

# MICHIGAN COUNTRY LINES



MILLER FAMILY

FARM

— A LEAP INTO —  
UNCHARTED WATERS

Both of these devices create hot air  
but which uses less power?



**Space Heater (high)**  
1,500 watts



**7 Series  
Geothermal Heat Pump**  
900 watts<sup>1</sup>

## WaterFurnace—The smartest way to heat and cool your home.

You may not realize it, but your home is sitting on a free and renewable supply of energy. A WaterFurnace geothermal heat pump taps into the stored solar energy in your yard to provide savings up to 70% on heating, cooling, and hot water. It uses less power than a typical space heater—and it won't singe the hair on your legs. Geothermal is a smart investment in your family's comfort. Contact your local WaterFurnace dealer today and find out how much you can save by switching to geothermal.

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[totalcomfortresource.com](http://totalcomfortresource.com)

**Hart/Ludington**  
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(231) 873-2665  
[adamsheatingcooling.com](http://adamsheatingcooling.com)

**Indian River**  
M & M Plmb & Htg  
(231) 238-7201  
[mm-plumbing.com](http://mm-plumbing.com)

**Jackson/Adrian**  
Comfort 1 Htg & A/C  
(517) 764-1500  
[comfort1.net/geothermal](http://comfort1.net/geothermal)

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Kalkaska Plmb & Htg  
(231) 258-3588  
[kalkaskageothermal.net](http://kalkaskageothermal.net)

**Mt Pleasant**  
Walton Htg & Clg  
(989) 772-4822  
[waltonheating.com](http://waltonheating.com)

**Muskegon**  
Adams Htg & Clg  
(231) 873-2665  
[adamsheatingcooling.com](http://adamsheatingcooling.com)

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(231) 747-7509  
[kiesselsgeo.com](http://kiesselsgeo.com)

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ESI Htg & Clg  
(517) 647-6906  
[esiheating.com](http://esiheating.com)

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Plmb & Htg  
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[mwphonline.com](http://mwphonline.com)

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[watergeofurnace.com](http://watergeofurnace.com)

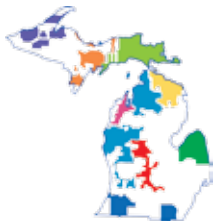
D & W Mechanical  
(231) 941-1215  
[dwgeothermal.com](http://dwgeothermal.com)



visit us at [waterfurnace.com](http://waterfurnace.com)

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1. 7 Series unit uses approximately 900 watts while running in speeds 1-2.





Michigan's Electric Cooperatives  
[countrylines.com](http://countrylines.com)

**January 2017**  
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**Facebook**

**Change of Address:**

Please notify your electric cooperative. See page 4 for contact information.

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

# IN THIS ISSUE

Photo—Rudy Malmquist



## ON THE COVER

A true family affair, Miller Family Farm, in Carney, MI, has mastered the system of aquaponics.

Standing left to right: Dawn Miller, Rob Miller, Sandy Miller, Fred Miller  
Kneeling left to right: Jake Miller, Hannah Miller

Photo—Emily Prehoda

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Miller Family Farm Vegetarian Minestrone Recipe

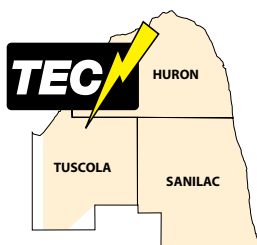
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*Jack O'Malley*

Guess Our New Mystery Photo And Win A Bill Credit!  
Submit An 'I Remember' Story And Earn \$50!





## Thumb Electric Cooperative

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Uby, MI 48475-0157  
1-800-327-0166 or 989-658-8571  
E-mail: [tec@tecmi.coop](mailto:tec@tecmi.coop)  
[www.tecmi.coop](http://www.tecmi.coop)

### Board Of Directors

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District 1 • 989-551-6533

**Donald Wolschleger**, Vice President  
District 2 • 989-975-2027

**Beth McDonald**, Secretary  
District 3 • 989-550-7470

#### SANILAC COUNTY

**Kim Nunn**, Director  
District 1 • 810-679-4291

**Mike Briolat**, Director  
District 2 • 989-284-3405

**Duane Kursinsky**, Director  
District 3 • 810-837-3828

#### TUSCOLA COUNTY

**Louis Wenzlaff**, President  
District 1 • 989-683-2696

**Jonathan Findlay**, Director  
District 2 • 989-551-8393

**Carl Cousins**, Director  
District 3 • 989-871-4449

**Dallas Braun**, General Manager

### PAYMENT STATIONS

#### Huron County

Bad Axe—Northstar Bank  
Pigeon—Northstar Bank

#### Tuscola County

Akron—Northstar Bank  
Caro—Northstar Bank  
Mayville—Mayville State Bank  
Millington—Mayville State Bank

#### Sanilac County

Sandusky—Northstar Bank

Visit Thumb Electric's website  
[www.tecmi.coop](http://www.tecmi.coop)

*Thumb Electric Cooperative is an equal opportunity provider and employer.*



## Happy New Year



**Dallas Braun**  
General Manager

**A**s we enter yet another new year, on behalf of all the employees and directors of Thumb Electric Cooperative, we wish you and your family a healthy, happy and fulfilling year.

Looking back at the past year's accomplishments, I would like to thank all the employees for safely doing their part and taking care of the electrical system and members' needs. This ensures that your cooperative continues to offer the safe, reliable and competitively-priced electric service that you, our members, have come to expect.

While it would be nice just to sit back and dwell on our past success, making improvements and positioning your cooperative for future generations is an on-going process. With that in mind, I would like to share with you some things to expect in 2017.

