

WATTS *Current*

July 2019

For Our Members

A Message from the Manager

By *Jeremy Richert, CEO*



It's hard to believe six months have gone by since I transitioned into the CEO's role at Maquoketa Valley Electric Cooperative. Overall, I feel the transition has gone smoothly and we have been plenty busy at the Cooperative. We are fortunate to have a great group of employees at the Cooperative and they are constantly working to meet your needs as members and provide services that improve your quality of life and promote the success of the communities you live in.

As we move into the summer months, construction activity has ramped up and crews are busy constructing new services, upgrading existing services, and relocating line in preparation for upcoming road projects. Construction on the MVlink fiber network is also in full gear as we work to finish Phase 3 of the network and begin construction on Phase 4, which is the final phase of the initial build.

As we begin to prepare for our Annual Meeting in August, I have been reminded that it can be easy to forget just how different Maquoketa Valley Electric Cooperative really is from other energy companies. As an electric cooperative, we are led by members like you who understand and are in tune with the community you live in. *We don't* answer to outside investors who are interested in using us only as an investment; and this key difference has been part of the plan from the beginning. While talking to some of our members recently, I was reminded once again of how important our Cooperative is to the communities our members live in.

In the 1930's, electric cooperatives were founded to meet the electric needs of people in rural areas. Here we are decades later and we are still providing reliable and affordable energy to our members. With time, the needs of our members have changed and we have responded by stepping up in recent years to offer the fastest internet available in Eastern Iowa to our members with MVlink. MVlink has been a game changer for many members in our rural areas. It has allowed businesses to expand, members to work remotely from home, members to further their education online, and improved entertainment options as members can stream from multiple devices without buffering.

We have also provided economic development support to the communities our members live in. These efforts have brought communities together by helping to provide gathering space and services, adding jobs and helping businesses grow, and assisting with housing needs to ensure the communities our members live in can continue to grow.

Maquoketa Valley Electric Cooperative was built by the communities we serve from day one, which means we have been shaped to respond to the specific needs of you and your neighbors, the people who live here and have a long-term interest in seeing our communities thrive. Please plan to attend your Annual Meeting on August 22nd at the Berndes Center in Monticello.

Brown Eggs or White?

Baal Poultry Farm is known for their farm fresh eggs and generosity in the Dubuque community.

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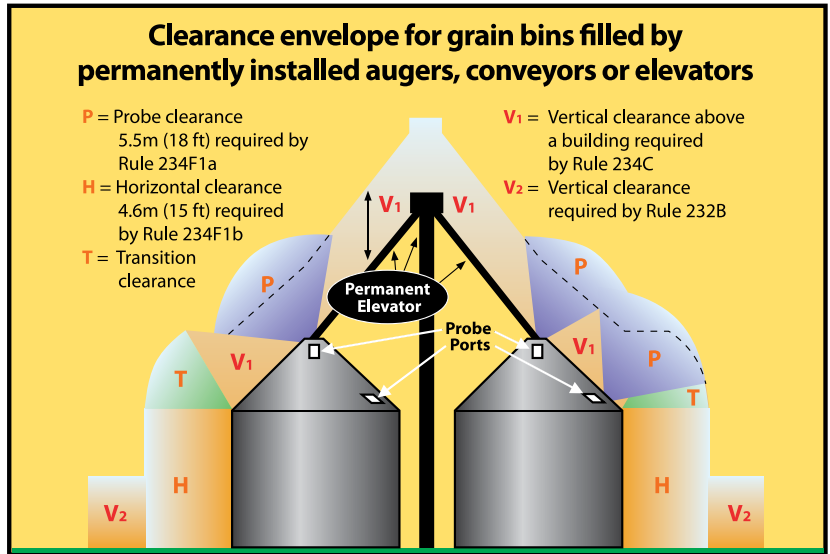
Maintain Proper Clearance Around Grain Bins

If you are planning to construct a new grain bin (or move an existing one) please contact Maquoketa Valley Electric Cooperative. We will provide assistance in planning a safe environment for everyone working at, and living around, your grain bins. The State of Iowa requires specific clearances for electric lines around grain bins, with different standards for those filled by portable augers, conveyors and elevators, as well as permanent equipment.

