor a fantastic 'Dawn Patrol' around the end of September each year, and all are welcome.

— Robert Evans, *Traverse City*

The north end of the grass runway leads to a beautiful little park on Lake Michigan with a lookout tower. It's a wonderful place to get away and relax!

— Steve & Michele Rambo, *Howard City*

If you enjoy Michigan history as I do, you might like knowing how the subject of the January Mystery Photo came to be. Visit <http://bit.ly/b6Jv5L>

— Charlie Johnston

My 86-year-old father was born and raised in Northport, and the Woolseys are distant relatives. My family has enjoyed many hours at this location over the years!

— Catherine Hall McNalley, *Hemlock*

The cutest airport in the world!

— Elizabeth Black, *Traverse City*

All About Apples

Enjoyed your column about Michigan apples, and wanted to comment on Honeycrisps. Here in Oceana County, we have quite a good supply, as well as the 'daughter' of Honeycrisp, Sweet Tango. If you haven't tried a Sweet Tango yet, get your taste-buds ready! Each September, at the Apple & BBQ Cook-Off Festival in Mears/Silver Lake, Honeycrisp and Sweet Tango run neck-and-neck for 'fan favorite'!

— Gay Lynne Liebertz, *Pentwater*

In 1954 or 55, my family bought a small farm in Rives Junction, MI, and though my dad worked full-time as a conservation officer, he began farming part-time—perhaps as a way to introduce his children to the life he knew growing up.

We had a great yard with two large apricot trees along the driveway, two peach trees, and a pear tree that I spent hours climbing and eating its produce.

My favorites, however, were the apple trees. I ate apples from mid-summer, when they were so bitter they made your face twist up, until they began to soften,



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.

Please note that 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 2012 issue.

The January contest winner is Davina Clark of Traverse City, who correctly identified the Woolsey Memorial Airport north of Northport.



or when a normal person called them 'ripe.' They were the greatest combination of sweet, tart and crisp and have probably gotten sweeter with the passage of decades and the fact I've never seen them for sale at a grocery or fruit stand.

Fast forward 50 years to when my wife and I bought our current property. While leafing through a tree catalog to find fruit trees suitable for our growing zone, I saw an 'heirloom' variety that rekindled memories of those apple trees from my youth. You guessed it—it was a Transparent.

After reading Buda's article, it is apparent I'm not the only long-suffering [Transparent apple] addict. Last year, my tree had it's first and only apple, and true to my past I picked it too early, so can't say if they are as good as I remember. Time will tell, as I hope to have more than one this year. I'd invite you over, but I'm not sure I can bring myself to share yet.

— Charlie McCord

My dad and all seven of his brothers and sisters were fruit farmers in SW Michigan. As a result, apples have always been a part of my life, too.

Shortly after I got married, I planted two apple trees: a Macintosh and a Jonathan. I've taken good care of them ever since [annual pruning, fertilization, periodic spraying] and get a nice crop every year.

My wife makes five or six pies shortly after I pick the apples, and places them [well-wrapped and uncooked] in the freezer. Then, she can quickly bake us a 'fresh' apple pie for most special occasions that arise. Another trick I learned is: The day I pick the apples, I sort out two 2-gallon plastic bags of the 'best,' and after squeezing out the excess air, seal the bags and place them in our basement refrigerator. Each time I hunger for an apple, I remove one or two from a bag, reseal it, and enjoy a fresh apple! When cared for this way, apples will

There are apples for sale today, throughout Michigan, that are... a far better apple than the Yellow transparent ever was.

remain relatively fresh into April of the following year!

— Bert Metzger,
West Bloomfield

I just finished your essay on apples. You really like the apples in your memory! When it comes to today's apples, you: • Don't like the arsenic in seeds • Don't like the wax • Don't like the pesticides • Don't like the cost of the Honeycrisp...

...and all the wonderful gains we have made storing delicious, high-quality apples are not enough, so you suggest apples this time of year 'taste so old' they are from the year before??

I heartily contest your whole perception of today's apples. Why call the article 'An Apple A Day' when you're really saying today's don't measure up to the yellow Transparents in your childhood memories?

There are apples for sale today, throughout Michigan, that are crisp and tasty, and a far better

apple than Yellow transparent ever was.

— John King, King Orchards,
Central Lake

Mike Buda responds: *I still eat an apple-a-day. And, I agree there are more and better varieties now than the old Transparents, but there was a short time before they fully ripened when they were spectacular, and there's no way to duplicate that taste with stored apples.*

Also, I can live with wax now that I know why it's there, and I really think Honeycrisps are worth the cost. But, you'll have to convince me that some apples I buy now aren't over six months old because they sure have an old texture. Thanks for writing.

No More Classified Ads?

I noticed there haven't been any classified ads listed at the back of the magazine. Are you not going to have them anymore?

P.S. — I really enjoy your publication! Articles are informative and things that I can relate to, and the recipes are great! I have used at least one or two of them from every issue.

— Jane Howe

Editor's Note: *With so many cheap, easy ways to sell things online today (Craigslist, eBay), we were receiving fewer classified ads every issue. We made the difficult decision to discontinue the classified ads to make room for more great articles.*

Scholarships Offered

Each year, the Michigan Electric Cooperative Association awards two \$1,000 scholarships to qualifying applicants. Individuals are chosen based on their scholastic achievement and extracurricular involvement during their high school career.

The applicant's parent or guardian must be a member or employee of a Michigan electric co-op, and the applicant must be planning to attend

a Michigan college or school full-time. Selection will be based on grade point average, character, leadership, academic achievement, extracurricular and community activities, and essay response.

Applications are available at countrylines.com; click on "Youth," email tschafer@meca.coop, or call 517-351-6322, ext. 201. Eligible applications must be postmarked by April 6, 2012.

Shop Co-op!

There are over 900 electric co-ops in America. But your local electric co-op is just one type, and there are over 29,200 different co-ops operating nationwide, including many in the ag industry. From dairy to oranges, and almonds to cotton, our farmers know the value of the co-op business model.

The next time you grocery shop, see how many items you can buy that were produced by a co-op.

Starting with produce, pick up some Ocean Spray cranberries or Sunkist oranges, tangerines, grapes or grapefruit.

Then, cruise to the refrigerated cases for eggs — 95 percent of American eggs are produced and marketed by co-ops. Then, get some Land O'Lakes butter, Cabot or Tillamook Cheese. Need a warm drink? Try Equal Exchange coffee, tea and hot chocolate. Finally, grab some Blue Diamond almonds for a perfect pick-me-up snack.

Now that you're done grocery shopping, visit Ace Hardware or True Value for weekend project supplies. Or, replace your old blue jeans with new ones from GAP, Banana Republic, or Guess—they all get their cotton from the Plains Cotton Growers Cooperative's Denimatrix. But first, visit another co-op—your credit union—to make a deposit to cover your purchases.

The co-op business model promotes self-sustainment and local economic growth. Support all our co-ops as we work together to build a better world.

Find a co-op business near you at go.coop.



Monthly Service Charge & Distribution Charge

Based on our 2011 Cost-of-Service Study, the cost of making energy available to our residential members is \$30/member/month. This reflects everything related to running your co-op except the actual power supply. Our MPSC-approved monthly Service Charge is \$18. The rest of the costs are rolled into the Distribution Charge, which is based on your monthly use. Our ultimate goal is to require everyone to contribute their fair share for availability of electricity through the Monthly Service Charge, regardless of how much or how little is consumed.

Power supply costs, represented in the Energy Charge and the Power Cost Adjustment, make up about 67 percent of the typical residential bill. The Energy Charge is the cost of generating and transmitting the power you used for that billing cycle based on the rates we establish with our power supplier. Midwest Energy does not generate electricity; we are essentially a transportation company. The kilowatts come in to our substations from the power suppliers, and we distribute them from there. We assess the charge on your bill based on your monthly kilowatt-hour use, then ultimately return all of that money to the power supplier. Power supply prices are steadily increasing, due largely to volatile energy markets and increasingly stringent climate change regulations.

This represents the difference between what we budget for power supply and what we actually pay to our suppliers. It directly reflects the volatility of power supply prices addressed above. The charge is based on your monthly kilowatt-hour use.

Energy Optimization is Michigan's mandated charge to provide funds for energy efficiency education, programs and services. The charge is based on your monthly kilowatt-hour use.

Uncle Sam's piece of the pie.

[illegible]

Electric Use Member Survey

In March you may be contacted to participate in a survey of residential co-op members. These surveys, commissioned through our power supply partner, are conducted to help us understand how our family of members uses electricity.

As a society, we have become increasingly dependent on electricity for many of the conveniences in our modern lives, especially as they relate to appliances and electronics. As your energy provider, the more we know about what you're using and how you're using it, the better prepared we are to have adequate power supply and reliable systems in place to serve and support you.

Members have been selected at random to receive a survey by mail. The information you provide is confidential and will only be shared with our co-op and power supply teams. We appreciate your help in completing and returning this tool.

If you have questions about the process, please call us at 800-492-5989.

When Planning New Structures...

In an effort to protect members from the dangers of electrical contact, Midwest Energy has a line clearance policy.

The policy stipulates that members who build structures closer to power lines than is allowed by the most current version of the National Electrical Safety Code will be required to either move the structure or pay to relocate the power line. Structures may include new homes, home additions, grain bins, signs and outbuildings.