- 2017 will be the first full year in which your cooperative will be member-regulated. Any rule or tariff revisions regarding rates, charges, accounting standards, billing practices and terms and conditions of service will be made locally by your elected board of directors with members' input. Safety, interconnection, code of conduct, service area, distribution performance standards, and quality of service will still be governed by the Michigan Public Service Commission in Lansing.
- Approximately \$5.5 million in capital investment improvements are scheduled in 2017. Some of the projects include: the complete rebuild of 16 miles of our Uby to Kinde transmission and distribution underbuild circuit; installation of new emission controls for the Uby plant generators to bring a renewed value to the plant; and modernizing the transmission protective relaying and wiring at the Uby plant.
- On the operations side, we will continue with our aggressive tree trimming/removal program. We anticipate spending well over \$1.5 million to safely clear our rights of way and remove dangerous dead ash trees. Thank you in advance for working with us to make this program cost-effective.
- And, finally, the 2017 Annual Meeting will be held at the Octagon Barn.

I look forward to another safe and successful year. As always, if you have any questions, concerns, or comments regarding your cooperative, please give me a call. ■

# Co-op News

## Annual Meeting At Thumb Octagon Barn

Thumb Electric Cooperative's Annual Meeting will be held June 10 at the Thumb Octagon Barn in Gagetown. Mark your calendar and join your cooperative members. Registration begins at 9 a.m. and the business meeting will start at 10 a.m. Be a part of the democratic process at your electric cooperative and plan on casting your ballot for the board of directors election. As always, there will be entertainment for the kids with balloons, face painting, pony rides and bucket truck rides. When the meeting is over, and you have had lunch, feel free to take in the sites of years gone by and enjoy the Octagon Barn's vast collection of farm, home and early 20th century items.

## Tree Trimming Efforts To Continue

Tree trimming will continue at an aggressive rate in 2017. We see fewer outages and shorter duration of outages because of these efforts. Priorities will continue for line sections that are historically problematic, followed by overgrown line sections, and finally, less severe circuits will be maintained.

Due to a disease in the Ash tree, which is a very popular species of tree in our service territory, we

have had to adjust our trimming locations at times. It has made planning a challenge, but we make every effort to contact members ahead of the trimmers. We will send out a postcard to members to let them know trimmers will be in the area and, if possible, we will try and call members to inform them. If you have an updated phone number, please call us with the new contact information.

## Several Payment Options Available

Thumb Electric offers members several options when it comes to making payments and turning in meter readings. You may mail in the payment with the provided stub along with the reading, or you can make a payment over your computer or smartphone and turn in your meter reading at the same time. We even have a cash payment option through MoneyGram offered at such locations as Walmart or CVS Pharmacies, if that best suits you. For those choosing the smartphone app option (SmartHub), you have the convenience of reporting an outage that you may be experiencing, thus avoiding time waiting for someone to speak to you on the phone. For more information, please visit our website at [tecmi.coop](http://tecmi.coop). ■

## Special Election Notice For TEC Members

In March 2017, a nominating committee of nine Thumb Electric Cooperative members will meet to select a slate of candidates for one director position in each of the three counties served by the cooperative.

Positions in District 3, currently held by Beth McDonald, Duane Kursinsky and Carl Cousins, will be voted on at the 2017 annual meeting in June.

Any co-op member interested in running for a district director position should write a letter to the Thumb Electric

nominating committee chairperson prior to Feb. 15, 2017, indicating his or her interest in being nominated.

The committee will review the prospective nominee's qualifications to determine whether they meet bylaw requirements and whether he or she should be placed on the ballot.

If you would like more information, please contact the co-op's general manager, Dallas Braun, at 800-327-0166 or 989-658-8571.

## Annual Meeting Notice

Saturday, June 10, 2017

Thumb Octagon Barn

Business meeting begins at 10 a.m.



# NO BARRIERS

ADVENTURES FOR RURAL VETERANS—APPLY BY JAN. 31

Michigan electric cooperatives believe there should be “No Barriers” for veterans with disabilities. That’s the name and idea behind CoBank’s No Barriers initiative. Michigan cooperatives are looking for qualified veterans\* from our local community to participate.

No Barriers is a five-day, all-expenses-paid, expedition in Colorado, designed to help veterans with disabilities transform their lives through curriculum-based experience in challenging environments (climbing, rafting and hiking).

**If you are a disabled veteran, or you know of a disabled veteran in our community who would like to participate in the No Barriers program, please complete the form on our website:**  
**[countrylines.com/nobarriers](http://countrylines.com/nobarriers)**

*\*Must have VA disability rating to be eligible.*



## Storm Watch: Plan Ahead And Be Prepared

**W**hen winter temperatures drop and storms hit, it can be challenging to stay safe and warm. Your electric cooperative cares about your safety, and we want you to be prepared. Heavy snow and ice can lead to downed power lines, leaving you without power. During a power outage, our crews will continue to work as quickly and safely as possible to restore power, but there are a few things you can do to prepare yourself.

### Winterize Your Home

- Inspect and maintain heating equipment and chimneys to ensure they’re working safely and properly.
- Caulk and weather-strip doors and windows to stop air leaks and related heat loss.
- Freezing temperatures can cause water pipes to burst. Wrap pipes with insulation or newspapers and plastic. Allow faucets to drip during extreme cold to avoid frozen pipes.
- Consider installing storm windows for better insulation. From the inside, windows can also be covered with plastic.

- Make sure everyone knows where the fire extinguisher is and how to use it. House fires occur more often in winter, especially from using alternative heating unsafely.

### Stay Warm And Safe

Plan ahead for alternate heating or other places you can go. A fireplace, propane space heater or woodburning stove is sufficient. Fuel and wood-burning heating sources should always be vented and used with caution—make sure carbon monoxide and smoke detectors are working. If you use a portable generator, make sure it is placed outside the home for proper ventilation. Be careful not to overload it, and use a proper outdoor extension cord that can handle the electric load.