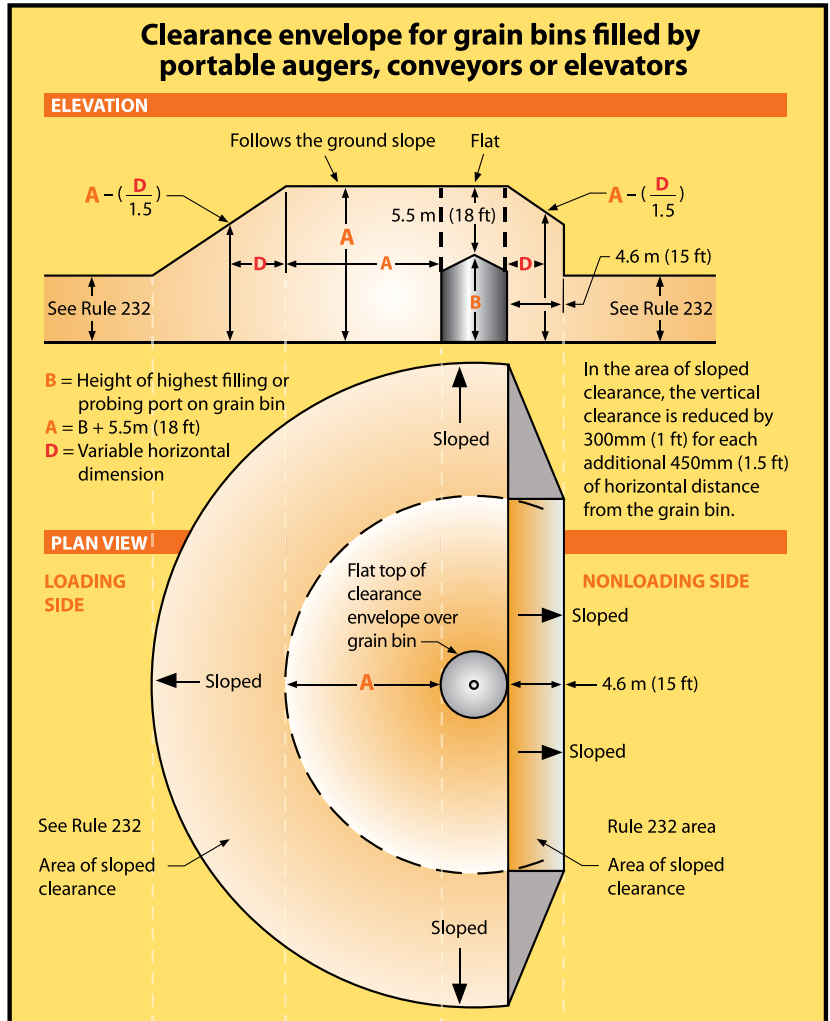
Electric wires should be at least 15 feet from the non-loading side of the grain bin; at least 18 feet from the highest filling or probing port on the bin; and a clearance of at least the bin height plus 18 feet from the loading side of the grain bin. Electric service cannot be provided to a grain bin installation that does not meet these clearances.

According to the Iowa Electric Safety Code found in Iowa Administrative Code Chapter 199-25.2(3)b. *An electric utility may refuse to provide electric service to any grain bin built near an existing electric line which does not provide the clearances required by the American National Standards Institute (ANSI) C2-2017 "National Electrical Safety Code," Rule 234F. This paragraph "b" shall apply only to grain bins loaded by portable augers, conveyors or elevators and built after September 9, 1992, or to grain bins loaded by permanently installed augers, conveyors or elevator systems installed after December 24, 1997. (As adopted by the Iowa Utilities Board.)*

If the electric wires around your existing or proposed grain bin do not meet the requirements shown in the diagrams or if you have any questions, please contact our office at 800-927-6068.



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Disclaimer: These drawings are provided as part of Iowa electric cooperatives' annual public information campaign and are based on the 2017 Edition of the National Electrical Safety Code. To view the actual drawings, refer to that publication. Every care has been taken for the correctness of the contents for these drawings. However, the Iowa Association of Electric Cooperatives and its member cooperatives accept no liability whatsoever for omissions or errors, technical inaccuracies, typographical mistakes or damages of any kind arising from the use of the contents of these drawings, whether textual or graphical.