"Every year we hear tragic and preventable stories of people who come into contact with power lines. Our objective is to eliminate that danger and keep our members safe," says Mike Roush, vice president of operations.

If you have questions about the location of a planned structure with regards to the location of overhead power lines, please call the co-op's engineering department at 800-492-5989. We will happily work with you in planning the location of your structure so that it falls within all applicable guidelines and keeps you and your family safe.

 **Your
Perspective**
PHOTO CONTEST

*January
Winner!*



The votes are in and Marita English, a member from Edwardsburg, is the January winner of our 2012 Your Perspective Photo Contest. Her entry, "Pure Smell" secured the most votes by Jan. 31 and won Marita a \$20 bill credit. There's still plenty of time to submit your entry. For details and official rules, visit us at Facebook.com/TeamMidwest.

Midwest offices will be closed on Friday, April 6, in observance of the Good Friday holiday. Payments may be made at the drop box and will be posted on the next open business day.

Have a happy and safe holiday weekend.

Higher Power Costs On Horizon

Growing demand and environmental regulations stress electric rates.

Thirty-five years ago disco was king, personal computers were born, and Americans needed more electricity. To meet this demand, nonprofit, consumer-owned electric co-ops—in partnership with their wholesale power suppliers—built or invested in power plants, mostly coal or nuclear.

Unfortunately, many of these plants may now be forced to make expensive changes to meet increasing environmental regulations—and as electric demand keeps climbing, new generation will be needed to keep the lights on. Some coal-fired power plants may require modifications so severe that it will be more cost-effective to simply shut them down.

Accelerating Factors

Consumers, adding more plugged-in devices daily, already pay more for electricity. The average annual residential electric bill has risen \$263.40 since 2005, with electricity use outpacing efficiency efforts. Despite the recession, U.S. homes on average used an additional 50 kilowatt hours (kWh) every month between 2009 and 2010; retail electricity sales rose 4.4 percent.

Americans aren't the only people using more power; as worldwide energy use grows, resource competition (and prices) shoot up. By 2035, global energy consumption, primarily in China and India, will jump 53 percent from 2008 levels.

In spite of increasing energy needs, 37,600 megawatts (MW) of older coal-fired power plants are slated for retirement by 2018. The North American Electric Reliability Corporation (NERC), the Georgia-based organization charged with overseeing reliability of the electric grid covering the United States, most of Canada, and the Mexican state of Baja California Norte, predicts a worst case scenario of environmental regulations may force coal plants generating up to 54,000 MW of additional power to shut their doors by 2018.

New power plants could offset this loss, with natural gas taking center stage. The National Energy Technology Laboratory, a branch of the U.S. Department of Energy, focused on advancing national, economic

and energy security, predicts 20,000 MW of natural gas facilities will start operating this year, with another 28,000 MW proposed for 2013. A strong breeze from wind project proposals may add 42,000 MW this year and 28,000 MW in 2013—but only if federal production tax credits continue.

Shifting Fuel Focus

While about one-half of the nation's electricity comes from burning coal, co-ops rely more heavily on the fossil fuel—about 80 percent. That's because the majority of

dioxides—compounds formed by burning fossil fuels—dropped at least 67 percent nationally even as electricity use climbed 38 percent. And, the large-scale expenditure isn't over. Another \$4 billion is slated for upgrades through 2021, with the bulk of the money—\$2.18 billion—marked for work this year and next.

Regulation Risks

"Environmental regulations are shown to be the number one risk to [maintaining electric] reliability over the next one to five years,"

Over the last decade, co-ops have invested \$3.4 billion to boost power plant performance and limit emissions. Another \$4 billion is slated for upgrades through 2021.

co-op coal power plants were built between 1975 and 1986, when using natural gas was prohibited by the federal Powerplant and Industrial Fuel Use Act.

Now, a series of U.S. Environmental Protection Agency (EPA) regulations impacting cooling water intake structures, coal ash disposal, interstate transport of air pollutants, and hazardous air pollutants like mercury are affecting all electric utilities. In most cases, co-ops will need to retrofit coal-fired plants with costly pollution control equipment; in others, co-ops could opt for early plant retirements.

"Time is tight—improvements take time and new technologies have to be tested before going mainstream," says Kirk Johnson, senior vice president of government relations for the National Rural Electric Cooperative Association (NRECA). "We're deeply concerned that EPA's strategy to require significant change within very compressed timelines may be unachievable and could damage the economy of rural America and affect service reliability."

Seeing the handwriting on the wall, co-ops have taken action. Over the last decade, power supply co-ops have invested \$3.4 billion to boost plant performance and limit emissions. In fact, since 1990, power plant emissions of nitrogen oxides and sulfur

reports NERC's 2011 Long-Term Reliability Assessment.

Why the concern? Because steps required by EPA rules have the potential to cost the industry billions of dollars and don't provide enough time to comply.

"Regulation on top of regulation, and court decision on top of court decision, have compounded the situation to the point that we now have contradictory regulations and court decisions that don't make any sense," explains NRECA CEO Glenn English. "Our nation needs to adopt a balanced, common-sense approach to environmental protection that factors in electric reliability and affordability."

NRECA has been actively urging the EPA through comments, testimony and litigation to consider the negative impacts of increased electric power costs on consumers as it continues to move forward with its rulemakings.

Electric co-ops are leading the way to find affordable solutions to America's electricity demand. Find out how you can help at ourenergy.coop.

—Megan McKoy-Noe

Sources: U.S. Energy Information Administration 2011 International Energy Outlook Table 5A; NERC 2011 Long-Term Reliability Assessment; NETL Tracking New Power Plants, July 2011

7 Questions

for Michigan Department of Agriculture and Rural Development Director Keith Creagh.

People might assume you grew up on a family farm. What has kept a city-kid like you in the agriculture industry for over 35 years?

I enjoy working with people who make their living from the land. They're salt-of-the-earth people who work hard and aren't afraid to tell you just exactly what they think.

What does your quote 'agriculture is more than just cows and plows' mean?

MDARD is involved with all kinds of things people don't traditionally associate with agriculture. We oversee everything from ag business development to certifying the scales for pharmaceuticals, gas pumps and trucks, regulating county fairs, and international exports.

Last year, Gov. Snyder signed an executive order officially adding "rural development" to the Dept. of Agriculture's mission. Will this focus lead to more jobs for rural Michigan?

Our role isn't to create jobs, but to create an environment where businesses can flourish and create jobs on their own. We help them create this environment by bringing groups and resources, such as bankers, realtors and others together with the Ag Department and other sectors. It's a fun, collaborative environment to be working in!

Gov. Snyder has also said that rural economic development is a key focus for his administration—particularly in agriculture, mining and exports. What is your role in this?

The governor is serious about reinventing Michigan, and we're

having some good conversations about projects that will boost rural communities, businesses and the economy. Land-based industries need to be part of the state's rejuvenation. Sustaining the state's food processing plants and other businesses is crucial.

All state departments need each other—whether it's health, housing, tourism or agriculture—to help determine what's needed to reinvent Michigan and how rural communities can be involved. This means renewed cooperation among state departments to solve business problems.

Tell us some success stories about how the MDARD is benefiting rural businesses and communities.

We're partnering with the governor and the Michigan Economic Development Corporation on a plan that provides Asian food companies with healthy foods while promoting Michigan food exports—especially fruit. In fact, we run an export program that partners with foreign ag services around the world, and locally.

We also assist Michigan companies with other high-end marketing and exports, such as working with the Johnson & Johnson company, of Zeeland, to provide a new baby formula for infants in China.

Other projects involve everything from "Project Fresh"—helping farm markets develop electronic readers they can use

to accept Michigan Bridge Cards (debit cards issued to Department of Human Services clients to buy certain food products)—to providing food safety and science engineers to help establish a dairy plant in Coopersville.

We have helped Cherry Central Cooperative (Traverse City fruit grower/processor) develop new markets in France; Mastronardi Produce (Livonia gourmet vegetable grower) with bulk fertilizer storage and increasing their productivity.

We also work with food processors on logistics at the farm gate, including farm and pesticide safety, registering products, sorting out federal rules, and defining technology and expertise that gets projects moving.

What efforts are you most excited about?

There's just something happening in Michigan—we're iconic food processors with a water resource and value chain that is envied worldwide. But now our business expertise is also drawing the attention of foreign companies.

We've helped 22 companies with first-time food sales overseas. Exports in 2010 were \$1.75 billion in food and ag products, with top markets being Canada,



China, Japan, Mexico, South Korea and Taiwan. These exports boost farm prices and income while supporting 14,700 jobs.

There's renewed interest in developing the U.P. mining and forestry industries. We're working on the best tax structure, rewards for local people, and supporting needs, like access to workers with advanced degrees—all things that make a community prosperous. Of course, energy is front and center in those conversations.

There's also more optimism—a new and exciting little pulse beating in Michigan that is relationship driven, and we are working with rural communities to increase their success.

Michigan Country Lines magazine has been featuring Michigan-made (or grown!) products. What is your favorite?