Visit [ready.gov](http://ready.gov) or call 1-800-BE-READY (1-800-237-3239) for more tips on preparing for winter storms. ■





ELECTRIC CO-OPERATIVE  
**YOUTH TOUR**



# Michigan Co-ops Inspire Tomorrow's Leaders Today With **YOUTH TOUR 2017**

An exclusive summer highlight for the best and brightest youth in the state.  
**June 10–15, 2017**

Designed to inspire the leaders of tomorrow, Youth Tour teaches the brightest students of Michigan about their past—and helps equip them with the skills they need to be Michigan's next generation of energy-minded leaders. This is a once-in-a-lifetime, all-expenses-paid leadership travel opportunity for high school sophomores and juniors (going into their junior or senior year this summer) and is sponsored by Michigan's electric cooperatives. From the battlefields of Gettysburg to the halls of Congress in Washington, D.C., the program explores the leadership lessons of our nation's history and will immerse students in the cooperative spirit.

Youth Tour offers a unique opportunity to build leadership and public speaking skills, enhance students' knowledge of the cooperative form of business, and build life-long friendships with other student-leaders from across the country.

**Youth Tour applications accepted  
between now and Feb. 28.**

## **Trip Highlights Include:**

- Visit the Gettysburg Civil War battlefields
- See Fort McHenry, birthplace of "The Star Spangled Banner"
- Explore the Washington, D.C., monuments and memorials
- Attend a theater performance at the Kennedy Center
- Explore the museums of the Smithsonian Institution
- Pay respects at Arlington National Cemetery
- Meet with Michigan Senators and Congressmen
- Batter up! Enjoy a Washington Nationals baseball game

**Additional information and online application  
are available at [CooperativeYouthTour.com](http://CooperativeYouthTour.com).**

THUMB ELECTRIC

# Energy Optimization Rebate Program

Energy Star Rebate	For Energy Star appliances, LED bulbs and fixtures, Energy Star TVs, and much more.
In-Home Energy Audit	Get knowledge on the energy usage of your home and some free energy saving items, as well!
HVAC Rebates	Installing a new furnace or AC system? Certain energy-efficient upgrades qualify for incentive dollars.
Appliance Recycling	Got an old refrigerator or freezer eating up your energy budget? Have it recycled and get cash back. *Window AC & dehumidifiers qualify under certain conditions.

Agribusiness and commercial programs also available.

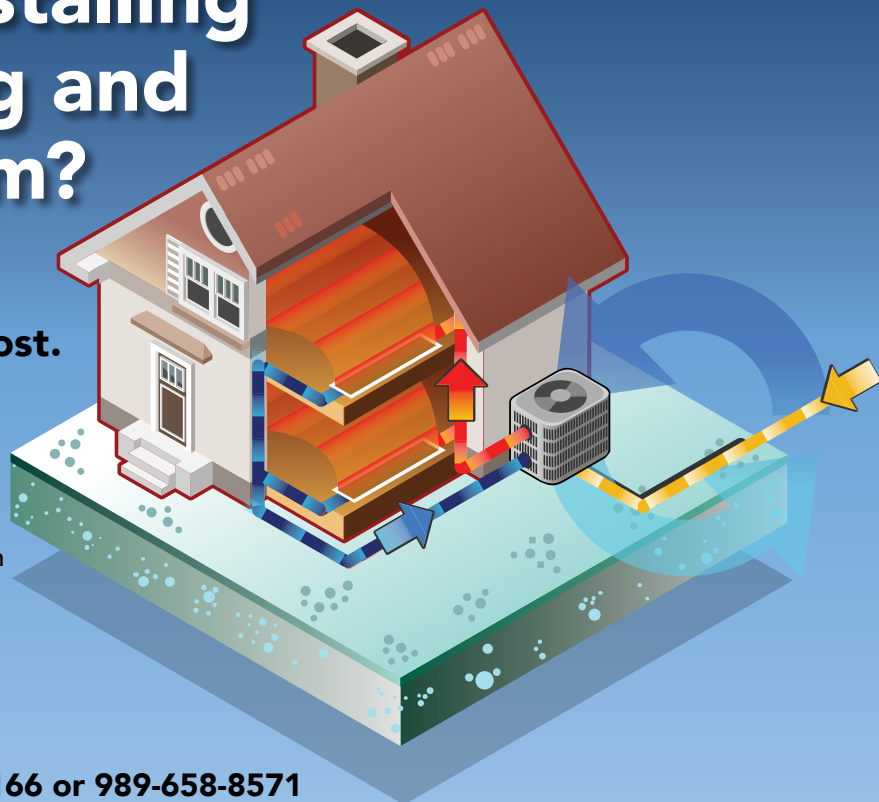
**Call 989-658-8571 or 1-800-327-0166, or visit our website [tecmi.coop](http://tecmi.coop) today to learn specific details.**

## Thinking of Installing a New Heating and Cooling System?

**Thumb Electric may have a rebate to help with the cost.**

- Geothermal rebate up to \$1,200
- AC and Air Source Heat pumps up to \$450

There are many more Energy Optimization rebates available. For a full listing, please visit our website or call our office.



**Call: 1-800-327-0166 or 989-658-8571**  
**[www.tecmi.coop](http://www.tecmi.coop)**



# Country Roads



A view of a beautiful, stormy sunrise from our back patio. *By Lynn Shultz*



## Show Us Your Photos

Thumb Electric invites members to share their photos. Selected photos will be published in *Michigan Country Lines*. Upcoming topics and deadlines are: **Family** due **Jan. 20**—March issue and **Planes, Trains and Automobiles** due **March 20**—May issue.

To submit photos, and for details and instructions, go to <http://bit.ly/countrylines>

We look forward to seeing your best photos!



Mother Nature showed up in full force last spring with hail, lightning and damaging winds, putting on an incredible show. *By Lynn Fabbo*



Double rainbow. *By Dawn Mundri*



## New Operations Supervisor Named

Please welcome Mike Affer as the new Tuscola County Operations Supervisor. Mike has been a journeyman lineman with Thumb Electric for more than 18 years. Many of those years he has served in a leadership position as lead foreman out of the Ugly warehouse. Current Tuscola County Operations Supervisor Brandon LeGault will be assuming the Huron/Sanilac county operations supervisor position that became vacant due to an upcoming retirement.

