

MICHIGAN COUNTRY LINES

MICHIGAN'S Iron Man

Plus!

5 GLE Director Lends A Hand

12 More Co-op Member Photos

13 Solar Display Update



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Association officers are **Robert Schallip**, Cloverland Electric Cooperative, chairman; **Mark Kappler**, HomeWorks Tri-County Electric, vice chairman; and **Eric Baker**, Wolverine Power Cooperative, secretary-treasurer. **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.

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



IN THIS ISSUE



6 OUR ENERGY
Efficient Indoor Lighting For Your Home
James Dullely



7 HOME COOKING
Simple And Tasty Pizza Recipes
Christin McKamey & Our Readers



14 FEATURE
Tom Moran Is Michigan's Own Iron Man
Emily Haines



17 SAFETY
Always Call Before You Dig



18 READERS' PAGE
'Slow Down & Go Around' Roadside Utility Workers
John Vanvig
Guess Our New Mystery Photo

ON THE COVER*

Tom Moran, of Moran Iron Works in Onaway, MI. When he's not busy building ships, turbine components or customizing industrial and commercial fabrication jobs, Moran creates large-scale art projects for the community.

**Some co-op editions have a different cover.*



Michigan's Electric Cooperatives
countrylines.com



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Electrical Safety Reminders

Everyone is likely familiar with basic tips on how to use electricity safely at work or play.

There are obvious hazards that we know to avoid, such as keeping electrical devices away from water and heading inside when the first rumbles of thunder are heard.

We understand the importance of taking the proper precautions, such as making sure electrical outlets are not overloaded, keeping extension cords in good shape, using only lightbulbs that meet the wattage ratings of the light fixture, and turning off power at the main panel for any circuits we plan to work on.

It's a general awareness of common electrical dangers that keeps us safe. But there are other electrical hazards that are not so common. Are we prepared to handle them, too? What should be done if you spot a downed power line or if it falls on your car?

When powerful spring storms bring down power lines, you could unexpectedly find yourself in a situation where the wrong decision could be deadly. We can help you make the right decision.

Here are some good tips from the Electrical Safety Foundation International (ESFI) regarding downed power lines:

- If your car comes in contact with a downed power line while you are inside, stay in the car. Honk your horn to summon help, but direct others to stay away from your car. If you must leave your car because it is on fire, jump out of the vehicle with both feet together and avoid contact with both the car and the ground at the same time. Shuffle away from the car.
- If you see a downed power line, move away from it and anything touching it. The ground around power lines—up to 35 feet away—may be energized.
- You cannot tell whether or not a power line is energized just by looking at it. You should assume that all downed power lines are live.
- The proper way to move away from the power line is to shuffle away with small steps, keeping your feet together and on the ground at all times. This will minimize the potential for a strong electric shock.
- If you see someone who is in direct or indirect contact with the downed line, do not touch the person. You could become the next victim. Call 911 for help.
- Do not attempt to move a downed power line or anything else in contact with it by using an object such as a broom or stick. Non-conductive materials like wood or cloth can conduct electricity even if slightly wet.
- Be careful not to touch or step in water near where a downed power line is located.
- Do not drive over downed power lines.

May is National Electrical Safety month. Electricity is the cause of over 140,000 fires each year, resulting in more than 500 deaths, 4,000 injuries and \$1.6 billion in property damage, according to ESFI. It's a good time to remember that electricity is safe if we remain alert and diligent in our efforts to use it wisely. ■



Steve Boeckman
Great Lakes Energy
President/CEO



First Quarter Reliability Update

SAIDI (pronounced SAY-DEE) says Great Lakes Energy (GLE) finished the first quarter of 2015 with more average outage minutes than for the same period last year.

On April 1, average outage minutes totaled 18.3 minutes compared to 16.96 minutes reported on the same date a year ago. We still remain on track to reach our 2015 reliability goal, which is to not exceed 182.1 average outage minutes.

The goal is based on average outage minutes recorded during normal conditions. Typically outages are due to weather, animals, equipment failures, vehicle accidents, and other causes.

SAIDI is an industry standard index used by your cooperative to determine the average amount of time a GLE member could be without power in a given year.

Since it represents an average, some members actually experience no outage times while others experience more than the SAIDI number.

Weather-related outage events are factored into the SAIDI calculations, with the exception of major event days (MEDs). Storms that create MEDs occur infrequently and are the most damaging.

Great Lakes Energy will continue working to limit the weather's damaging impact on its distribution system. The addition of more line protection devices, use of new technologies, improvements to major power line circuits, and ongoing vegetation management to limit tree damage to power lines are all helping to get the lights back on safely and more quickly for members during storms.

Watch for SAIDI goal updates in future issues of *Country Lines*. ■

Our Commitment To Community

Great Lakes Energy director Ric Evans joined more than 100 other electric cooperative volunteers from across the country in Orlando, FL, for the 7th annual Touchstone Energy Cooperatives Community Service Project.

They teamed up with other volunteer groups to provide local low-income homeowners with critical home repairs, accessibility modifications, and energy efficient upgrades.

The project coincided with the National Rural Electric Cooperative Association's (NRECA) annual meeting in February that Evans attended.

 Watch the video to learn more about this great project that showcases the cooperative spirit and our commitment to community: vimeo.com/120622203. See if you can spot director Evans.



Great Lakes Energy director Ric Evans shares a hug with an Orlando area resident whose home was part of a community service day project conducted by Touchstone Energy electric cooperative volunteers. (Luis Gomez Photos)

Efficient Indoor LIGHTING For Your Home



People often wonder which type of lighting to use in their home with all the choices on the market today. It is important to know the differences between the options available.