The things I love most about Michigan aren't physical things. I remember driving over the Mackinac Bridge with my son one fall day at sunset and asking him, 'is there anyplace else you'd rather be?' But as far as actual Michigan-made products, I would say fresh fish from Krueger's Fish Market in Mackinaw City is at the top of my list. Couple it with asparagus, a Michigan wine and Hudsonville Ice Cream, and you have a pretty nice meal. And, the Stormy Kromer hat gets an honorable mention!

THE CREAGH FILE:

- Raised in Detroit, earned a B.S. in forestry from Michigan Tech. Univ.
- Retired after 33 years at the Michigan Dept. of Agriculture, serving as chief deputy director, and pesticide/plant pest division director.
- Worked as industry affairs director for Neogen Corp., 2007-2011.
- Appointed by Gov. Snyder to return to MDARD as director in 2011.

Valerie Donn's Garden Art



Photo – Sarah Brown Photography

If you could stand among Valerie Donn's tulips this spring, you'd see a handmade birdbath whose design was inspired by the leafy reach of her rhubarb plant. And nearby, hidden under the sweet scent of catmint and its leaves, you would find a whitetail fawn painted into the curve of a stone. Farther up, there's a birdhouse with a family of raccoons handpainted in welcome.

It's these details that tell you Donn's garden is not just soil and seed. This place is hers, a place where her art and garden complement each other, one growing from the other.

Donn lives with her husband Ted in Williamsburg (and Hessel in summer, where they are Cloverland Electric Co-op members), and is mostly a self-taught artist who had her first success in high school.

"I remember my high school art teacher telling me to stay with it, to keep going with my art," she says. "Those words stayed with me." That year, she won an award for one of her sculptures. From there, she took one art course in college before life brought with it a family and a career.

"I had a full-time job and two children who, of course, loved to interrupt me,"

Donn says with a laugh.

As her schedule became tighter, her art had to

wait. But once her children, Heather and Corey, were grown, she picked up her interest in art again. She started researching techniques and tools by checking out library books on art. Next, she took a decorative painting class.

"It was cutesy stuff," she says, "but I wanted to do more, do different things."

It wasn't until she took a workshop from Rod Lawrence, a well-known wildlife artist in Kalkaska, that she finally found her pace.

"I started learning how to draw animals, their fur, things like that. It was so inspiring," she says. "He really emphasized painting what you liked, things you were drawn to."

Donn soon started creating better, more detailed garden art, along with paintings like those of Roxie, her pet Pug, and of her son at a young age holding his father's hand.

She soon found herself experimenting with sculpting again, too—like the day she broke the lid of her ceramic olive oil bottle. Instead of tossing it, she sculpted a piece of clay into the shape of a playful woman, painted her with grapes in-hand, and topped the bottle herself.

Today, Donn is still learning as an artist and trying new things in her garden each summer.

Her artwork can be found at a handful of area craft shows, but she sells most of it by word of mouth. (She was once commissioned to hand-paint rocks for a sports bar!).

Outside her garden and art, she is a special events planner at PAEM Solutions, a division of Passageways Travel in Traverse City, and can be reached at tvdonn@yahoo.com.





Photos Courtesy--Valerie Donn



Create Your Own...

Artist Valerie Donn encourages you to release your inner artist and create your own garden art. "Most people say, 'I can't do this!' but they would be surprised," she says. "Adding one small personal detail turns even a store-bought item into art."

Go online. Donn's favorite website is etsy.com, a snappy marketplace of homemade and vintage items from around the world, where she cruises for ideas and inspiration. "If I find something I like, I try it," she says. "It's fun to see what others are doing or, sometimes, to see if I'm doing something no one else is."

Hit the books. Donn visits the library and scouts out painting and photo books. If she finds something she likes, she makes a color copy to reference later, and paints pictures based on them.

Try it all. Consider working with stone, wood and/or glass. Looking at Donn's varied collection confirms that there is no one "way" to create.

Go simple. Use stencils, Donn says, to make a store-bought purchase your own. One of her projects was a plain, wooden birdhouse bought from the store. She painted it, then stenciled it. Voila! A one-of-a-kind, personal touch to her garden.

Buy the right paint. Donn purchases outdoor paint from craft stores like Michaels and Jo-Ann Fabrics & Crafts in Traverse City. "Outdoor patio paint won't fade," she says. "I have projects that have stood outside for years that haven't lost their color."

Protect it. Spray a clear finishing coat for the final touch on any outdoor project. Donn uses Krylon® acrylic clear coating, also from the craft store. "Be sure to get the non-yellowing outdoor coating," she says. This is key to keeping your craft in its original condition over the years.



Corn Is King



To get the best taste explosion from sweet corn, you need to grow it yourself. That way, you can “get the pan boiling and go pick the corn.” It doesn’t get any fresher than that, and regardless of where you live in Michigan, you can grow sweet corn. Here are some tips to get you planning your crop now, so you can enjoy the ultimate sweet taste of summer later.

Variety Selection

Sweet corn has been cross-bred more than most vegetables. Breeders are always seeking ways to make it sweeter, bigger and more disease resistance. There are four ways to classify sweet corn in regards to sugar content: normal sugary (su), sugary enhanced (se) and (se+), synergistic, and super sweet (sh2) (see yellow box for descriptions).

The goal is to choose a variety that both meets the approval of your taste buds and can be grown successfully in your area, based on the growing days listed on the packet. These refer to the number of *good* growing days available in your area. For example, if you have up to 75 days of warm weather, nights averaging in the lower 60s or better, then choose a variety that requires 75 days to maturity or less.

If you garden south of Gaylord, you’re most likely in zone 5 and should have from 70-85 good growing days. Select your sweet corn variety accordingly. One of the sweetest I remember from growing up in the Thumb area is Illini Sweet Corn (sh2) (Burpee.com), an 85-day variety that produces very large, sweet ears. It holds its sugar content well, even if you don’t cook it right away after picking it. Kandy Korn EH Yellow (se) (jungseed.com) is another 85-day variety, and a favorite among Jung customers. Of course, there are other varieties for southern Michigan growers, some that don’t require as long a season, such as the popular Ambrosia Bicolor (se) from Jung’s and Sugar Buns (se+), a 70-day, easy-to-grow variety from Johnny’s Selected

CORN TYPES: What’s the Difference?

NORMAL SUGARY (su) • Traditional corn flavor, sugar turns to starch quickly after harvest.

SUGARY ENHANCED (se) and (se+) • Increased tenderness and varying sweetness.

SYNERGISTIC • Comprised of 75% se and 25% sh2; combining tenderness with super sweet.

SUPER SWEET (Sh2) • High sugar content, slow to turn to starch after picking.



Photos – © iStockphoto.com

Seeds (johnnyseeds.com).

For northern gardeners, there are a few varieties that will do just fine in our cold belt, providing you follow the growing tips below. The varieties that have preformed consistently for me are Northern Extra Sweet Yellow (sh2), 67 days, and Early Xtra Sweet Yellow (sh2), a 68-day crop. These may produce a little smaller ear than the ones noted above, but they’re just as tasty.

Planting

Corn is a sun-loving crop that performs best over a long, hot summer. It is also a big feeder, so have an organic or inorganic fertilizer to use.

Plant your corn in fertile, well-drained soil. A slightly sandy soil is fine as long as you’ve added copious quantities of well-rotted

manure or aged compost. And, planting seeds directly in the soil often works better than using transplants.

Consider ordering seeds that are coated with a fungicide, especially if your soil is slow to warm up in the spring. Corn should be planted no later than June 1 to have time to ripen. Plant in blocks of at least four rows side by side, to ensure good pollination. Most varieties need to be separated from others by at least 25 feet to avoid cross pollination, which can result in changes in starch and sugar.

As the seedlings emerge, fertilize lightly with an all-purpose liquid or low nitrogen organic fertilizer, such as Milorganite. Side-dress the plants about every two weeks with an organic or inorganic plant food. Take care not to apply too much nitrogen, and avoid direct contact with the roots. Water during dry spells and keep the rows properly weeded and cultivated. Also, thin the plants to at least 8 inches apart, as this move alone will help ensure ripe ears.

The three problems that seem to plague sweet corn are the ear worm, which bores directly into the ear, corn smut, and raccoons. Crop rotation can prevent the first problem from becoming endemic, but if these become a serious problem, treat with *Bacillus thuringiensis* (Bt). Raccoons can be a serious matter since they come around to spoil the party just as the ears are turning yellow. The best defense against raccoons has proven to be the tall woven fence that surrounds my garden.

Now, it’s time to get eating. When the pot comes to boil, drop the shucked corn in for no more than three minutes. Sweet corn also tastes great in corn fritters and freezes real well, giving you the fresh taste of corn all year long.

Neil Moran is the author of “North Country Gardening with Wildflowers: A Guide to Growing and Enjoying Native Plants in the Upper Great Lakes Region.”





A Corn Chip Worth Eating

Michigan-grown FarmBoy products are a tasty, organic harvest.

Corn. You can see it growing from spring to fall—those thick green leaves waving to us in the wind until they turn crispy gold and fly away. But did you know there are over 11,000 corn farmers in Michigan whose labor contributes over \$1 billion per year to our economy?

The corn products you're probably most familiar with—fresh on the cob, frozen, canned, popcorn, and corn syrup—represent only a fraction of what is made with corn.