# HEALTHY LIVING

Great tasting, good-for-you recipes.

## Energy Bars

Joyce Tamminga,  
Great Lakes Energy

- 1 cup peanut butter, sunflower butter or almond butter
- $\frac{2}{3}$  cup honey
- 3 cups rolled oats
- $\frac{1}{2}$  cup ground flaxseeds or chia seeds
- $\frac{2}{3}$  cup mini chocolate chips
- 1 cup any combination of nuts, seeds, and soft dried fruit (sunflower seeds, raisins, dried cranberries, etc.)
- shredded coconut

Combine the peanut butter and honey in a large mixing bowl and stir until smooth. Gradually add oats and chia seeds/flaxseeds. Add chocolate chips and nut/seed/fruit mixture. Mix gently to combine. Use a 7x11 or 9x9 pan sprayed with baking spray. Sprinkle bottom with coconut, pat down mixture firmly, and sprinkle more coconut on top and pat down. Refrigerate and cut into small bars. Enjoy for a healthy snack! Keep refrigerated.





## Fresh Corn Salsa

Mary Babcock, Thumb Electric



- 2 cups corn kernels, fresh or frozen
- ½ cup red onion, diced
- ½ cup red pepper, diced
- 1–2 jalapeños, seeded and minced
- ½ cup cilantro, chopped
- 4 teaspoons lime juice
- 1 teaspoon kosher salt

Sauté corn over medium-high heat until kernels begin to char. Set aside to cool. In a medium bowl, combine onion, red pepper, jalapeño, cilantro, lime juice, and salt. Add sautéed corn and stir to combine. Enjoy with fresh chips!

## Overnight Oatmeal (Muesli)

Mary Ellen Wynes, HomeWorks Tri-County



- ½ cup oatmeal
- ½ cup yogurt (your choice)
- any fruit
- any nuts
- any fruit juice

Combine your oatmeal and yogurt. Add your fruit juice, nuts and fruit. Stir and refrigerate overnight. Enjoy in the morning!

## Delicious And Healthy Avocado Pudding

Cindy Dickinson, Presque Isle Electric



- 1 ripe avocado
- 2 tablespoons cocoa powder
- 2 tablespoons maple syrup
- 2 tablespoons almond butter or peanut butter
- pinch of salt
- chocolate chips

Mash avocado in bowl until smooth. Stir in rest of ingredients. Chill 30 minutes or more. Sprinkle chocolate chips on top as garnish.



# Gather Round The Co-op Kitchen Table

Join our exclusive online cooking community to submit your recipes and try recipes from other members.

Please submit your favorite recipe for a chance to win a \$50 bill credit and have your recipe featured in *Country Lines*:

**“Muffins & Breads” due Feb. 4**

**“Breakfast & Brunch” due Mar. 4**

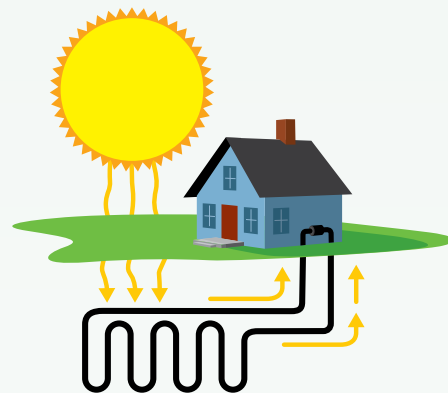
Enter your recipe online at [micoopkitchen.com](http://micoopkitchen.com) or send to (handprint or type on one side, please): *Country Lines* Recipes, 201 Townsend St., Suite 900, Lansing, MI 48933. Please note the co-op from which you receive your electric service.

**Go to [micoopkitchen.com](http://micoopkitchen.com) to register.**



# Renewable Geothermal Heat

Geothermal is a simple technology that uses the earth's renewable energy to provide high-efficiency heating and cooling. In winter, the system draws heat from the ground and transfers it to your home. In summer, it extracts heat from your home and transfers it to the ground. **Contact the energy experts at Thumb Electric Cooperative at 800-327-0166** for honest answers on your energy choices, or call any of the trained and certified installers listed here.