The wattage of a light bulb refers to how much electricity it consumes, not how much light it produces. The amount of light is measured in units called lumens. A 60-watt incandescent light bulb produces about 800 lumens of light and a 100-watt bulb about 1,600 lumens.

Today, your primary choices of bulb are halogen, CFLs (compact fluorescent lights) and LEDs (light emitting diodes), which are listed in order of increasing efficiency. For many home applications, LEDs are the best choice even though they cost more initially.

- **Halogen bulbs** are basically incandescent bulbs with halogen gas around the filament to improve efficiency enough to meet efficiency standards.
- **CFLs** are much more efficient, using only about 25 percent as much electricity as incandescent bulbs to produce the same amount of light—and they last 10 times longer.
- **CFLs** can produce true full-spectrum (simulates natural sunlight) light quality and can be purchased with warm white, cool white and daylight color temperatures. Daylight lamps have an even higher color temperature, and they produce more accurate colors and are good for tasks such as reading and painting.
- **LEDs** are the newest and most efficient light source available and provide an excellent payback. A 12-watt LED produces as much light as a 60-watt incandescent bulb. The LED bulb should also last a minimum of 20,000 hours. Most are dimmable, work well at cold temperatures and reach full brightness immediately. LEDs gradually get dimmer over time. When a LED is rated for 20,000 hours, its output will stay above 70 percent of its original brightness for that time.

If you have been using incandescent bulbs, you are probably accustomed to a yellowish light quality. This is called the “color temperature” of a bulb. Incandescent bulbs are in the 2700-degree K range. The whiter “daylight” LEDs and CFLs are in the 4,000- to 5,000-degree K range. Most people grow accustomed to the whiter light and prefer it. The color temperature is listed on the packaging.

CRI (color rendering index) is another quality of the light bulb to consider. A higher CRI makes objects in a room look more like they would look under natural sunlight. A CRI above 80 is considered adequate for homes, but 90 or above makes everything look better and doesn’t cost much more.

There are four general types of lighting uses—ambient, accent, decorative and task. Ambient lighting is for general illumination with comfortable brightness. Accent lighting can create a mood in the room or highlight areas or objects. Decorative lighting is when the light itself is the object, such as a chandelier. Task lighting is for reading or doing a specific activity.

For effective lighting, install several grouped circuits with dimmers to control and vary the lighting schemes. For example, choose high-CRI bulbs over a dining table to enhance the appearance of food. An overhead high color-temperature bulb above a chair would be good for reading or other tasks.

For existing rooms, where it may not be easy to rewire or add circuits, switch to LEDs in most fixtures, and install dimmer wall switches.

The goal for lighting efficiency is to use as little lighting as needed. Where you do not have a wall switch, such as with a table lamp, install a three-way socket and use a new three-way LED. Add a four-bulb lighting kit to a ceiling fan with a switch to allow you to switch on fewer than all four lights.

No matter which type of bulb or light fixture you choose, start saving by turning lights off when you leave a room. ■



HOMEMADE PIZZAS

Delicious And Easy Pizza Recipes

Pesto Salad Pizza *(pictured)*

- | | |
|----------------------|-------------------------|
| 2 c. basil | red peppers, sliced |
| ½ c. parmesan cheese | goat cheese and/or feta |
| ¼ c. olive oil | and/or mozzarella |
| 2 cloves garlic | mixed greens |
| flour tortillas | balsamic vinegar |
| onions, sliced | |

Preheat oven to 400°. Put basil, parmesan, olive oil and garlic in a food processor and blend. Line a baking pan with foil. Place tortilla shell on pan and smear with pesto. Add onions, peppers, and cheese of choice. Bake for 10 minutes. Add mixed greens to top of tortilla pizza. Drizzle with balsamic vinegar. Enjoy!

Janice Clarkson, Granger

Mexican Pizza

- | | |
|------------------------------|--------------------------------|
| 1 pizza dough | 1 T. chili powder |
| 12-oz. ground turkey or beef | 1 can (16-oz.) refried beans |
| 1 small onion, sliced | salsa |
| 3 t. ground garlic | 1–2 c. shredded Mexican cheese |
| 2 t. ground cumin | |



Spread pizza dough on sprayed pizza pan. Bake at 375° for 10 minutes. Meanwhile, cook the meat. Drain. Add onion and spices. When pizza crust has cooked, spread the refried beans over it. Then layer the meat, salsa and cheese. Return to oven; bake for 10 more minutes. Options:

sour cream, shredded lettuce, sliced black olives. Any of the ingredients can be altered for individual taste.

Dianne Compo, Brimley

Cool Veggie Pizza Appetizer

- | | |
|---|--------------------------------|
| 2 8-oz. cans refrigerated crescent dinner rolls | 1¼ t. onion salt |
| 2 8-oz. pkgs. Philadelphia brand cream cheese, softened | 1 c. broccoli flowerets |
| 1 c. Miracle Whip salad dressing | 1 c. chopped, seeded tomato |
| 1½ t. dill weed | 1 c. chopped green bell pepper |
| | ¼ c. chopped onion |
| | ½ c. olive slices (optional) |

Heat oven to 375°F. Press dough onto bottom and sides of 15x10x1 inch baking pan. Bake 11–13 minutes or until golden brown; cool. Mix cream cheese, salad dressing, dill and onion salt until well blended. Spread on crust. Top with remaining ingredients. Refrigerate. Cut into squares. Makes 24.