Another popular corn product is tortilla chips, and there are actually several producers in Michigan. One is in North Branch, and was nominated by *Country Lines* reader Cathy Isbell.

"Our favorite Michigan-made product is FarmBoyTortillaChips...made on the Simmons family farm," says Isbell, a member of Presque Isle Electric & Gas Co-op.

The farm's current owner, John Simmons, started working alongside his dad and uncle when he became big enough to ride a tractor. Now, at 56, he runs the 150-year-old farm under the brand names of FarmBoyTortillaChips and FarmBoyFlapJacks mixes, with help from his own family, especially daughter Stacey, who helps with the business side.

In the early '90s, seeing demand for organic food on a steep rise, John decided to focus the entire farm on diverse organic production. Today, FarmBoyFlapJacks mixes and the heirloom corn that became FarmBoyTortillaChips are made with organic grains.

"Much of the planning was similar to the planning involved in farming—projections of ingredient needs, costs versus projected revenues, storage requirements, and cash flow versus expense flow projections," he says of the transition. "Some new considerations were packaging, label creation, promotion of products, and public relations."

FarmBoyTortillaChips are packaged in unpretentious brown paper bags with white stickers illustrating John himself, and exclaiming "Heirloom Corn!" and "No GMO."

But, what he loves most about running his business is the people. "I love the interaction with people—retail store owners, restaurant owners, cooks/chefs, wait-staff, consumers—every person who tastes the food I've grown and prepared, and reacts with an expression



John Simmons is the owner of FarmBoyTortillaChips in North Branch.

of surprise, satisfaction and joy!"

"Much of what I've found leading to success in my food business may be contrary to industry norms," he adds. "I have an unusual product line, and as an innovator, I've just had to 'figure some things out' through trial and error."

John is happy to talk details about his corn chips, and he is not a bystander in their production. "We use open-pollinated heirloom corn, which gives our chips an amazing depth of flavor," he explains. The corn is then parched and prepared into homestyle tortilla chips that are fried in organic sunflower oil.

For the future, he continues, "I hope to expand production and provide delicious wholesome food to as many people as I can."

FarmBoyTortillaChips are sold in over

50 stores throughout the state, and now in Illinois and Kentucky. Chip varieties include Celtic Sea Salt, Lime, Garlic, Jalapeño, Cracked Black Pepper, and Holiday Spice. To find a store near you, visit farmboytortillachips.com or order directly from the website.

"My favorite chip person who I meet at food shows is a person that says, 'Oh, I don't eat corn chips,'" John laughs. And he responds, "Well, perhaps you've never had a corn chip worth eating!"

Writer Jodi Bollaert is a lifelong Michigan resident and enthusiastic locavore (person interested in eating food that is locally produced, not moved long distances to market). Find more wonderful Michigan-made products on her special listing at facebook.com/favoritemichiganproducts.

Tell us about your favorite, or a unique, Michigan-made product. Email your submission to czuker@meca.coop or send to: *Country Lines*, 2859 W. Jolly Rd., Okemos, MI 48864. Be sure to share why you like it, or a unique story to go with it.





Photo - © iStockphoto.com

Tech Tips for Tots

Modern technology tools help us learn anytime, anyplace.

No area has greater potential to transform the lives of children than education. And no technological innovation in our lifetime has greater potential to transform education than broadband internet. That's a message from more than 150 rural education and technology experts who participated in a National Rural Education Technology Summit in July 2011.

Paired with mobile devices like the iPad, the internet is expanding access to more teachers and lessons—which can be a big boost for rural communities. Modern technology can make learning more personal and engaging, and it can turn a remote schoolhouse into a global community of learners.

Technology can also turn a grandma into a liar.

In my defense, the child's mother made me do it. She claimed the only way to get my grandson to nap during a recent road trip was to pretend my iPad batteries had died. Since a tired 2-year-old is no one to mess with, I played along.

Not everyone approves of computer use for children under age 3. Critics prefer toddlers to learn through their bodies, first mastering developmental skills such as crawling, walking, talking, and making friends.

Try telling that to a toddler trapped in a car seat—especially after he's saved a story with "Super Why," and actually made "the wheels on the bus go 'round and 'round'" (over and over, and over again).

The truth is, tablet computers like the iPad change the technology game considerably. The big screen, touch interface, and fun learning apps make it a child magnet, prompting both *ComputerWorld* and *The New York Times* to call the iPad the "toy of the year" in 2010.

Rural Learners Gaining Ground

The benefits of educational technology for school-aged children are even greater. And in rural schools, technological developments are helping to launch students into the outside world.

Just look at the payback from online learning alone—for learners of any age.

- **Unlimited access:** Students gain knowledge and information from recognized experts at a minimal cost.

- **Flexibility and convenience:** Online learning is available 24/7. This flexibility makes it possible for learners to take breaks for work, sports, travel, or even child care.

- **Job-readiness:** The workplace is going progressively digital. E-learning has made it possible to acquire digital literacy skills.

- **Mobility:** The learner does not need to commute every day to gain knowledge.

- **Accessibility:** The learner can access information from any location with an internet connection.

Lack of Connectivity Still Limits Results

In too many rural communities, however, lack of connection prevents students from joining the technology revolution. For many rural districts, infrastructure, including little or no access to broadband or the internet, is among their biggest problems. The 2011 report, "Bringing Broadband to Rural America" (available at fcc.gov), revealed 28 percent of rural Americans lacked access to broadband, compared to 3 percent who lack access in non-rural areas.

Rural schools are also less likely to have full-time tech-savvy leaders, with only 36 percent of rural districts reporting they had such staff members compared to 79 percent of city districts, according to a 2008 U.S. Department of Education report. Twenty-three percent of rural districts didn't have any sort of technology leader.

There is hope on the horizon. Connect

Michigan (connectmi.org) has partnered with the Michigan Public Service Commission to engage in a comprehensive broadband planning and technology initiative as part of a national effort to map and expand access to high-speed mobile broadband service across rural Michigan. They have a champion in President Barack Obama, who has set a national goal of ensuring 98 percent of Americans have broadband internet access within the next five years.

And a handful of technology-related partnerships are developing between rural districts and universities, such as Vanderbilt University's Aspinaut program, which includes a "one-room school on wheels" where students use laptops to work on STEM (science/technology/engineering/mathematics) content during lengthy bus commutes.

Which brings me back to that road trip. Once my little back-seat buddy nodded off, I slipped out my "sleeping" iPad to help pass the time. I'd no sooner flung my first angry bird when I heard a sleepy, "Hey, what you doin,' grandma?"

I was so busted.

Start early, start smart

It's up to adults to keep children safe online, and select software and settings that fit the way young children develop and learn.

KEEP IT SOCIAL – Allow children to work together at computers, they'll gain social and communication skills.

KEEP IT IN BALANCE – Limit screen time; allow for plenty of active play.

SET THE STAGE – Technology should be included in the main learning area, rather than in a separate room, so it can be monitored, and adults can comment on what's happening. Hide wires and keep the screen free of glare.

MAKE LEARNING KEY – Researchers agree, software for young children should:

- Encourage exploration, imagination and problem solving
- Reflect and build on what children already know
- Involve many senses and include sound, music and voice
- Be open-ended, with the child in control.

Resources

- ◆ netc.org/earlyconnections – Tips for using computers in learning at all ages.
- ◆ childrenandcomputers.com – Software and websites appropriate for young children.
- ◆ connsensebulletin.com – Includes tips for children with special needs.
- ◆ pbslearningmedia.org – Thousands of classroom-ready, digital resources, even in-depth lesson plans. PBS LearningMedia™ is free for educators.



Source - Scott Bauer/USDA

The deadly parasitic Varroa mite on the back of this honey bee is one of many pests the U.S. Department of Agriculture is trying to combat without harming the bee.

Guarding the Honey Bee

Honey bees have existed for millions of years and supplied honey for the human race since the Stone Age, but there is great concern that their benefits to the world will be diminished, if not lost. However, with a little help from homeowners and other concerned citizens there is hope for their future—and ours.

These amazing and almost mythic creatures have a highly developed social structure that has helped sustain humankind and human society.

Once thought to be native to South Asia and the South East Asia subregion, recent studies indicate honey bees may also be native to Africa and probably all continents except North America. Cave drawings also indicate that early humans recognized the value of honey.

As humans learned to domesticate honey bees the art of beekeeping grew, and today they also provide us with beeswax, propolis (a bee glue used in cosmetics and health supplements) and pollination services.

Though several species exist, only two have been domesticated (the Egyptians were among the first to do so), and only one (*Apis mellifera*) is used extensively for domestic honey production and pollination.

An average well-managed domestic hive will hold 50,000 bees (sometimes as high as 80,000) in mid-summer. Bees from one hive can gather up to 80 pounds of pollen, and produce well over 100 pounds of honey annually.

Honey bees generally visit flowers to collect pollen, their source of protein, and in the process are responsible for about 80 percent of all insect pollination. This service is valued in the billions of dollars, and without it many commercial and home-grown food crops would be greatly reduced.