## All-Temperature Geothermal Systems

1103 E. Caro Rd., Caro, MI 48723  
989-673-5557

## Ameriheat, Justin Faber

2891 E. Forester Rd., Deckerville, MI 48427  
810-376-4534

## B & D Heating, Cooling & Plumbing

1148 North Van Dyke, Bad Axe, MI 48413  
800-515-1117

## Burkhard Plumbing & Heating

638 E. Huron Ave., Bad Axe, MI 48413  
989-269-7532

## Certified Temperature Innovations

3107 Custer Rd., Carsonville, MI 48419  
810-300-7748

## ES Sheetmetal

9450 Belsay, Millington, MI 48746  
989-871-2067

## Geo Renew Systems, Inc.

3045 Grange Hall Rd., #7, Holly, MI 48442  
248-531-0325

## Geomasters, Inc., Plumbing & Heating

57 Ward St., Croswell, MI 48422  
810-679-2251

## Geothermal Systems of Lapeer, LLC

6689 Orchard Lk. Rd. #188  
West Bloomfield, MI 48322  
810-240-2116

## Holland Heating and Cooling

9160 Lapeer Rd., Davison, MI 48423  
810-653-4328

## Ingell Refrigeration

1115 4th St., Port Huron, MI 48060  
810-982-4226

## J & B Plumbing & Heating

7641 Pigeon Rd., Pigeon, MI 48755  
989-453-3931

## Jack McCain Plumbing & Heating

9651 Weale Rd., Bay Port, MI 48720  
989-453-2277

## Kowaleski Heating & Cooling, LLC

3977 Ruppel Rd., Port Hope, MI 48468  
989-428-3371

## Kulek Heating & Air Conditioning

14421 Jeddo Rd., Yale, MI 48097  
810-387-4452

## Kundinger & Kroll

31 E. Main St., Sebawaing, MI 48759  
989-883-2770

## Lakeshore Improvements

**Plumbing & Heating**  
7825 Big Gulley Rd., Palms, MI 48465  
989-864-3833

## Michigan Energy Services

8445 Main St., Whitmore Lake, MI 48189  
888-339-7700

## NRG Control

3690 Washburn Rd., Vassar, MI 48768  
989-670-2543

## Newton-Johnson Plumbing & Heating

114 Enterprise Dr., Vassar, MI 48768  
989-823-2341

## Orton Refrigeration

31 W. Sanilac Rd., Sandusky, MI 48471  
810-648-2252

## Preferred Heating

7736 Arendt, Melvin, MI 48454  
810-378-5454

## Priority Service by Porter & Heckman

3056 Davison Rd., Lapeer, MI 48446  
810-644-8576

## Shetler Plumbing & Heating

7184 Nitz St., Pigeon, MI 48755  
800-547-3651

## Superior, Inc.

3442 Cemetery Rd., Cass City, MI 48726  
989-872-3305

## Thumb Cooling & Heating

5599 Pochert Rd., Port Hope, MI 48468  
989-428-4948

**And:** 837 South State, Caro, MI 48723  
989-672-4948

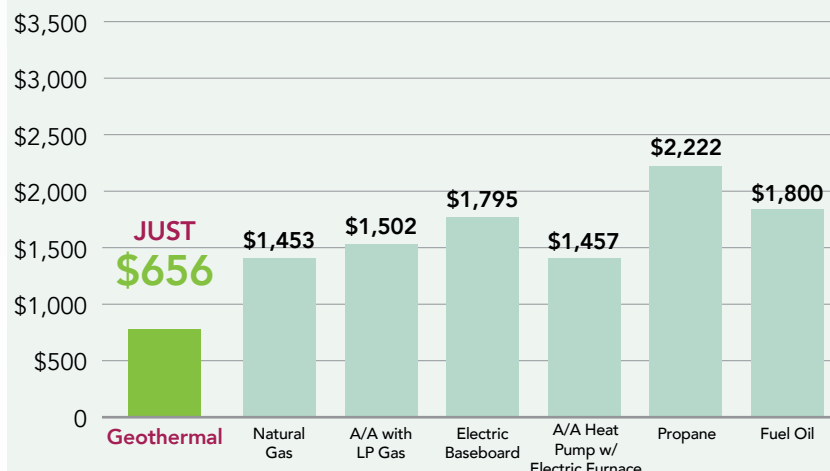
## Well Connect-Terra Caloric

PO Box 307 Alpena, MI 49707  
989-356-2113



## Annual Operating Costs

For an Average 1,800 Sq. Ft. Home  
(45,000 BTU heating load, 20,000 BTU cooling load)



Factors Used: Electric Baseboard, Air-Source Heat Pump and Geothermal—based on TEC's 7.196¢/kWh dual-fuel rate. LP gas—based on \$1.60/gal. and 90% efficient furnace. Fuel Oil—based on \$1.60/gal. and 80% efficient furnace. Natural Gas—based on \$1.08/therm., 90% efficient furnace including \$9/mo. service charge. (Electric baseboard costs do not include air conditioning.)

# If You Smell Gas...

**D**id you know that propane gas has no odor? The "rotten egg" smell is added for your safety, to help alert you to any possible leaks. If you smell gas in the house, or if you have a gas alarm that signals the presence of gas, immediately follow these safety guidelines:

## No flames or sparks!

Immediately put out all smoking materials and other open flames. Do not operate lights, appliances, telephones, or cell phones. Flames or sparks from these sources can trigger an explosion or fire.

## Leave Immediately!

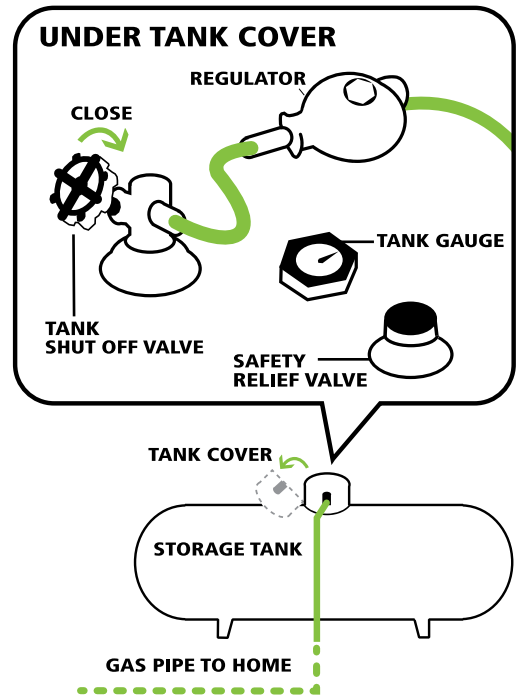
Get everyone out of the building or area of the suspected leak.

## Shut off the gas.

Turn off the main gas supply valve on your propane tank if it's safe to do so. To close the valve, turn it clockwise (see diagram).

## Report the leak.

From a neighbor's home, call Thumb Electric at 800-327-0166 right away. If for some reason you can't reach us, call 911 or your local fire department.



## Stay away.

Do not return to the building or area until we have determined that it is safe to do so. ■

## What Is A Power Supply Cost Recovery Factor?

Each year our staff estimates how much power our members will need for the coming year, as well as how much it will cost to generate or purchase that power for you to use. That estimated cost is passed on to all members through the Power Supply Cost Recovery (PSCR) factor on your monthly bill.

Estimating power costs can be difficult. As we've seen in previous years, fuel costs can change dramatically without much notice. Estimates are based on historical information and power supply contracts, but weather and other factors can change the actual costs.

Once the financial audits are completed for a fiscal year, usually in late March, we reconcile the actual power costs to the total PSCR collections. Any over or under collections are then dealt with through future PSCR adjustments.