Beatrice Richard, Posen

SUBMIT YOUR RECIPE!

Thanks to all who send in recipes. Please send in your favorite “Fresh Seafood” recipes by **July 1**.

Enter your recipe online at countrylines.com or send to (handprinted or typed on one side, please): *Country Lines* Recipes, 2859 W. Jolly Rd., Okemos, MI 48864. Please note the co-op from which you receive your electric service.

Contributors whose recipes we print in 2015 will be entered in a drawing and *Country Lines* will pay the winner’s January 2016 electric bill (up to \$200)!

Photos—831 Creative



Delicious And Easy Pizza Recipes

Pour Pizza *(pictured)*

- | | |
|--------------------------|------------------------------------|
| 1 lb. hamburger | $\frac{2}{3}$ c. milk |
| 2 eggs | pepper, to taste |
| 1 onion, chopped | 15 oz. pizza sauce |
| $\frac{1}{8}$ t. oregano | 1 c. flour |
| 1 t. salt | 1 $\frac{1}{2}$ c. shredded cheese |

Brown hamburger, onion, salt and pepper. Combine flour, eggs, milk and oregano, making a soft dough. Pour batter into a greased 9x13 inch pan. Pour pizza sauce and meat on top. Bake 15 to 20 minutes at 350°. Remove and put cheese on. Bake 15 minutes more.

Linda Lampen, Otsego

Chicken Crust Pizza

- | | |
|---|--------------------------------|
| 1 c. packed chicken breast, cooked and minced (canned chicken can be substituted) | 1 T. dried parsley |
| 1 c. shredded mozzarella cheese (low fat) | 1 t. dried basil |
| | $\frac{1}{2}$ t. onion powder |
| | $\frac{1}{2}$ t. garlic powder |

Preheat oven to 425°. Process chicken and cheese together (food processor or blender). The mixture should resemble a thick or mealy, dense crumb consistency. Press this onto parchment paper, on a pizza pan or cookie sheet. Top with remaining ingredients and bake for 10–12 minutes; let cool for 5 minutes. Top with your favorite sauce and toppings. I also flavor my crust with by brushing a little flavored olive oil, or coconut oil, or grapeseed oil around the edges. Bake another 6–8 minutes or until cheese is melted. Cool a few minutes, serve and enjoy.

Mary Kovalcik, Free Soil

Full of Flavor Pizza

2 10-inch whole wheat crusts of your choice

Sauce:

- | | |
|-------------------------|--|
| 3 T. olive oil | 28-oz. stewed/crushed, or chopped tomatoes |
| 1 c. chopped onion | 6 oz. can tomato paste |
| 4 garlic cloves, minced | 1 c. red wine |
| 2 or 3 shredded carrots | 1 bay leaf |
| 8-oz. firm tofu | handful of dried mushrooms or 4 oz. fresh mushrooms sliced |
| 2 t. oregano | salt and pepper, to taste |
| 1 t. basil | |
| pinch of rosemary | |
| 1 t. fennel seed | |

Toppings:

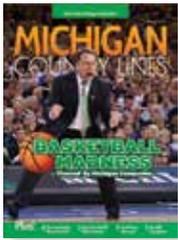
- | | |
|---|---|
| 4 oz. greens (spinach, kale, mustard, super greens, etc.) | Optional: roasted red pepper, sausage of choice, shredded or grated cheese (Romano or Asiago) |
| sliced Kalamata or green Greek olives | |
| additional mushrooms, sliced | |

Heat oil on medium-low in large pan. Sauté onion, garlic and carrots in oil until tender and translucent. Drain tofu and crush/squeeze with hands to a consistency similar to hamburger. Add to pan and brown while stirring. Tofu will not brown a lot but will gather the flavors, and gain a chewy texture during this process. Add the spices and stir a few times in the oil. Add tomatoes and paste, bay leaf, mushrooms and wine. Simmer gently until it reaches thickness you want. Add salt and pepper to taste. Remove bay leaf.

Spread a little sauce on unbaked crust. Layer on greens and spread more sauce over. Add ingredients of choice. Bake at 450° for 20 minutes. When done, remove from oven. Brush crust edges with olive oil and let set a few minutes. Cut and enjoy.

Cynthia Donahey, Harbor Springs

Country Lines, Your Partner In Communication



For over 35 years, our co-op members have received *Michigan Country Lines* because it is the most effective and economical way to share information with our members. This is our most empowering communication tool to keep members up-to-date about everything going on within their electric co-op.

Each issue contains information about our services, director elections, member meetings, and the staff and management decisions you need to know about as an owner of the co-op.

The magazine also includes legal notices that would otherwise have to be placed in local media at a substantial cost. And, sending *Michigan Country Lines* to you helps the co-op fulfill one of its important principles—to educate and communicate openly with its members.

The board of directors authorizes the co-op to subscribe to *Michigan Country Lines* on your behalf at an average cost of \$3.63 per year, paid as part of your electric bill. The current magazine cost is 49 cents per copy—the same cost as a first-class stamp. *Michigan Country Lines* is published for us, at cost, by the Michigan Electric Cooperative Association (MECA) in Okemos. As always, we welcome and value your comments.

Notice to Members of Great Lakes Energy Cooperative

Case No. U-15817 2013 Renewable Energy Plan Annual Report Summary

The Michigan Public Service Commission (MPSC) requires all Michigan electric utilities to get approximately 2 percent of their power supply from renewable sources by 2012 and increasing to 10 percent by 2015.