The Fiber Download

Understanding Internet Connection Speeds

MVlink internet service offers three pricing packages. Speed is often the most important factor since a faster Internet connection will improve your overall online experience. Generally, faster speeds are more expensive. That's why it's important to understand how Internet connection speeds work to ensure you select the right package for the needs of your household. How is Internet speed measured? Let's start with the concept of speed, or bandwidth, as it's sometimes called. Measured in Megabits per second (Mbps) or Gigabits per second (Gbps), your Internet speed is the amount of data that can be transferred every second over your Internet connection. Your speed determines the type of activities that you can do online and how quickly you can do them. A connection speed of 1 Mbps, for example, allows you to browse web pages easily, but it's not fast enough for you to stream HD videos on Netflix. (According to Netflix, that requires a minimum connection speed of 5 Mbps.) If you tried to stream HD video at 1 Mbps, your video would be poor quality and would likely stutter or pause altogether. On the other hand, a speed of 1 Gbps—one thousand times faster than 1 Mbps—is blazing fast, allowing you to do almost anything, including letting multiple family members stream 4K video simultaneously.

Download Versus Upload Speeds

When you are choosing an Internet package, there are two speeds you need to consider: the download speed and the upload speed. The download speed is the speed at which data travels from a remote location on the Internet to your personal Internet-connected device. For example, if you are watching a video on YouTube, the download speed is the rate at which the information in the video stream travels from the YouTube server to your home computer or phone. The upload speed, on the other hand, is the speed at which data travels from your personal connected device to a remote location on the Internet. For example, if you post a video or a photo onto a social media site like Facebook, the upload speed is the rate at which the information travels from your device to the Facebook server. References to speed often refer to 'asymmetrical' where the download and upload speeds aren't equal. MVlink offers 'symmetrical' 50/50 Mbps and 100/100 Mbps packages and an asymmetrical 1 Gbps download and 250 Mbps upload package. When deciding what is best for your needs, think about your online activities. Web surfing, video streaming, and application downloads involve downloading a lot of data; and for certain activities, like online gaming and video streaming, the faster you can download data, the better. The upload speed may also be important for you if you enjoy uploading high-resolution photos or sharing photos. If you work from home, or operate a small business, you might also require a faster upload speed.

The Bottom Line

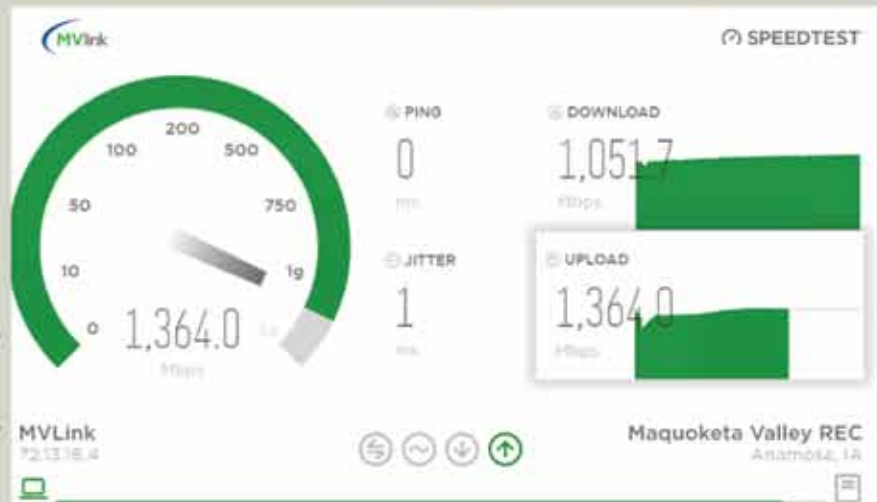
The speed of your Internet connection has a big impact on the quality of your online experience. So when you're choosing your MVlink package, make sure both the download and upload speeds are fast enough for the kind of activities you and your family plan to do online. With MVlink's lowest price package of 50/50 Mbps, you will experience speeds not currently available to most of our membership. MVlink allows members to easily increase to a higher speed at any time.

Glossary of Terms

Megabit: Describes the speed of an Internet connection. Megabit is measured on a per second basis and recognized as Mbps.

Megabyte (MB): Equal to eight megabits. Usually MB refers to the size of a file or storage space.

Gigabit: Describes the speed of an Internet connection equal to 1,000 Mbps. Gigabit speeds are an exponential increase compared to government requirements of 25 Mbps download.



Sites to See

Watch this section for new or popular internet sites you may want to explore.

- staggeringbeauty.com
Need to entertain a child for a few minutes? Or want to distract yourself from a rough message or site you just saw? Just move your mouse and the worm follows you. Move faster and see a bright, flashing image.
- littlealchemy.com
A time-wasting, but educational site allows you to mix and match materials to create more materials. What happens when you mix earth and fire?
- agoodmovietowatch.com
Looking for something to watch? This site has a highly curated list of movies based on genre, mood, or randomness.