The board of directors approves these estimates, as they did in November 2016. For the coming year, effective March 1, the PSCR will be \$0.00125 per kilowatt-hour (kWh) or \$1.25 per 1,000kWh.

## Notice To Members Of Thumb Electric Cooperative Tariff Changes Effective March 1, 2017

The Thumb Electric Cooperative Board of Directors adopted the following changes to the cooperative's tariffs at a Special Open Meeting held Nov. 28, 2016, in accordance with P.A.167

- Established the 2017 Power Supply Cost Recovery Factor at \$0.00125 per kilowatt-hour, based on annual cost forecasts, effective with the March 2017 bills.
- Eliminated tariff D1.01, the Annual Rate Realignment Surcharge/Credit, in its entirety.

For specific details of any Thumb Electric tariffs, please call 1-800-327-0166 or visit [tecni.coop](http://tecni.coop).



# MILLER FAMILY FARM

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## — A LEAP INTO — UNCHARTED WATERS

By Yvonne Whitman

**A**fter a long career in the construction business, Rob Miller, then a Madison, WI, resident, found himself at a crossroad when he lost his job during the 2008 economic downturn. During this time, his son, Jake, was working for a vegetable farmer. Jake's work in the agriculture industry piqued Rob's interest in how foods were being grown. "I realized that food is a commodity that will never go away," Rob says. It was a realization that steered him and Jake to investigate alternative methods for farming. "And that led us to aquaponics," Rob explains.

Aquaponics is the marriage of aquaculture (raising fish) and hydroponics (the soilless growing of plants) that grows fish and plants together in one integrated system. The fish effluent provides an organic food source for the growing plants, and the plants provide

a natural filter for the water in which the fish live. This environmentally-sustainable method of farming is free of pesticides, herbicides, and fertilizers, plus it uses just one-tenth of the water expended in traditional field growing methods.

The Millers began working with Nelson and Pade, a Wisconsin aquaponic company, to learn everything they could about the technology. When trying to decide where to locate their operation, the decision was easy. "When I was a kid my favorite spot was Michigan's Upper Peninsula to visit my grandparents. I love it up here," Rob reflects.

In 2013, Rob, his wife, Dawn, and their three children all took a leap of faith into uncharted waters and moved their family to a seven-acre farm in Carney. Once owned by his maternal great grandparents, the farm is currently owned by Rob's parents, Fred and Sandy. Purchasing a nearby additional 60 acres, Rob began construction on the first building for the aquaponic operation.

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In 2016, the farm was recognized as one of three finalists in the Governor's Energy Excellence Award for Best Project in the Agriculture sector.



Tilapia are a critical component to the farm. Jake is holding a fish in front of one of the farm's six fish tanks. Each carefully monitored 500-gallon tank holds approximately 250 fish.

The first shipment of 276 tilapia fish were delivered in 2014. It took them approximately one year to get the system operating at full capacity, growing both fish and produce. So, how does it work? The nutrient-rich water from the fish feeds the 200 lettuce seeds that are planted every day, six days of the week. Approximately 40 days later, the crop is harvested and ready to sell. The farm now produces several types of lettuce, kale, tomatoes and cucumbers. The produce is sold in 10 U.P. grocery stores, in addition to supplying healthy food to the Carney and Gladstone school lunch programs. This has all been accomplished with little to no advertising, but rather through word-of-mouth publicity. The quality of the produce advertises for itself, the Millers attest.





Rob Miller proudly stands in the rows of his impressively tall tomato plants.

Photos—Emily Prehoda

Still in its infancy, the operation will reach full capacity in five years when it is expected to produce 60,000 heads of lettuce and 70,000 pounds of tomatoes annually. Future plans include a certified kitchen on-site, so that they can sell the fresh fish, as well as constructing more greenhouses for crops, such as strawberries and peppers.

Family involvement weaves its way through the fabric of the farm with Rob's son, Jake, handling fish operations, his daughter, Hannah, as a greenhouse technician, and son, Jon, as general help. Rob's wife, Dawn, initially a bit reluctant at the prospect of relocation, adds, "Now that I'm up here, I love it. I love working on the farm. I've always enjoyed gardening, and this is just gardening on a different level."

"I have to attribute all of this to my mom and dad," Rob thoughtfully acknowledges. "They have been entrepreneurs their entire lives, and they taught by example. I saw first-hand their successes and failures and how they got through them. Those sorts of life lessons helped me through my own trials and errors with this business."

Together, as a family, the Millers have traversed uncharted territory to be able to supply fresh, sustainable food throughout the U.P.'s four seasons.

*Miller Family Farm is a member of Alger Delta Cooperative Electric Association. For more information on the farm, contact them at 906-639-2506, millerfamilyfarm2013@gmail.com or eatupmichigan.com.* 🐟