Under this requirement, Great Lakes Energy Cooperative submits an annual report to the MPSC regarding its Renewable Energy Plan. Great Lakes acquired 42,759 renewable energy credits and 1,503 incentive credits from its wholesale power supplier, Wolverine Power Cooperative, Inc. Wolverine will continue to generate renewable energy and bank unused renewable energy credits for future use and compliance with statutory renewable portfolio standard requirements on behalf of all of its members.

A full copy of the cooperative's Renewable Energy Plan annual report that was filed with the MPSC is available on the cooperative's website at gtlakes.com or by request at any of the cooperative's offices.

STATE OF MICHIGAN BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

NOTICE OF OPPORTUNITY TO COMMENT Case No. U-16593

On January 27, 2015, in Case No. U-15825 et al, the Michigan Public Service Commission (Commission) ordered Great Lakes Energy Cooperative to file a renewable energy plan on or before May 12, 2015 to comply with the "Clean, Renewable and Efficient Energy Act" (2008 PA 295, MCL 460.1001, et seq.) and MPSC order in Case No. U-15800 dated December 4, 2008. On April 13, 2015, Great Lakes Energy Cooperative filed its Notice of Intent to File Application For a Renewable Energy Plan with the Commission.

Any interested person may review the filed Renewable Energy Plan on or after May 12, 2015 on the MPSC website under Case No. U-16593 at: www.michigan.gov/mpscdockets, or at the office of the Commission's Executive Secretary, 7109 West Saginaw, Lansing, Michigan, between the hours of 8:00 a.m. and 12:00 p.m. and 1:00 p.m. and 5:00 p.m., Monday through Friday, or at the offices of Great Lakes Energy Cooperative, 1323 Boyne Avenue, Boyne City, Michigan.

Written and electronic comments may be filed with the Commission and must be received no later than 5:00 p.m. on June 12, 2015. Written comments should be sent to the: Executive Secretary, Michigan Public Service Commission, P.O. Box 30221, Lansing, Michigan 48909, with a copy mailed to Great Lakes Energy Cooperative, 1323 Boyne Avenue, P.O. Box 70, Boyne City, Michigan 49712. Electronic comments may be e-mailed to: mpscdockets@michigan.gov. All comments should reference Case No. U-16593. Comments received in this matter become public information, posted on the Commission's website, and subject to disclosure. Please do not include information you wish to remain private.

The Commission will review the renewable energy plan together with any filed comments and provide a response within 60 days of the filing of the application indicating any revisions that should be made. If the Commission suggests revisions, Great Lakes Energy Cooperative will file a revised RPS plan no later than 75 days after the filing of the application. A Commission order will be issued on or before the 90th day following the filing of the application.

Any proposed Renewable Energy Plan Charges may not exceed \$3 per meter per month for residential customers, \$16.58 per meter per month for commercial secondary customers or \$187.50 per meter per month for commercial primary or industrial customers.

GREAT LAKES ENERGY COOPERATIVE

Reliable Service Keeps Your Lights On

BEST PERFORMING CIRCUITS

Because of improvements made over the last 10 years, 157 worst performing (higher occurrence of outages and blinks) circuits are now our best performing circuits. They include 8,741 miles of main power lines that serve 102,641 Great Lakes Energy members. That leaves only 66 circuits yet to be done.



REDUCING TREE PROBLEMS

Trees and brush near power lines are re-cleared in our service area on a regular rotating basis, which helps control a major cause of outages. In recent years, we've expanded our re-clearing efforts to remove more dead, diseased and dying trees that pose a threat to our lines.



MORE PROTECTION

Thousands of additional protection devices were placed on our power lines over the last decade. Protection devices operate like circuit breakers in your electrical panel. Each breaker protects different appliances and areas within the home. If there's an electrical problem, one breaker shuts off power to the trouble area leaving most of the home in the light. Similarly, the addition of more protection devices helps limit the number of members affected by outages.

BETTER TECHNOLOGY

Better technology today is brightening the day by helping to limit outage times. One example is the fault indicator (see photo). During an outage, the indicators blink on the line to help guide repair crews to the trouble. In many cases, they eliminate the need for crews to walk long stretches of line not accessible by vehicle to find the problem. Time is saved and your lights come back on sooner.

Our Members are Our Owners



Clothing Pantry Adds Thrift Store

When Love INC of Oceana County opened a clothing pantry in 2012, they were pleasantly surprised by the large amount of donated clothing they received. It led to a decision last year to expand the pantry into a thrift store.

“We realized that by opening the pantry as a thrift store we could offer a much needed service to our community,” said Lori Ray, executive director of the ministry-based charity. “We can continue to offer clothing to our Love INC clients without charge, but also offer clothing and other donated items to our greater community at bargain prices.”

It also appeals to people looking for a local site to bring their donations.

Part of the cost for the equipment to run the store came from a \$1,200 Great Lakes Energy People Fund grant.

“Not only does it help serve the needs of our clients, we also are able to raise much needed revenue to support the Love INC ministry,” she added.

The thrift store is located at 186 N. Michigan Ave. in downtown Shelby and is open Monday and Wednesday through Friday from 10 a.m.–5 p.m. and Saturday from 10 a.m.–3 p.m. ■



Volunteer workers (L to R) Marilyn and Susan are surrounded by donated items at the Love's Second Chance Shoppe, a thrift store and clothing pantry in downtown Shelby operated by Love INC of Oceana County.

YOUR SMALL CHANGE MAKES A BIG DIFFERENCE

Can you give a few cents a month to help your community? The People Fund program works because there is power in numbers. A contribution of less than \$1 each month adds up fast when thousands of Great Lakes Energy members get involved.