Brown Eggs or White?

Patty Manuel, MVEC Director of Public Relations

Nestled in the beautiful hills north of Sherrill, I visited with Jim and Mary Lou Baal and learned about their poultry farm and their generosity.



Mary Lou & Jim Baal

The Baal's are proud to be the third generation to work the farm where they also raised their two children, a son (deceased) and a daughter who now lives in Madison, Wisconsin. Jim informed me the family has been members of Maquoketa

Valley Electric Cooperative since the early 1940's when his grandfather, Joseph Baal, helped mark electric poles when electric service was first established in the area.

Jim recalls as a young man his parents decided they wanted to raise chickens and sell eggs. Jim said, "Dad, I'll build the buildings for the chickens if you agree that I can keep the money I earn from selling eggs, and you can keep the money you earn from selling eggs." His dad agreed and as they say, the rest is history. Jim recalls his dad selling more eggs because he belonged to several senior citizen clubs who would purchase from him and the income became a good supplement to social security. His mom's specialty was taking care of the baby chicks.

Jim served in the U.S. Air Force from 1967 to 1971 during the Vietnam War and earned the rank of Staff Sergeant. He was a mechanic, often working on the F105 fighter jets and I picked up a hint that he still dabbles in mechanic work as needed for himself and friends. Returning to the farm, Jim enjoyed raising beef cattle in a pasture just across the road and began a long career with Klauer Manufacturing in Dubuque, retiring six years ago.

In 1990 when he was no longer able to rent the pasture, and with no place for his cattle, he was able to devote more time to the family egg business. The Baal Poultry Farm has been selling

eggs from this same 3½ acre location since 1976 and enjoy customers who have purchased from them for 35 years.

The farm has raised as many as 800 chickens at once, but today ranges anywhere between 600 and 750 chickens. They purchase chickens from a Wisconsin hatchery and prefer the brown Gold Star chickens and white Leghorn. Jim has found that most of his customers request brown eggs over white and walking through his barns with 750 chickens, it's evident there are far more brown chickens. New chickens are purchased every six months and as egg production drops they will run ads to sell the older chickens.

Jim says he generally keeps chickens about 1½ years because the eggs received from older chickens get larger and the shells become more fragile. Surprisingly, many customers don't want the larger eggs and bakers are very particular about the size of the eggs they use in their tasty creations. Customers love to find a double or even triple yolk egg in their frying pan. It isn't unusual for a customer to call Jim if they find a triple yolk egg.



Gold Star chickens at Baal Poultry Farm.

The Baal Poultry Farm chickens currently produce 45-50 dozen eggs each day. In recent years the farm has produced as many as 12,500 dozen eggs in just a year compared to 1,700 dozen in the late 1980's. Jim informed me a new flock of chickens might produce just three eggs in a day, but will quickly work up to over 200 eggs each day.

The chickens consume two tons of feed every two weeks. The Baal's purchase a laying concentrate from Skip Breitbach's Feed Store in Balltown. Breitbach then works with Farmers Shippers in Dyersville to blend the concentrate with corn and oats that the Baal's have in storage, and adding



calcium to keep shells hard. Oyster shell and grit are also fed to the chickens. Consumers appreciate the chemical-free feed and knowing Baal's do not use antibiotics. The chickens will quickly eat a broken egg, but Jim is quick to find them before the chickens do so he can discourage that practice. Damaged eggs can be mixed with cat food for the farm's cats.

Today's customers will sometimes request free-range eggs. While the Baal's can't market themselves as free-range, the chickens are free to roam within their respective houses. When I stepped in to the barn, the chickens flocked around me in a tight circle, leaving



Leghorn chickens at Baal Poultry Farm.

a good third of the barn empty, and I think they were perfectly happy standing next to each other. Jim reminded me free-range doesn't work well with area predators like coyotes or fox. It's also difficult to manage a free-range farm because a chicken can lay eggs anywhere and finding them hiding under brush, or knowing how long the egg has been there, is quite difficult.

The Baal's have two employees; one will help with chores each morning and another each evening. Their eggs are stored in three refrigerators and each evening Mary Lou helps Jim wash and package the eggs. At 50 dozen eggs per day I can imagine that is quite a task! Thankfully, they do use an egg washing machine.