## VEGETARIAN MINESTRONE

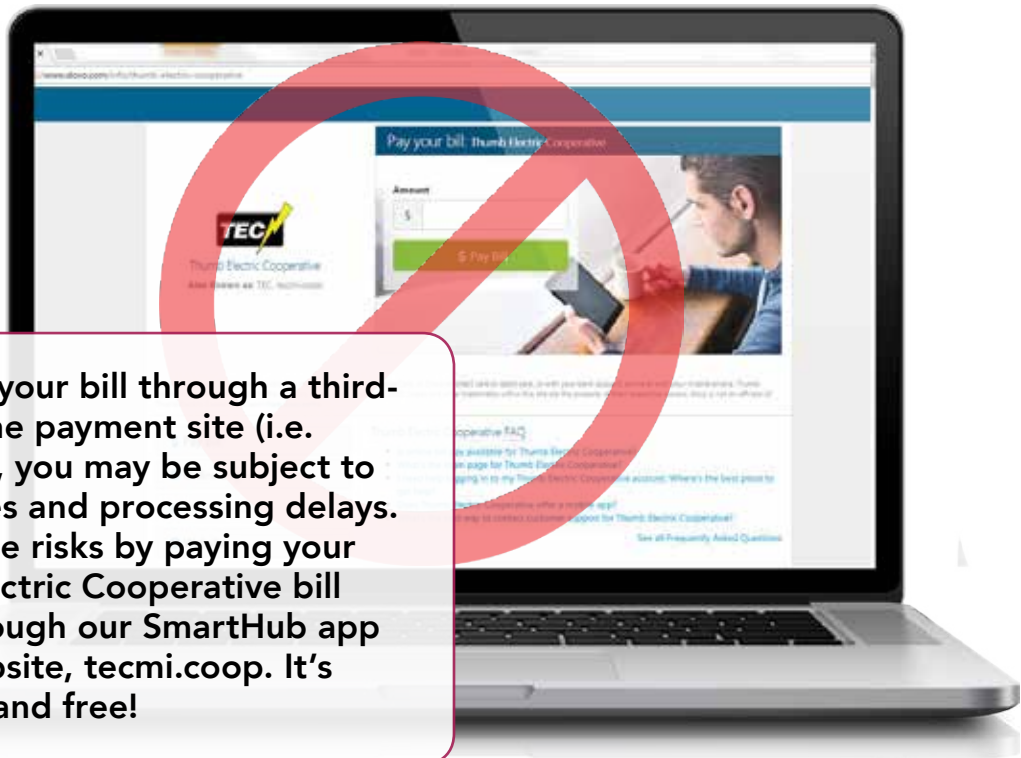
*A Miller Family Farm Favorite*

- 2 tablespoons olive oil
- 1 teaspoon garlic, minced
- 1 large onion, finely chopped
- ¼ cup celery, diced
- 1 cup carrots, peeled and sliced into thin half moons
- 1 cup fresh mushrooms, sliced
- 1 teaspoon basil
- 1 teaspoon oregano
- 2 tablespoons chicken flavored seasoning (vegetarian)
- 6 cups boiling water
- 1 teaspoon steak sauce
- ½ teaspoon Worcestershire sauce (Annie's vegetarian)
- 12 ounces fresh kale, chopped
- 3 ½ cup tomatoes, crushed
- 4 cups spaghetti sauce (homemade or store bought)
- 3 ½ cups navy beans canned (drained & rinsed)
- 1 ½ cups zucchini, cut into small bite size
- 2 cups ditalini, cooked (or other small pasta)
- salt and pepper to taste

Heat oil in a large soup pot. Add onion, garlic, celery and carrots. Sauté 2–3 minutes until onion is translucent. Add mushroom, oregano and basil and cook 2 minutes over medium heat or until mushrooms are softened. Prepare broth by dissolving vegetarian chicken seasoning into boiling water, then add to pot with onion mixture. Add steak sauce, Worcestershire, kale, tomatoes, spaghetti sauce and beans. Bring to a boil, then simmer for 10–20 minutes, add zucchini and cook 10 more minutes or until zucchini is tender. Adjust seasoning with salt and pepper, then add the cooked pasta. Remove from heat and serve. Makes about 1 gallon.



Find this recipe and more at **micoopkitchen.com**.



If you pay your bill through a third-party online payment site (i.e. doxo.com), you may be subject to hidden fees and processing delays. Avoid these risks by paying your Thumb Electric Cooperative bill online through our SmartHub app or our website, tecmi.coop. It's fast, easy and free!

## Beware Of Other Online Payment Sites

**P**aying your Thumb Electric Cooperative bill online is fast, easy and free when you use our website— tecmi.coop. Beware of hidden fees from other payment websites.

Pay your TEC bill online at any time. If you accidentally select another payment website to make your bill payment, you risk possible extra charges and payment processing delays. Make sure our website with the address above appears before making a payment. Some websites allow visitors to pay their local utility bills with the utility's name and company logo appearing on the site. Thumb Electric Cooperative is not affiliated with any third party website that offers utility payment service.

If you pay your Thumb Electric bill on a third party website, you risk:

- Extra charges levied by the third party for each transaction on their website.
- Delays up to two weeks or more before the payment is posted to your TEC account. For some members, the delay could result in the account being disconnected for nonpayment if payment is not received in time to avoid shut-off. Even if late payment does not result in a shut-

off, late payment fees could be charged to the account. Members can avoid these risks by taking advantage of payment options offered directly from their cooperative.

Thumb Electric offers several free and convenient payment methods. Choose whatever option works best for you:

- **AutoPay:** Your payment is automatically deducted each month from either your checking or savings account, credit card or debit card.
- **SmartHub:** Pay with the app or online at tecmi.coop. Make a one-time payment from your checking or savings account, or credit card or debit card.
- **Mail:** Send in payment to our Ubly office at 2231 Main St. Ubly, MI 48475
- **MoneyGram:** Cash option at MoneyGram locations.
- **Any location of Northstar Bank or Mayville State Bank.**
- **PhonePay:** Pay at any time by using our automated pay-by-phone service. We accept payment by credit card or checking or savings over the phone. Simply dial 800-327-0166 or 989-658-8571, then choose option 1 to make a payment.
- **In Person:** Ubly office counter, drive-thru, or night deposit dropbox. ■

# Mother Nature Leave You in the Dark? There's an App for That!

When Mother Nature causes damage in your area and you need to report an outage, did you know that you can report it through TEC's smartphone app called **SmartHub**? The app gives you another option to report an outage without waiting, and it may help you avoid possible busy signals on the telephone system. TEC's staff and answering service will always be available to speak to members during a storm and after-hours, but due to high call volumes, it may take a while to get through.

SmartHub is also a powerful account management service tool that offers much more than a quick way to pay your bill. It's a convenient, two-way communication platform that allows you to access your electric service account and track energy use information from either a computer or mobile device.