The needs of our local communities continue to grow, and you have the power to give the People Fund a bigger role in meeting those needs. We round up your electric bill to the next dollar and the amount, which averaged just 49 cents a month in 2014, goes into the People Fund. There are no administrative costs. All donations are returned to our local communities.



Bellaire Public Library
Children's Literacy Station Computer

We Need Your Help!

Enroll in the People Fund today: 1-888-485-2537 • gtlakes.com



Talented Members Share “Pet” Photos



Here are some creative photos from our members

1. Jack sitting on Charlie!
Photo by: Gaye Hott, Ellsworth
2. Mr. Patch enjoys anything his humans are doing and gets in the middle as if it were his own project.
Photo by: Brenda Battle, Paris
3. Weechee is a Japanese Chin that I adopted from National Mill Dog Rescue.
Photo by: Sandy Vander Weele, Harbor Springs
4. These special chickadee friends/pets will fly in and take a seed while another one waits. They also will land on our shoulders, knees and heads.
Photo by: Marlene Kohlmeyer, Fowler
5. We cared for a newborn fawn—named “Baby”—until she was about a month old. Our dog liked to lick the goat's milk off Baby's chin.
Photo by: Barbara Galloup, Luther
6. Tiger asleep on his cat tree.
Photo by: Raymond Venema, Newaygo

See more amazing photos at facebook.com/greatlakesenergy

Enter the ‘Pay My Bill’ Photo Contest!

Great Lakes Energy members whose photos we print in *Country Lines* will be entered in a drawing and one lucky member will win a credit (up to \$200) on their December 2015 energy bill. Submit photos now through Sept. 21. Upcoming topics and deadlines are: America the Beautiful due May 20; All About Michigan due July 20; Sunrises/Sunsets due Aug. 20 and Kids at Play due Sept. 21.

Visit gtlakes.com/photocontest to submit your high resolution digital photo, read contest rules and see upcoming themes. It's fast and easy. To send by mail: Include your name, address, phone number, photographer's name, topic and details about your photo to: Country Lines Best Shots, P.O. Box 70, Boyne City, MI 49712. Photos will not be returned. Do not send color laser prints or professional studio photos. We look forward to seeing your best shot!

GLE Solar Snapshot

Here is an update on the solar display installed last year outside our Boyne City headquarters to help educate Great Lakes Energy members on renewable sources of energy.

The solar energy helps meet the power needs at our Boyne City office.

Size: 10 kilowatts (kW) or 10,000 watts (enough to help power a home).

Configuration: two 5 kW arrays, a tilting array that can be adjusted to maximize its sun exposure, and a fixed array. Each rectangular array contains 20 solar panels.

Cost, including installation and inverter: \$41,392.

Break-even point (using 2014 GLE rates): 25 yrs with 30 percent tax credit, 35 yrs without tax credit.

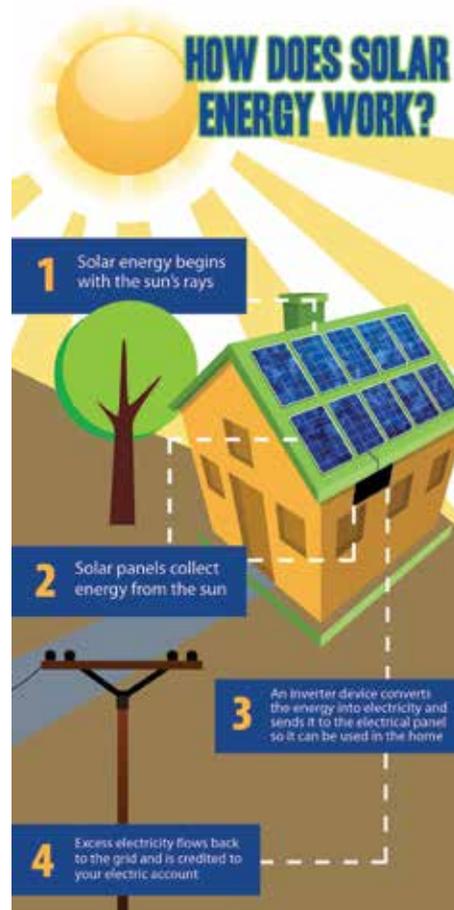
In September 2014, the angle of the adjustable tilt array was changed from 30 to 45 degrees to take better advantage of the sun's lower position in the sky. In April 2015, it was adjusted back to 30 degrees. The fixed-position array remained at a 32.5 degree angle. The tilting array generated a little more power than the fixed array (see chart below.)

Together, the arrays generated 3,410 kilowatt hours (kWh) over the Oct. 1 to March 19 period.