In 2007, honey bees made the news

because a disturbing number (30 to 70 percent) of North American European hives collapsed. This sudden, unprecedented decline was named colony collapse disorder (CCD). Researchers have not found a specific cause, but many scientists suspect a combination of factors rather than a single pathogen or poison. This may include loss of habitat, changes in agricultural practices, new viruses and pathogens, extreme weather during the past decade which resulted in impaired protein (pollen) production, and the possible synergistic effects of any combination of these factors.

A decline in beekeeping is another contributing factor to the population decline that has been taking place since the 1950s, notes Tim Tucker, a member of the American Beekeeping Federation's Membership and Marketing Committee and editor of ABF's E-Buzz newsletter.

"For many years the cause of decline was economic in nature and tied to the availability of other sweeteners on the market," he explains. Access to inexpensive sugar and high fructose corn sugar (HFCS) has caused many people to stop using honey as a home sweetener.

"With relatively cheap sweetener prices, we no longer consume much honey on a per-person basis—less than 2 pounds per year," he said. "On the other hand, we consume more than 100 pounds of refined sugars and HFCS per person and some estimates are much higher than that.

"This caused honey prices for many years to stay so low as to make it difficult to make a living and many commercial beekeepers gave up their operations," he adds.

Compounding that problem are the health issues of honey bees. "In the last 20 years we have had two new parasitic mites come into the country, and the varroa mite vectors

as many as 17 to 20 different viruses that affect honey bee health," he continues. This has increased the cost of keeping bees alive, resulting in additional beekeepers giving up this important work for jobs in other fields.

"Without a corresponding rise in pollinating fees over the past 15 years or so, many of the larger beekeepers that are still in existence would likely have gone out of business as well," Tucker says.

Though research indicates that the use of chemicals in home gardens and landscapes has not contributed to CCD, Tucker says homeowners can still help protect these amazing and economically important creatures.

"The main thing homeowners can do is provide plantings of beneficial flowers that bloom during the full season to provide nectar for honey bees and all native pollinators."

"The second thing is to educate the public to accept a lower level of perfection in their yards and gardens and use less herbicides and pesticides that can affect pollinators," he continues. "It is not a good thing to treat our lawns to remove clovers and even dandelions that provide nectar to bees. While it makes for a less perfect looking lawn, it is more natural and beneficial to the bees."

According to Tucker, white clovers and native wild flowers, trees and shrubs that provide lots of pollen and nectar are wonderful additions to yards and landscapes. Shrubs such as spirea, currants, blackberries, blueberries and even honeysuckle are great choices. Beneficial trees include all fruit-producing and ornamental varieties such as Bradford pears and black locusts.

Homeowners certainly can take up beekeeping themselves. Courses are available in every state, often through local beekeeping associations and Cooperative Extension units. If beekeeping is not feasible, homeowners can still help by providing locations for beekeepers to place bees—especially on the outskirts of towns and suburban environments, but also in the countryside, Tucker says.

So, what's the course of action if a swarm of honey bees show up on its own? Because they can pose a threat to people and animals, and because the swarm may be the more aggressive strain of Africanized honey bees, Tucker suggests calling a local beekeeper to have them removed.

To learn more about honey bees and beekeeping, visit the ABF site at abfnet.org or contact a county or regional Cooperative Extension office for sources of local information and help.

— Tim Tucker

Meatless Meals

You don't always need meat to create a tasty dish. These meatless recipes are flavor-filled and sure to fill you up. They're so delicious even meat-eaters won't miss a thing.

Visit countrylines.com for hundreds more reader recipes.

Margherita Pizza

- 1 T. olive oil
- 2 T. pizza sauce
- 1 pre-made whole wheat or white pizza crust
- 3/4 of 12-oz. jar diced tomatoes, drained
- 2 T. sliced yellow (mild) peppers
- 2 T. chopped fresh basil leaves
- 8 ozs. shredded mozzarella cheese

Preheat oven to 450° (or directions on crust package). Mix olive oil with pizza sauce and spread evenly onto crust. Add tomatoes, peppers, basil and cheese, making sure all ingredients are evenly distributed around crust. Bake for 12-15 min or until desired crispness.

Christin Russman

Photography by: 831 Creative

Teriyaki Turnovers

- 16 oz. pkg. frozen Athens Fillo Dough, thawed
 - 1 T. olive oil
 - 1 stalk celery, finely chopped
 - 1 sm. head broccoli, finely chopped or 10-oz. pkg. frozen, chopped
 - 5-oz can water chestnuts, finely chopped
 - 6 T. teriyaki marinade or sauce
 - 1 bunch chopped green onion (save 2 stalks, also chopped, 1 for dipping sauce and 1 for garnish)
 - 3 ozs. roasted cashews (2 ozs. chopped and 1 oz. finely minced for garnish)
 - 1/2 c. butter
- Dipping Sauce:**
- 1/4 c. Swanson vegetable broth
 - 1/4 c. teriyaki marinade or sauce

1 T. chopped green onion
2 T. Asian (Lee Kum Kee) Chili Garlic Sauce
Set oven to 375°. Sauté celery in olive oil until slightly soft. Add broccoli and water chestnuts and sauté for 3 more minutes; drizzle with 4 to 6 tablespoons teriyaki sauce. Mix in 2/3 of raw green onion and 2 ounces cashews. Set aside.

Heat 1/2 cup butter in a small microwaveable bowl until melted (approx. 20 sec). Brush very thin layer onto 1 sheet of dough, repeat adding a second layer, and third if desired. (You must keep dough you're not using from drying out by placing a wet and wrung paper towel on top until ready for next sheet. Work quickly so dough doesn't dry out and crumble.)

Add 1/4 cup of broccoli mixture placing in



Olive and Mozzarella Orzo



Margherita Pizza

the bottom corner of dough. Fold the empty side over then continue folding into a large triangle. Place on cookie sheet lined with parchment paper and repeat process until broccoli mixture is all used. Makes about 6 turnovers. Bake for 15 min and serve with dipping sauce.

Mary Gorshe, Suttons Bay

Grilled Tuscan Salad on a Stick

Place any combination of the following on a skewer:

colored bell peppers, cut in pieces
cherry tomatoes
zucchini, cut in rounds
summer squash, cut in rounds
mushrooms
artichoke hearts
onions, cut in chunks

Grill the vegetables and place on a bed of greens, such as Romaine or baby leaf lettuce.

Tuscan Salad Dressing:

3 T. mayonnaise
1/3 c. red wine vinegar
1/2 c. water
2 t. lemon juice
2 T. parmesan cheese
3 T. olive oil
1 sm. clove garlic, minced
1/4 t. dried oregano
1/4 t. dried basil
1/4 t. thyme
1/8 t. black pepper

Combine ingredients in a blender and drizzle over the salad.

Julie Dennison, Roscommon

Olive and Mozzarella Orzo

1 lb. orzo pasta
1 1/2 c. chopped onion
2 T. olive oil
2 T. butter
2 c. chopped celery
2 T. flour

1 c. water
1 t. chicken bouillon
1 28-oz. can tomatoes, drained and chopped
1 t. basil
1 t. oregano
1/4 t. cayenne
1/2 lb. pitted Kalamata olives, chopped
3/4 lb. mozzarella cheese, cut into 1/4" pieces
Cook orzo till almost done, drain and place in large bowl. Cook onion in oil and butter over medium-low heat, stirring until soft. Add celery and cook; stir for 5 min. Stir in flour and cook 3 min. Stir in water, bouillon, tomatoes, basil, oregano and cayenne. Simmer 5 min. Stir into orzo with olives, 1/2 lb. mozzarella and salt to taste. Transfer to 2-qt. casserole. Cut remaining cheese into strips and arrange decoratively on top. Bake at 400° for 30 min, or until heated through.

Vicky Hueter, Lovells

Galuski

1 med. head cabbage
1/4 c. butter
salt to taste
pepper to taste
generous dash paprika
1 8-oz. pkg. Kluski noodles
Shred cabbage finely. Melt butter in large skillet; add cabbage with salt, pepper and paprika. Cook noodles in boiling salted water until tender; drain. Mix with cabbage and fry until brown.

Janice Harvey, Charlevoix

Mock Tuna Salad

2 15-oz. cans garbanzo beans
1 red bell pepper, finely chopped
2 carrots, peeled and finely chopped
2 celery stalks, finely chopped
1 med. onion, finely chopped
2 T. finely chopped fresh cilantro
1 c. chopped walnuts
1 T. dijon mustard
3/4-1 c. mayonnaise
salt and pepper to taste

Drain garbanzo beans. Mix in food processor until flaky. Combine all chopped vegetables with beans by hand. Mix mustard, mayonnaise, and salt and pepper together and add to bean/veggie mixture. Serve as sandwiches.

Geralyn Guild, Grand Ledge



Squash Bisque (Pictured above)

1/2 c. chopped onion
2 T. grated fresh ginger
1 T. olive oil
3 c. cooked, peeled butternut squash
3 c. vegetable broth
1 c. evaporated skim milk
1/8 t. nutmeg
salt and pepper to taste
Sauté onion and ginger in olive oil, then stir in squash and broth. Cook 5 minutes, and then puree in blender. Return to saucepan and add remaining ingredients, heat until hot. Serve with hearty bread and a good salad.

Jill Justin

SUBMIT YOUR RECIPE! Contributors whose recipes we print in 2012 will be entered in a drawing. We'll draw one winner in December and pay their January 2013 electric bill (up to \$200) as a prize.