*Join the 5,431 members that are currently using SmartHub to:*

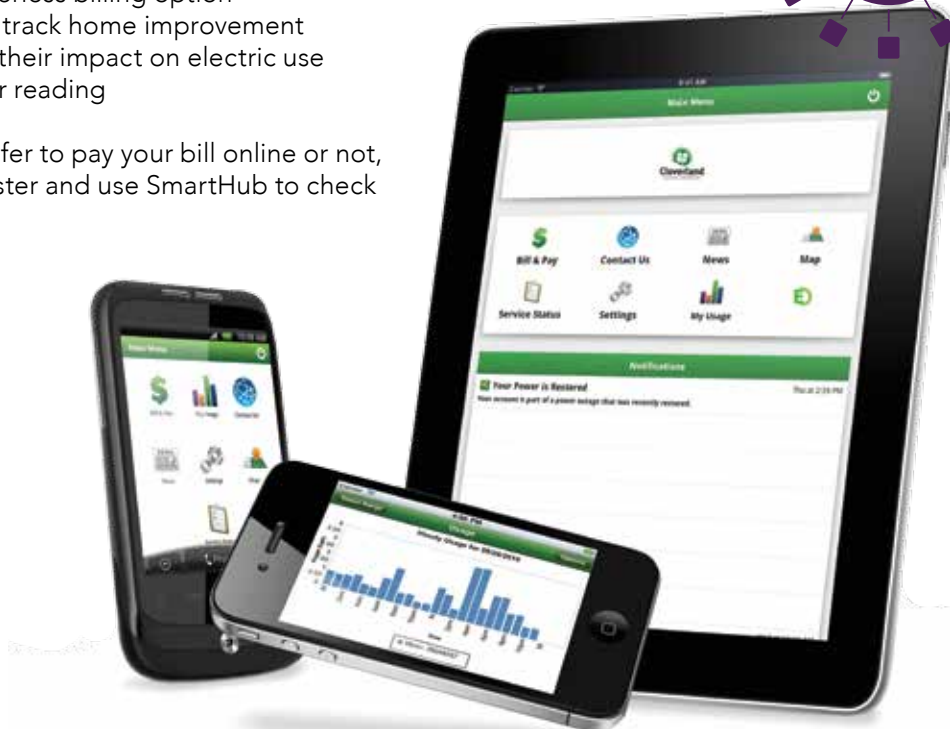
- Report an outage
- View or pay their bill
- View payment and billing history
- Check their monthly kilowatt usage and view related graphs
- Activate a paperless billing option
- Set markers to track home improvement upgrades and their impact on electric use
- Record a meter reading

Whether you prefer to pay your bill online or not, you can still register and use SmartHub to check

your electric use, report a service-related matter, and more! The registration process for new users is simple and fast, but have your electric bill handy so you can quickly enter the account number. To get the process started and enroll, visit [tecmi.coop](http://tecmi.coop) and click on the "My Account—Pay Bill/Meter Reading" button on the home page.

The SmartHub app is free to download and install, and is available for both Apple/iOS and Android mobile devices. Search for it in the Apple Store or on Google Play. SmartHub is not case sensitive, but must be entered as one word. If duplicates appear, the correct app is the one provided by our service partner and product developer, the National Information Solutions Cooperative (NISC). The app is supported using iOS 8.0+ and above (iPhone and/or iPad), and the Android 4.1 and above (smartphones or tablets) platforms.

For more details, visit our website at [tecmi.coop](http://tecmi.coop) or call 800-327-0166. ■





# Sky's The Limit

By Jack O'Malley

What happens when you combine a master electrician, educator, licensed contractor and self-described tinkerer? You get Mike Schmerl, an instructor at Northwestern Michigan College and owner of Panoramic Electricity.

Since starting his electrical company 23 years ago, Mike has made the study of electricity something of a hobby, fueling the fiddler within while inspiring a new generation of electricians. In fact, one of Mike's electrical apprenticeship classes was awarded a grant to study solar power. With his home now covered in solar panels, wired with various switches and batteries, Mike uses his personal experiences with this alternative energy source in the classroom. And his students seem to be warming to the idea.

"Solar has amazing benefits," Mike said. "We are much further along in its day-to-day use than people even know." An electric car, for instance, can run approximately 238 miles between charges. Mike says, "that pretty much covers the average day driving for most of us."

But what happens when you combine an electric car with solar power? Mike discovered you can have an affordable and comfortable means of transportation as proven by the solar powered golf cart he built! And while he admits some working vehicles might still need gas or diesel fuel to operate, Mike remains confident that soon we'll be picking up groceries in electric powered cars.

Some argue that Michigan's often cloudy, overcast skies make solar impractical. Mike insists that's not true. He cites Germany, a country sharing its latitude with Michigan, as a global leader in solar energy. While acknowledging that solar might not be the total solution to man's energy needs, Mike



says sun power complements other energy forms, pointing out that "even oil companies see the value of finding alternative energy sources so as to extend their production life."



Jack O'Malley

Describing solar power as the perfect marriage of old and new technology, Mike understands many of us will never be truly off the grid. "We will always need bigger generating capacity to power an ever-growing infrastructure," Mike explained. "If you want a hot tub or larger appliances, you will always need the power grid." ■

## I Remember...

**We invite members to share their fondest memories.**  
*Country Lines* will pay \$50 for stories we publish.

### Guidelines

1. Approximately 200 words
2. Digital photos must be at least 600 KB
3. Only one entry per household, per month
4. *Country Lines* retains reprint rights
5. Please include your name, address, email, phone number and the name of your electric co-op
6. Submit your memories online: [countrylines.com](http://countrylines.com)



## «« Where In Michigan Is This?

Identify the correct location of the photo on the left and be entered into a drawing to win a \$50 electric bill credit. Enter your guess at [countrylines.com](http://countrylines.com) or send by mail to: *Country Lines* Mystery Photo, 201 Townsend St., Suite 900, Lansing, MI 48933. Include the name on your account, address, phone number, and the name of your co-op.

Our Mystery Photo Contest winner from the November/December 2016 issue is Cathy Kinzey, a Great Lakes Energy member who correctly identified the photo as The Blue Buck on 72, a specialty market in Kalkaska.

Winners are announced in the following issues of *Country Lines*: January, March, May, July/August, September and November/December.





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