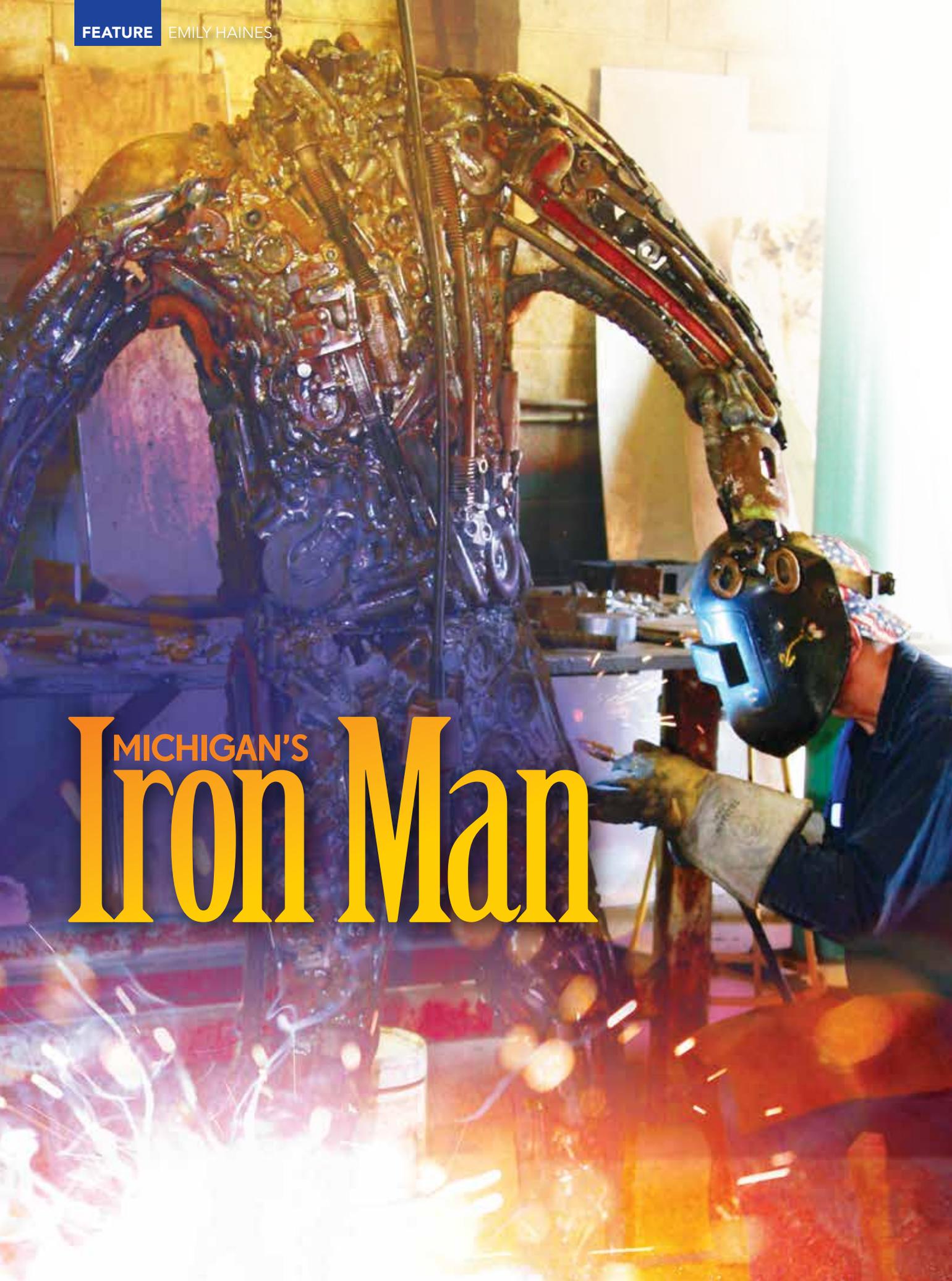
The fixed array had six days during this period when no kWh were generated compared to one day for the tilting array. We suspect the fixed array's flatter slope may have led to a greater snow buildup on the panels that caused more temporary disruptions in energy production.

The amount of clean energy produced so far by the two arrays since they began operating in May 2014 has saved over 5.5 tons in carbon dioxide emissions. The emissions savings is comparable to removing one passenger car from the highway for one year, according to federal Environmental Protection Agency estimates.

Members can view the display by visiting the Boyne City office at 1323 Boyne Avenue. The office is open Monday through Friday, but the solar panels are available for viewing at any time. More information is available online at gtlakes.com. **GLE does not sell or install solar panels.** ■



	TILTING			FIXED		
	kWh	Daily kWh High	Daily kWh Low	kWh	Daily kWh High	Daily kWh Low
October 2014	346	30.1	1.4	343	28.6	1.6
November	148	27.7	0.03	114	26.9	0
December	177	19.7	0.42	168	19.5	0.22
January 2015	250	25.9	0	226	24.8	0
February	461	35.1	0.30	376	32.8	0.31
March (thru 3/19)	416	37	1	385	35.3	0.70
Total kWh produced	1,798			1,612		
Avg kWh/day	10.6			9.5		



MICHIGAN'S Iron Man

While he makes his living from his 37-year-old business, Moran Iron Works, Tom Moran has had a second career as a teacher. His first student? Tom Moran.

The son of a career lumberjack, Moran always had an interest in metalwork, but with college an unlikely possibility and his high school no longer able to support metals classes, he used some of the abandoned tools in his shop class to teach himself how to weld.

“I started tinkering with some tools and working on broken chairs in classrooms,” says Moran. “Then, it was fixing trailers for teachers. By the time I graduated, I’d become the unofficial school repairman.”

After graduation, Moran worked in the logging business with his father and at night made his own tools, practiced his craft and eventually started his own business. The land where he first built, an abandoned dairy farm in Oneway, MI, has since undergone 29 additions.