Thanks to all who sent in recipes! Upcoming: Please send in your **CREPE** recipes by March 10, **RECIPES FOR KIDS** by April 10 and **FRESH FROM THE GARDEN** recipes by May 10. Mail to: Country Lines Recipes, 2859 W. Jolly Rd., Okemos, MI 48864; or email recipes@countrylines.com.



Need a New Water Heater?

Purchasing a new appliance can be an overwhelming proposition. Which brand is best? What features do I need? What will this do to my energy bills?

When it comes to your next water heater purchase, Midwest Energy Cooperative wants to take the confusion out of your hands.

We are pleased to offer a program that will put a 50-gallon, high efficiency water heater in your home with only \$100 out of your pocket. Comparable units are \$400 and above at most hardware stores and retail outlets.

The GE High Efficiency Residential Electric Water Heater offers a .94 efficiency rating. The unit comes with a full one-year in-home warranty through Home Depot, and a six-year limited warranty on tank and functional parts. It features double 4,500-watt heating elements and a factory-installed temperature and pressure relief valve. A special porcelain lining provides tank protection.

If you are a co-op member and homeowner who uses a minimum of 400 kilowatt-hours monthly, you can now purchase this high efficiency water heater for only \$100 out of pocket when you participate in our load management program. Load management allows us to remotely control the electricity

to your water heater. As a utility we have periods of peak usage during which customers are using a lot of power at the same time. Because energy supply charges from our power suppliers are based on monthly peak demand, all co-op members ultimately benefit when we can “reduce peak.” We then pass those savings back to those participating in the load management program in the form

If you participate in our Load Management program, you may purchase a high-efficiency water heater for only \$100 out-of-pocket.

of a credit on their electric bill.

With this program, your \$4 monthly water heater load management credit will be applied to the cost of your water heater for 66 months. After that time, you will receive the full monthly credit under the terms of the load management program. Essentially, you pay only \$100 out-of-pocket for a brand new high-efficiency water heater, and begin pocketing a load management credit after completion of the term.

Water heater control does not exceed five hours a day, and occurs predominately between the hours of 3–9 p.m. when the system is at its peak. The hot water stored within your insulated tank will remain hot for a long time.

Water heaters are available for pick-up from 8 a.m.–5 p.m. in the Cassopolis and Adrian offices, and from 8 a.m.–1 p.m. and 1:30–4 p.m. in Paw Paw. For more information about this program or to see if you qualify, please call the cooperative at 800-492-5989, or visit one of our offices.

Rebates Also Available

The water heater load management offer, combined with the HVAC Program offered through Midwest Energy Cooperative's Energy Optimization Program, could put a new water heater in your home for only \$50!

The HVAC Program is designed to encourage residential members to install energy-efficient heating, cooling and water heating equipment. Co-op members are eligible for a \$50 rebate in the form of a bill credit when they replace an existing electric water heater with a high efficiency (.93 or greater) electric water heater. Members must live in a single family dwelling in Michigan.

Members do not have to participate in the load management program to qualify for the HVAC Program offer.

To claim the rebate, members must complete an incentive claim form and submit it with all required documentation. The claim form submitted must be for equipment purchased on or after Jan. 1, 2012. Claim forms are available at our website at TeamMidwest.com or by calling the office at 800-492-5989. Rebate incentives are subject to change and availability.

Fuel Mix Report

The environmental characteristics of Midwest Energy Cooperative as required by Public Act 141 of 2000 for the 12-month period ended 12/31/11.

COMPARISON OF FUEL SOURCES USED

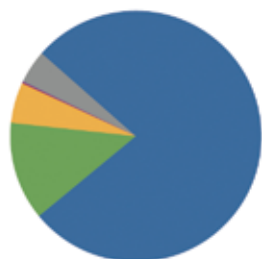
Regional average fuel mix used

Your co-op's fuel mix

FUEL SOURCE	Co-op	Regional
Coal	77.5%	64.7%
Nuclear	12.7%	24.0%
Gas	5.2%	7.1%
Oil	0.1%	0.4%
Hydroelectric	0.2%	3.1%
Renewable Fuels	4.3%	3.1%
Biomass	2.5%	0.4%
Biofuel	0.1%	0.1%
Solid Waste Incineration	0.0%	0.4%
Wind	0.1%	1.7%
Wood	1.3%	0.4%
Solar	0.1%	0.0%

NOTE: (1) 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 EMISSIONS/WASTE	lbs/MWh	
	Your Co-op	Regional Average*
Sulfur Dioxide	7.5	8.2
Carbon Dioxide	1,898	2,186
Oxides of Nitrogen	3.7	2.0
High-level nuclear waste	0.0044	0.0083

*Regional average fuel mix data was compiled from Michigan, Illinois, Indiana, Ohio and Wisconsin.

Wabash Valley Power Association, Midwest Energy's power supplier, purchases 36.13% of its energy under long-term power supply contracts, for which actual fuel mix characteristics of purchased electricity could not be discerned, but which is nearly all coal, so all purchased power is reflected as coal-based.

Tips for Refinancing The Roof Over Your Head

If you own your home and are paying a mortgage, one way you may be able to save money is through refinancing—particularly if you closed on your home many years ago. Only you can decide whether refinancing is a smart move, but here are some things to consider:

Refinancing will cost you money.

There's no way around this. You're either going to be charged closing costs to refinance, or you may be offered a "no-closing cost" deal. But don't be fooled. One way or another, you will pay for it, since no-cost transactions usually mean you'll be charged a higher interest rate (than if you had paid your closing costs out of pocket).

How long do you expect to stay in your current home?

If you're thinking about moving within the next two years or so, the costs involved may not justify refinancing.

Think carefully before "cashing out."

It's a popular move for people who refinance to take cash out of their home when they refinance. But your home is *not* an ATM—that money will have to be repaid sooner or later. And if home prices drop after you refinance, you could find yourself owing more on your mortgage than your house is worth.



Check with your current lender before you commit to any refinancing deal.

Chances are, you may be able to save yourself quite a bit of money on closing costs, while taking advantage of a lower interest rate.

"Calculate" your move carefully!

There are no hard and fast rules when it comes to refinancing. But a refinancing calculator, such as one at Bankrate.com, can help you decide whether or not refinancing makes "cents."

Your home is one of your greatest assets. So be sure to consider any home-related financing decisions carefully.

— Doreen Friel, National Rural Electric Cooperative Association

Statement of Nondiscrimination

Midwest Energy Cooperative is the recipient of Federal financial assistance from the Rural Utilities Services, an agency of the U.S. Department of Agriculture, and is subject to the provisions of Title VI of the Civil Rights Act of 1964, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Age Discrimination Act of 1975, as amended, and the rules and regulations of the U.S. Department of Agriculture which provide that no person in the United States on the basis of race, color, national origin, age, or handicap shall be excluded from participation in, admission to or access to, denied the benefits of, or otherwise be subjected to discrimination under any of this organization's programs or activities.

The person responsible for coordinating this organization's nondiscrimination compliance efforts is Robert L. Hance, president & CEO. Any individual or specific class of individuals who feels that this organization has subjected them to discrimination may obtain further information about the statutes and regulations listed above from and/or file a written complaint with this organization; or the Secretary, U.S. Department of Agriculture, Washington, D.C. 20250; or the Administrator, Rural Utilities Service, Washington, D.C. 20250. Complaints must be filed within 180 days after the alleged discrimination. Confidentiality will be maintained to the extent possible.

POWER SUPPLY UPDATE

Focus Shifts for WCEV

Wolverine Power Cooperative plans to continue development of the Wolverine Clean Energy Venture (WCEV) near Rogers City in 2012, although work on the project is expected to be limited.

“New emission rules passed by the U.S. Environmental Protection Agency (EPA) in December 2011 make construction of a new power plant extremely difficult for any utility in the country,” says Brian Warner, director of environmental services for Wolverine. “Equipment vendors we have talked with agree.”

Wolverine received an air quality permit for the WCEV project from the Michigan Department of Environment Quality (MDEQ) in June 2011. Under state and federal law, the co-op has 18 months from the permit issue date to commence construction.

Prior to the new EPA rules, Wolverine was in the process of preparing formal bid



A rendering of the Wolverine Clean Energy Venture power plant.

packages for key components of the project, including boilers, turbines and foundations. The cooperative expected to seek bids from potential vendors in early 2012.

“We have suspended the bid process for now and shifted our focus to legal defense of our air permit and monitoring of regulatory and political developments,” Warner says. “We

continue to believe the Rogers City site is a world-class location for electric generation.”

The WCEV, proposed by Wolverine in May 2006, would consist of two generating units, each capable of producing 300 megawatts of baseload electricity. Baseload units are typically operated 24 hours a day, seven days a week.

Baseload Opportunity in Marquette

Wolverine signed a letter of intent with We Energies in January 2012 to evaluate formation of a joint venture that could lead to environmental improvements at the We Energies power plant in Marquette and shared ownership of the facility.

The Marquette power plant has five units, each capable of generating approximately 85 megawatts of baseload electricity. The plant was built between 1974 and 1979 and is currently staffed with 170 full-time employees.

Wolverine and We Energies have started evaluating the technical, economic and regulatory feasibility of installing state-of-the-art emission controls on the units to meet environmental regulations.