Jim has established a delivery route that takes him on the road 3-4 days each week to private homes all around the Dubuque area. He and Mary Lou, and sometimes their employees, will also sell eggs at the downtown Dubuque Farmers Market, which operates year-round on Saturday mornings. He has had buyers from Allamakee County and Maquoketa, speaking to the popularity of their eggs. The week before this interview, Jim indicated they sold 126 dozen eggs at the farmers market and have sold as many as 147 dozen in one morning! They have been known to sell out before 10:00 a.m. so the best advice is to arrive early and look for the Baal Poultry Farm banner. The Baal's also sell eggs at Breitbach's Feed Store in Balltown.

A unique and welcome aspect of Baal Poultry Farm is their generous hearts. Many years ago, a parish priest, best known today as Bishop Zinkula from the Davenport Diocese, encouraged Jim to donate eggs when the Dubuque Archdiocese had priests in training. This practice continues today, but has evolved to more than



Jim Baal holding one of his chickens.

just feeding the priests. The Baal's regularly donate eggs to Holy Spirit Parish, Dubuque, for events including their omelet breakfasts. The Baal's are also supporting Opening Doors in Dubuque where their eggs are utilized at both the Teresa Shelter and Maria House. *[Editor's Note: Opening Doors is a non-profit collaborative effort between Catholic religious organizations, the City of Dubuque, and the private sector that operates to provide emergency and transitional housing for women and children.]* The Baal's also donate eggs to the Dubuque Labor Harvest for their food giveaways and free breakfasts. The number of eggs donated varies from week to week but as many as 1,100 dozen were donated just last year!

An interesting note is the value of the poultry industry to Iowa. Many Iowans don't realize that one of every five eggs consumed in the United States comes from Iowa.

If you live near Dubuque and would like to inquire about Jim's delivery route, or need information on how to purchase Baal Poultry Farm eggs, give Jim or Mary Lou a call at 563-552-2346.

Reminder to MVEC Members!

What: Annual Meeting

When: August 22, 2019

Where: Berndes Center in Monticello

Registration: 10 a.m. - 12:30 p.m.

Lunch: 11:30 a.m. - 12:45 p.m.

Business Meeting: 1 p.m.



Save Money with Restored State Geothermal Tax Credit

If you're looking for an energy efficient upgrade that will save you money on your electric bills, consider a geothermal heating and cooling system. With a state tax credit back in place, this HVAC option is more affordable than ever!

Governor Reynolds recently signed HF 779 into law, which reinstated a geothermal tax credit that was eliminated in 2018. Geothermal heat pumps installed on residential property in Iowa are again eligible for a tax credit equal to 20% of the Federal tax credit. With the Federal tax credit set at 30% of the installation cost until the end of the year, the state tax credit is currently equal to 6% of the installation cost; this state tax credit can be applied retroactively to January 1 of 2019.

We're thankful to the Iowa Geothermal Association for leading this effort along with State Senator Waylon Brown (District 26) and State Representative Jane Bloomingdale (District 51) for championing this cause. The Iowa Association of Electric Cooperatives also supported this initiative and organized electric cooperative advocates across the state to contact their local legislators.

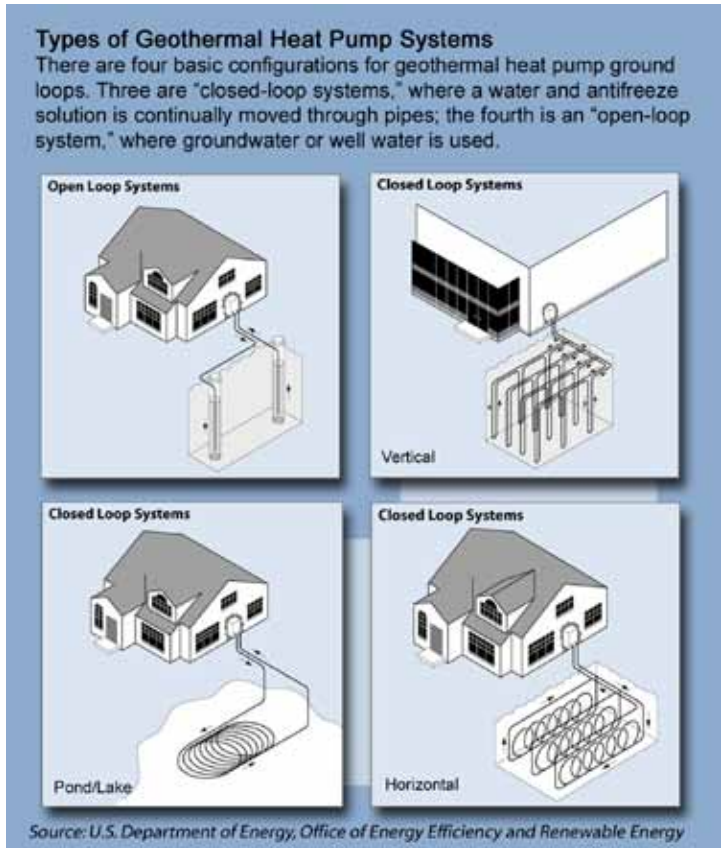
Why is a geothermal heat pump so energy efficient?