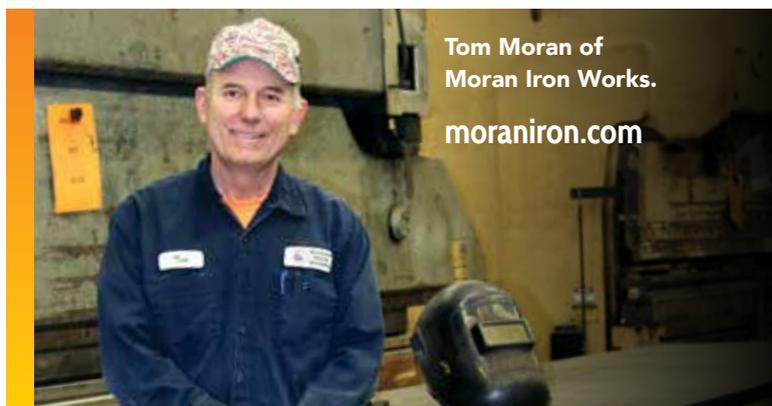
As his business grew, he was faced with the challenge of finding qualified welders and metalworkers in northeast Michigan.

“While we’re in love with northeast Michigan, it’s hard to recruit skilled tradespeople in this area of the state,” he explains. “We found the best way to make sure that we had a qualified workforce was to create our own training program,” Moran says. “We started evening classes for people with potential and interest. Some were folks we knew we’d be hiring and others were members of our community, like farmers or loggers, who wanted to be more self-sufficient.”

The training program is now a full-time school that is staffed by Moran Iron Works employees—10 full- and part-time teachers.

While Moran provides plenty of opportunities to teach his beloved trade, he’s humble and certain there is always more to learn.

Moran Iron Works has recently embarked on a large-scale project with



Tom Moran of
Moran Iron Works.

moraniron.com

Shepler’s Mackinac Island Ferry, to build their most recent ship—an 85-foot, all-aluminum ferry christened “Miss Margy” that is thought to be the first ever built entirely in Michigan. While Moran Iron has worked on many ship extensions, retro-fittings and conversions, this is the first vessel they’ve built from start to finish.

“Every project is unique and there is always something to learn,” Moran says. “With a project of this scale and scope, where you’re integrating several complex systems, you’re going to run into challenges. But in the end, the old lesson of ‘a job well planned is a job well done’ had really seen us through. Ship building is an art. The teams at Moran Iron have really turned it into an art and a science.”

When he’s not busy building ships, turbine components or customizing industrial and commercial fabrication jobs, Moran creates large-scale art projects for the annual Fourth of July parade in Oneway and as donations for area fundraisers.

“Maybe the art has gotten out of hand over 45 years,” Moran jokes. “Every year I say I’ll do something smaller and easier, but it hasn’t really gone that way.”

Maybe that’s the next lesson for Moran, but for now—the bigger the better. ■



Make the Call and Save

Refrigerators over 10 years old could be costing you about \$100 per year to run. More than 60 million refrigerators are over 10 years old, costing consumers \$4.7 billion a year in energy costs. If you have a second, working refrigerator or freezer that is 10, 20 or even 30 years old, **now** is the time to consider a replacement to a new, ENERGY STAR® certified model.

Use Great Lakes Energy Cooperative's Appliance Recycling program—a service that hauls away your secondary appliance for *free*—and get a \$50 rebate for participating! You'll be getting paid to recycle with only an easy phone call! *Bonus*: Receive a \$15 rebate for any outdated (yet functioning) air conditioning units or dehumidifiers.

After making the call for your free pick-up, purchase a new ENERGY STAR refrigerator or chest freezer and receive a \$25 rebate for your smart decision. By properly recycling your old refrigerator and replacing it with a new ENERGY STAR certified model; you can save up to \$300 on energy costs over its lifetime.

With these rebates offered from Great Lake's Energy Optimization program, you now have a great reason to finally get rid of your old appliances. If you have any questions about appliance recycling or residential, business or farm rebates, call 877.296.4319 or visit michigan-energy.org. ■

The process is as easy as 1, 2, 3:

1. Call 877.296.4319 or visit michigan-energy.org to schedule your pick-up date.
2. Let the experts deconstruct the unit by recycling and eliminating over 95 percent of the components and materials.
3. Receive your rebate.



**SAY
GOODBYE**

Make the call and save

If you have a secondary refrigerator or freezer that is 10, 20 or even 30 years old, **now** is the time to recycle it.

Use Great Lakes Energy's Appliance Recycling program, a service that hauls away your appliance for FREE. PLUS you get a **\$50 rebate** for participating!

ENERGY TIP: After making the call for your free pick-up, purchase a new ENERGY STAR refrigerator or chest freezer and receive a \$25 rebate for your smart decision.



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.

Heat Pump Discounts

Qualifying Great Lakes Energy members whose primary heating system is a heat pump (ground-source or air-source) can have it separately metered at a lower kilowatt-hour (kWh) rate.

The efficient electric heat rate offers a 3 cents per kWh credit year-round for qualifying ground-source heat pumps. Qualifying air-source heat pumps can receive the credit during the heating season, bills rendered November through May.

The electric heat pump must meet these energy efficiency standards to qualify for the lower rate:

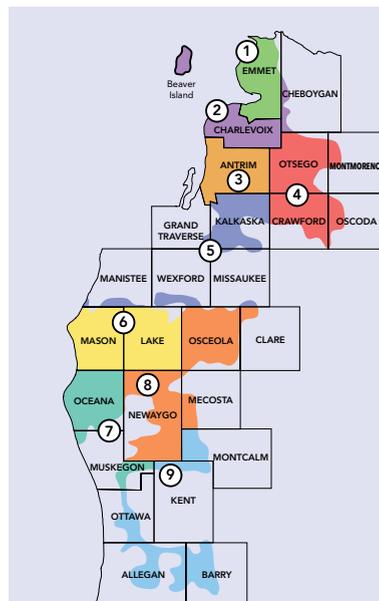
Geothermal System – minimum requirements of EER 17.1 COP 3.6 for closed loop water-to-air; EER 21.1 COP 4.1 for open loop water-to-air; EER 16.1 COP 3.1 for closed loop

water-to-water; EER 20.1 COP 3.5 for open loop water-to-water; EER 16 COP 3.6 for direct geexchange.