“We expect our due diligence efforts at the plant to take about six months, during which time Wolverine and We Energies will also negotiate definitive agreements for the potential joint venture,” says Dan DeCoeur, vice president of power supply for Wolverine. “A decision on whether to proceed is expected



We Energies' Marquette power plant.

by summer 2012.”

If the joint venture moves forward, Wolverine could own up to 60 percent of the Marquette plant's output. Wolverine is considering a joint venture with We Energies as part of its continuing efforts to secure reliable

baseload power supply at a competitive price for its members.

We Energies serves more than 1.1 million electric customers in Wisconsin and the Upper Peninsula, and over 1 million natural gas customers in Wisconsin.



Source - Champion Window

The seat sections for bay or bow windows can have a layer of foam insulation to reduce heat loss and improve comfort for people and plants.

bow and bay windows. As with any replacement window style, the glass is the heart of the window. Select the most energy-efficient glass your budget will allow, even if it forces you to cut back on styling or trim options. At the very minimum, select double-pane glass with a low-emissivity coating and inert gas in the gap between the panes.

Unless you are very handy with tools, it is better to buy an entire unit designed as a bow or bay window. This costs a little more than assembling one from individual windows, but it will likely be stronger and more airtight.

Whichever model you choose, you will enjoy the comfort and energy efficiency of your new “sunny spot” for years to come.

Creating a Sunny Spot

Q: *I have an old picture window I want to replace with a bow or bay window. My budget is tight. Which type is best and most efficient? Should I buy an entire unit or assemble one from individual windows?*

A: Bow and bay windows are an attractive and affordable way to create a sunny spot for plants, pets or people. While today's models are much more efficient than the large, single-pane picture windows common in older homes, there are several factors to consider when choosing one for your home.

Bow vs. Bay

A bow or bay window is sometimes called the “poor man’s sunroom,” because it can provide some sunroom benefits at a lower cost. But what’s the difference between bow and bay windows?

A bow window is made of four or more

(five is most common) narrow window panels, often of the same width. Using more window panels creates a circular appearance, which many people find attractive. Often, only the two end windows can be opened, but you can order them so they all open.

By comparison, a bay window is made from just three window panels. The fixed center window is similar to a smaller picture window, with an unobstructed view of the outdoors. A bay window can provide more of a mini-sunroom feel because it extends further from the house wall, providing more space for plants or a bench seat.

Efficiency and Payback

Replacing an old picture window will increase efficiency and reduce utility bills, but don’t make the decision based on efficiency alone. It will take many years of energy bill savings to pay back the entire cost.

In terms of energy efficiency and durability, there is not a significant difference between

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



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.

Turn Your House Into A Power Plant. Save Up To \$500.



Just like trees, geothermal heating and cooling systems produce energy from the sun and the earth. Learn how you can **cut heating bills** by up to 70%, and generate a **discount coupon** worth up to \$500, at earthcomfort.com. This is on top of a **30% federal tax credit**. Find a dealer and invest in lower heating bills now.

earthcomfort.com

Michigan Geothermal Energy Association

NEXT STEPS:

Ready to add a sunny spot to your home? Here are some companies that manufacture bay and bow windows:

Champion Windows:

800-875-5575 • championwindow.com

Peachtree:

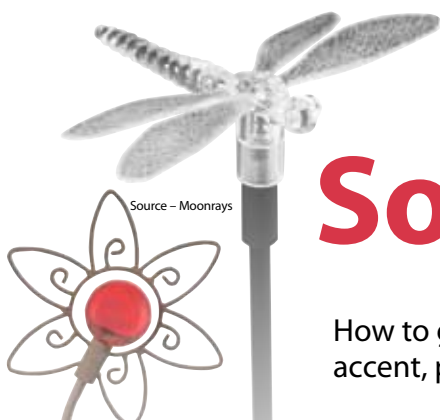
800-732-2499 • peachtreedoor.com

Thermal Industries:

800-245-1540 • thermalindustries.com

Weathershield Windows:

800-222-2995 • weathershield.com



Solar Flair

How to get the brightest benefits from solar accent, path, and task lighting.

Want to add some outside lighting pizzazz without installing wiring or impacting your electric bill? As prices for solar technology drop, many manufacturers are harnessing the sun to help consumers add solar “flair” outdoors. While solar lights aren’t typically as bright as traditional options, by keeping a few rules of thumb in mind you can get the brightest benefit from sun-powered lights.

What to Consider

Solar lighting takes many forms: stakes, lamp-posts, hanging jars, and more. But every unit follows the same basic principle: the mechanism generates and stores energy during the day, then releases it at night.

Each light includes a miniature solar panel, typically a four-cell array measuring 2-by-2 inches. On the inside of the light fixture, the solar panel attaches to a rechargeable battery, at least one light-emitting diode (LED), a controller board, and a photoresistor (light sensor) to manage when the light shines and when it recharges.

The U.S. Department of Energy (DOE) advises consumers to consider geographic and site-specific variables. Solar lights will only work if they receive about eight to 12

hours of sunlight a day. Fewer hours translates into fewer hours of yard light—shorter winter days typically result in a 30-50 percent output decline.

Avoid shade from shrubs, trees or buildings, and check the miniature solar panels periodically for bird droppings, leaves, insects or other debris that might block the sun. Not only does a lack of sun impact light output; receiving less sunlight than recommended can shorten the battery life, too.

Before buying solar lights, think about the need it will fill. There are three different types of outdoor lights: accent, path, and task lights.

Accents

Accent lights add a glow to a landscape, but do not illuminate spaces well. Offering a lower light output, they’re generally more affordable than other solar options.

Search for solar lighting on Etsy.com, a popular online handmade marketplace, and on any given day almost 200 options appear. Creative recyclers use Mason jars, soft drink bottles, lamp bases, bird cages, and other lidded antiques to house the light. The fixture’s base doesn’t matter—interchangeable lids contain the solar array and bulb.

Accent lights can be colorful—online retailers like Earthtech Products offer illuminated glass-blown bulbs or stylized glass flowers. Amber LEDs are often used as an alternative to white, casting a softer glow but still revealing only a limited amount of area outside the light.

Consider using accent lights to mark hazards (stones, low walls) or as part of a garden feature, but do not rely on them for visual aid at night.

Path Lighting

Solar lights fill an important role for path lighting. Commonly sold in sets of four or eight, they often come with stakes or hanging hooks

to be placed along a path or driveway.

Path lights focus light downward and typically illuminate an area up to 20 feet away from the base, depending on the light strength. Some sets offer automatic on/off settings triggered by outside light; others include a six-hour or 10-hour setting. An on/off switch may also be included, allowing owners to soak in the sun for several days, then turn the lights on for a special night-time event.

Suspended lights are not the only option; manufacturers like HomeBrite Solar produce stepping-stone solar lights, with styles that blend in with the environment.

Task Lighting

The sun also fuels practical outdoor lighting needs like floodlights and security motion sensors. These generally provide high light output—though not as bright as traditional spotlights—and are more expensive than other solar options.

Solar lampposts from manufacturers like Gama Sonic offer between eight and 10 hours of light with an output equivalent to 450 lumens (40 watts). Security lights are often ready-to-mount on a wall, but be sure the building or trees do not block the solar array. Some models have the solar array separate from the light to allow for prime sun placement.

Practical Matters

Although LEDs work well in cold temperatures, consider bringing accent and path lighting solar fixtures inside during harsh weather (freezing temperatures, heavy downpours, etc.). All outdoor solar lighting should be water resistant, but task lighting tends to be hardy and can withstand fiercer weather. And, while it’s fun to bring some solar flair inside for parties, remember to put them back outside to charge—leaving a solar jar on a windowsill will not work due to UV protection films and overhangs on many windows.

Read user reviews before buying a product. Some solar lighting sets may not last long, and the DOE advises consumers to make sure replacement bulbs and batteries are available. A variety of options are available at stores like Target, Home Depot, Lowe’s, and several online retailers. To learn more about these and other lighting options, visit energysavers.gov/lighting.

Sources: *How Stuff Works.com*, *Gardeners.com*, *U.S. Department of Energy*



Source - Lowe's

Staying Safe With Portable Generators

CARBON MONOXIDE HAZARDS:

- Always use generators outdoors. **Never** use them in homes, garages, basements, or enclosed areas, even with ventilation.
- Install battery-operated or plug-in (with battery backup) carbon monoxide (CO) alarms in your home, and follow manufacturer instructions. Test alarms often and replace batteries when needed.

ELECTRICAL HAZARDS:

- Plug appliances directly into generator or use a heavy-duty outdoor-rated extension cord.
- **Never** plug a generator into a wall outlet or connect it to your home's wiring. If whole-house use is required, have a licensed electrician install the equipment to safely connect emergency generators.

Contact Midwest Energy at 800-492-5989 with any questions about using your generator safely!