A geothermal heat pump (sometimes also referred to as a ground source heat pump) is a highly efficient renewable energy technology that is used for both residential and commercial buildings. Geothermal heat pumps are used for space heating and cooling, as well as water heating.

The technology relies on the fact that the earth (beneath the surface) remains at a relatively constant temperature throughout the year, warmer than the air above it during the winter and cooler in the summer, very much like a cave. The geothermal heat pump takes advantage of this by efficiently transferring heat stored in the earth or in ground water into a building during the winter, and transferring it out of the building and back into the ground during the summer. The ground acts as a heat source in winter and a heat sink in summer.

Using a geothermal system is also great for your wallet!

Data from the Environmental Protection Agency shows that homeowners save 30-70% on heating costs and



20-50% on cooling costs by using geothermal heat pumps compared to other conventional systems. This translates to roughly \$400 to \$1,500 in annual savings.

Installing a geothermal system involves adding an underground loop system, which makes the installation cost more expensive upfront compared to conventional HVAC systems. Homeowners can utilize federal and state geothermal tax credits to help offset these installation costs. Additionally, MVEC offers residential and commercial incentives, along with an electric heat rate under our Heat Plus program. Residential projects may be eligible for a \$300 per ton incentive for an open loop geothermal system or \$400 per ton for a closed loop system.

To learn more about geothermal heat pumps and the Cooperative's incentives, please contact Al Schilling, Energy Advisor, at 800-927-6068 or aschilling@mvec.coop. Al will explain the installation process and answer your questions. MVEC is here to help you use energy wisely!



Learn About Cooperative Careers at the Iowa State Fair!

MVEC is proud to be a Touchstone Energy Cooperative, which means we're part of a nationwide network of locally owned cooperatives to help our members use energy wisely.

During the Iowa State Fair (August 8-18), the Touchstone Energy Cooperatives of Iowa are again sponsoring the Rastetter 4-H Building on the south side of the fairgrounds. We're looking forward to connecting with fairgoers and rural 4-H families at our booth in the air-conditioned building. With a new, interactive display, electric cooperative employees will be talking about cooperative careers.

Cooperative Careers

Throughout rural Iowa, more than 1,200 people are employed full-time at locally owned electric cooperatives.

We hire skilled workers like linemen and mechanics in addition to professionals like accountants, engineers, IT managers, communicators, human resources managers, economic development officers, administrators, and customer care representatives. Electric cooperatives offer competitive pay and generous benefits in an exciting and challenging industry. Stop by our booth during the Iowa State Fair to learn more about job openings and internship opportunities.

We're excited to share our cooperative story at the Iowa State Fair; stop by our booth and say hello!



WE PAY YOU TO PULL THE PLUG

Recycle your old appliances through the Pull the Plug program. Call CLEARresult at 855-838-7817 to schedule your pickup.

Appliances in working condition (runs and cools) will qualify for the following rewards:

Refrigerators: \$35
Freezers: \$25
Window Air Conditioners: \$25

Limited to three appliances per year.

Watts The Answer?

1. The _____ of your Internet connection has a big impact on the quality of your online experience.
2. What city will the Coop's Annual Meeting be held in this year? _____
3. Data from the Environmental Protection Agency shows that homeowners save 30-70% on _____ costs and 20-50% on _____ costs by using geothermal heat pumps compared to other conventional systems.

Mail your answers in with your energy bill, or email them to erobertson@mvec.coop.

Two winners will each receive a \$10.00 credit on their energy bills.

Please complete the following:

Name

Address

May winners:

JoAnn Heber, Dubuque

Joe Pins, Earlville



Maquoketa Valley
Electric Cooperative
109 North Huber Street
Anamosa, Iowa 52205

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Understanding Your Electric Bill

On-Peak hours are 4 p.m. - 9 p.m.

Off-Peak hours are Midnight - 4 p.m. and 9 p.m. - Midnight

These times are in effect every day.

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Friday • 7:00 a.m. to 11:00 a.m.

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