Air-Source Heat Pump – minimum requirements of HSPF 8.5, EER 12.5, & SEER 15 for split systems and HSPF 8, EER 12 & SEER 14 for package systems.

Rebates of \$500 (ground-source) and \$250 (air-source) are also available for qualifying systems. For more information on the rebates and lower rate, call us at 1-888-485-2537, ext. 8957, or email us at: glenergy@glenergy.com.

Additional heat pump rebates up to \$450 are available through our Energy Optimization program. Visit michigan-energy.org or call 877-296-4319. ■



Board of Directors District Map Correction. Districts 7 and 8 were incorrectly identified in the board of directors district map in the April issue. Here is the correct map. We're sorry for any inconvenience this may have caused.

ALWAYS CALL BEFORE YOU DIG

For your safety and for the protection of underground utility lines, always follow these steps before starting any digging project.

1. Contact MISS DIG at 811 or missdig.org
2. Wait 3 days for utility owners to mark their lines
3. Respect the marks
4. Dig with care



**Know what's below.
Call before you dig.**
visit missdig.org for more information



Slow Down, Go Around Roadside Utility Workers

Summer travel, which lines up so neatly with utility construction and maintenance season, is just around the corner.

And Joe McElroy, safety director for the Michigan Electric Cooperative Association (MECA), is bracing for the almost daily reports of heart-stopping near-misses as electric equipment operators, lineworkers, groundmen and meter readers tackle projects in the rights-of-way they share with streets, roads and highways.

"It's one of the biggest concerns I have as a safety provider," McElroy says. And, protecting lineworkers by training them to do these jobs safely is getting harder. "Distracted drivers, primarily from mobile devices, are making roadway work zones more dangerous. Most any utility worker can tell you about a near-miss event. We are now encouraging work zones to be set up with an unoccupied buffer vehicle parked behind our bucket trucks to help absorb a crash."

During McElroy's 10 years at MECA, no co-op crew member has been killed in a traffic incident while on the job, but he recalls many suspected distracted-driver accidents and near-misses. "At safety meetings, operations personnel can usually recall an incident that has occurred within the past few weeks."

Last spring, McElroy joined utility reps, legislators, union leaders and Transportation Department and Public Service Commission officials, as Gov. Rick Snyder proclaimed May 22 as "Roadside Safety Awareness Day."

"Roadside safety awareness starts with us letting motorists and pedestrians know they are entering a work zone," McElroy says. "Orange signs, cones and amber lights should be enough for people to understand they are approaching an active worksite, but even with all the proper safety equipment in place, incidents still happen."

Roadside accidents annually kill 100 Michigan police officers, firefighters, and line or sanitation workers. Another 20,000 such public servants are injured by vehicles while doing their jobs.

McElroy is also quick to recommend stiffer penalties for these incidents and fatalities, and says a consistent national approach is needed. "And, I have encouraged our co-ops to use local law enforcement to help out in high-traffic areas or where visibility can be an issue. Drivers are accustomed to seeing our signs and cones, so they still speed or become

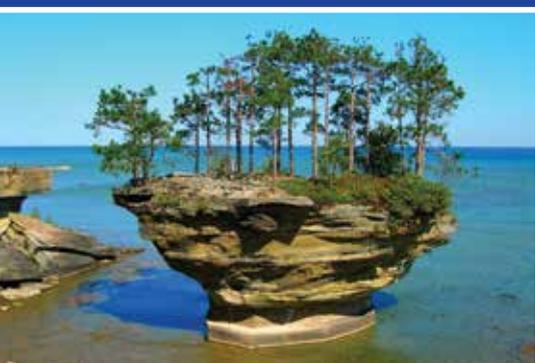


distracted. Once law enforcement is present, they seem to get it."

Meanwhile, McElroy drills co-op and municipal utility crews how to properly set up a safety perimeter. "Their situational awareness also has to be keen in the work zone, and those of us in the utility safety field have to raise awareness of these dangers."

Please "Slow Down, Go Around, and Watch Out" for folks who serve us by working near the roadways. ■

– Reprinted in part from RE Magazine



«« Do You Know Where This Is?

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

We do not accept Mystery Photo guesses by phone. Enter your guess at countrylines.com or send by mail to: *Country Lines* Mystery Photo, 2859 W. Jolly Rd., Okemos, 48864. Include the name on your account, 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 July/August 2015 issue.

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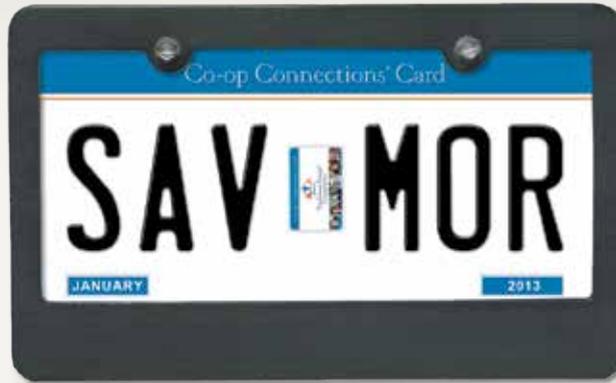
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