Don't Mess With Power Lines

Downed power lines carry a current strong enough to cause serious injury or death. If you see a downed line, follow these safety tips:

- ▶ Move away from the downed line, and anything touching it, by shuffling with small steps, keeping your feet together and on the ground at all times. This minimizes the potential for an electric shock. Electricity wants to move from a high voltage zone to a low voltage one—and it can do that through your body.
- ▶ Do not touch anyone who is in direct or indirect contact with a downed line—you could become the next victim. Call 911 instead.
- ▶ Do not try to move a downed line or anything contacting it by using another object, such as a stick. Even normally non-conductive materials like wood or cloth, if slightly wet, can conduct electricity and electrocute you.
- ▶ Be careful not to put your feet near water where a downed power line is located.
- ▶ Do not drive over downed lines.
- ▶ If you are in a vehicle that is touching a downed line, stay in the vehicle. Honk your horn for help and tell others to stay away.
- ▶ If you must leave the vehicle because it's on fire, jump out with both feet together and avoid touching the energized vehicle and the ground at the same time. This way you avoid being the path of electricity from the vehicle to the earth.



Don't let electricity costs trip you up.

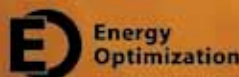
Put energy savings in your court. From income specific services to rebates on appliances and efficient heating and cooling, you'll get a game plan to better manage your electric use. Check it out. Find an Energy Optimization program that's a slam dunk for you.

MARCH MADNESS

ENERGY TIP: Get a smart strip for your TV.

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.

The Old Man and The Ski

Ed Harjala turns 90 years old this month, but that isn't keeping him from entering his 20th cross-country ski race.



Photo Courtesy - Harjala Family

What would life be like without a hero? I don't know because I've had a few. I met one of my heroes over a decade ago. I watched this unimposing cross-country skier munching on a Pasty in Calumet, MI, after the Great Bear Chase Ski Race. I knew I had to meet him and worked up the courage to go to his table. We are friends now and he is still my hero.

Ed Harjala was 75 years old in 1998 when he lined up for the American Birkebeiner Ski Race, a thirty-one mile venture through the torturous hills of Northwest Wisconsin. By mid-race he was averaging over ten miles an hour and on pace to break three hours for the marathon. That's three hours at age 75.

As fate would have it, Ed collided with a fallen skier and subsequently, a tree. His arm splintered in several places and he has a permanent plate of steel in the region as a reminder. He didn't get his sub-3-hour Berkie. He didn't stop skiing either. A few days later, he was back on the skating tracks at the SwedeTown Trails in Calumet, near his hometown of Copper City in Michigan's Upper Peninsula. He adjusted by using one pole and letting his wounded arm hang at his side. His wife, Dots, (Dorothy), drove him to the trails.

Ed is 89 years old now. He's slowed down some but, after all, he's not 75 anymore. At 75, he would ski 25 kilometers daily. He was still doing that a handful of winters ago. Now he deals with heart issues and a foot that doesn't serve him the way it once did. But he's still a master of enthusiasm and artful skiing. He's "The Old Man and the Ski." Sorry,

Hemingway, this guy has earned the title.

"When I was young, in my 70s, I would roller-ski 2,000 miles each summer," Ed says. "Two years ago I was still roller skiing 700 miles a summer. Anyway, roller skiing is too easy."

Ed was also doing two hour workouts rowing his wooden pram near his cottage on Lake Superior. He would row along shore one way for an hour (1,600 strokes). Then he would turn back and head for home.

At age 87, Ed was out on one of his morning roller-ski workouts when he spotted a patch on the highway ahead of him that looked to be new cement. As he got closer he realized that it was a slick from spilled cooking oil, (UP bear bait). Ed couldn't stop, slid onto the slick, and fell on his shoulder, wrenching it badly. "Just lucky I had a leather elbow patch on my shirt, to repair a tear, or my elbow would have been skinned up pretty good too."

Twenty years earlier, at the age of 67, Ed was still in wave 1 at the Berkie. "At (age 85), I was in Wave 3," Ed says. "Now I'm in Wave 9. I'm just moving now." Just moving now? Tell that to the other 89 year-olds on the planet.

Ed's last long Berkie was in 2006. His lungs don't quite give him the lift they once did. He also strides now instead of skating because, "Striding feels easier."

He has entered the Kortolopet these past years, the Berkie's 23 kilometer event. He missed last year's event.

Ed has completed 19 Berkies and needs one more to qualify for the commemorative 'Birch Leggings' bib given to those who finish

20 full Berkies. He told Berkie officials that his body just wouldn't allow him to complete that 20th race. In appreciation for the enthusiasm he has brought to the sport of cross-country skiing, officials sent him the 20-year commemorative bib anyway.

There have also been times, not that long ago, that Ed, thirsting for more competition, asked to be placed in a younger wave bracket at the Berkie. Up to recently, the last competitive age group category has been 80 years and over. In honor of Ed's contribution to the sport, they now have an 85 year old category.

Ed and Dots volunteer at the chalet at Swedetown Trails every Thursday afternoon, serving skiers items like coffee, hot chocolate, and U.P. pasties. They have been the poster couple for the local 'Ski for Hearts' fundraiser. When visiting the chalet, be sure to look up on the wall at Ed's 20-year commemorative Berkie bib, a tribute to a man who, in his way, has made the art of putting on skis a little easier for all of us. You'll also see at least one of his state-of-the-art collapsible wooden waxing stations in the complex. Ed is still in full stride, making them for anyone who needs one. Ed is also an accomplished mason, electrician, fisherman, and still makes his own firewood.

Ed, the oldest skier at Swedetown Trails, would like to compete in the shorter version of the track's Great Bear Chase, this March. The race is 26 kilometers in length. He'll be careful of the mass of skis and poles at the start. He'll pace himself so he doesn't tire early. He'll sense the old mining shafts and other remnants of a past Upper Michigan mining era as he skis with the enthusiasm of a child. Then he'll hear his name called and see people clapping at the finish. The giant digital clock will tell him that he is well within the reach of his goal. Then, with one last push of his poles, he'll cross the finish line, thrilled that he can still challenge himself at the age of 90. The public address announcer might even say something like, "Now finishing is Ed Harjala, a work in progress, The Old Man and the Ski."

My life was just beginning when Ed was overseas during World War II. I never even met him until he was in his late 70s. We have known each other on a limited basis since then. I think of him every time I wax my skis on the ski station he made me. I think of how he taught me to give life its best shot and enjoy every minute of it.

— Reprinted with permission, *Lake Superior Magazine*

Now is the best time to buy a...

Designer METAL ROOF!



American Metal Roofs
Made in America

- ✓ Your Last Roof - Never Rusts
- ✓ 120mph Wind Resistant
- ✓ Year Round Energy Savings
- ✓ Free, No Obligation Consultation

Visit us at at Home Show Near you!

March 9-11

Horse Expo 2012 @ MSU Livestock Pavilion, E. Lansing
2012 Home Show, Lifestyle & Leisure @ Indoor Athletic
Complex, E. Campus Dr., Mt. Pleasant

March 15-18

Lansing Home & Garden Show @ MSU Pavilion, E. Lansing

March 23-25

Cottage & Lakefront Living Show @ Devos Place, G. Rapids
2012 Home & Lifestyle Show @ SVSU, Saginaw (24-25th only)

Get A New Permanent
Roof For As Low As

\$241/Month*

Apply Online Today For Our
Blue Sky Financing Program

**Want to Win
a Metal Roof?**
Go online to
AmericanMetalRoofs.com
for your chance to win an
American Metal Roof**
**See Rules &
Regulations online

Showcase Homes Save! 10 homes wanted

We need your home to showcase our beautiful American Metal Roof. Homes selected will earn **drastic savings** off the investment of your Metal Roof in exchange for the use of your home for advertising purposes.

Call Jenn for details to qualify

888-221-1869



American Metal Roofs
Made in America

See our Photo Gallery and Watch the Snow Sliding Video at
www.AmericanMetalRoofs.com

Visit the American Metal Roofs Showrooms at
6140 Taylor Dr, Flint, MI 48507 and 1875 Lansing Rd, Charlotte, MI 48813

888-221-1869



Find us on Facebook
fb.me/AMRmichigan

*Promotion may not be combined with any other offers. Some restrictions apply. Call for details. Promotion is based on approved credit. Applies to purchases made on American Metal Roofs consumer credit program. \$241 monthly payment calculations based on a \$25,000 purchase at 9.99% APR for 20 years. Your interest may be deductible. Consult a tax advisor.

MI Contractor License #2102158513



ENERGY COOPERATIVE

Your Touchstone Energy® Cooperative 

TeamMidwest.com

youth

LEADERSHIP SUMMIT

PRESENTED BY
Michigan's Electric Cooperatives



High school sophmores and juniors
apply now for a FUN and FREE
three-day adventure: April 18 - 20

Are you a leader? The 2012 YOUTH LEADERSHIP SUMMIT is your chance to meet, mix and mingle with other young leaders from Michigan. This unique, high-energy experience will help you develop your leadership habits, explore career opportunities in the electric industry, and learn how to be actively involved in the democratic process. All while enjoying good food, relaxation and fun in beautiful northern Michigan.

Four students from our service area will be chosen to attend the YLS, and two of those will be selected for the RURAL ELECTRIC YOUTH TOUR, June 16-21—an all-expenses paid trip to Washington, D.C.—with over 1,500 other teens from across the country.

Learn more at miYLS.com and youthtour.coop.

Apply online at TeamMidwest.com.

Applications must be submitted by **March 16, 2012**, for consideration.