

WATTS *Current*

September 2017

For Our Members

Executive Message from the 2016 Annual Report

Cooperative's Build a Better Community

Since our creation in 1935, Maquoketa Valley Rural Electric Cooperative has been an important part of the communities we serve. We have represented our member's interests not only locally, but nationally as well. We are recognized nationally by our industry as a leader in adopting technology to improve member service. Our staff routinely is asked to present at national conferences and we have been written about on numerous occasions in industry magazines. Spotlighting rural Iowa as a technology leader helps our local communities to attract young talent and new business.

The rural electric program has been a tremendous success in bringing electrical energy to rural America. Today 838 cooperatives serve 42 million people in 47 states collectively covering 56% of the nation's territory. Cooperatives employ over 72,000 people and deliver 11% of the nation's kilowatt hours.

We cannot rest on past success. We recognize our member's needs have changed and just as no one was willing to bring electrical service to rural America 80 years ago, no one is bringing internet service to rural America today. Cooperative's need to step up to meet this need. Some will argue that internet service is not a necessity, but 80 years ago electricity was not seen as a necessity by everyone. We can tell you by the calls we receive during an outage, that nobody today would say electricity isn't a necessity!

Just as we were successful in the electrification of rural America, we believe Cooperative's can be successful in providing new services such as internet. Internet service plays a vital role in the lives of many Americans and that role is continually expanding. If rural America does not have quality internet, it will be left behind just as it was in the 1930's.

The internet is more than just sending emails to friends. It provides a unique way to communicate with people around the world and to exchange significant amounts of data. The internet is used in our schools to enhance educational experiences. Imagine being in your classroom and interacting with astronauts on the space station. Homework assignments are submitted via the internet, research is done via the internet. It has become an integral part of our education system.

The internet is also growing in the medical field. You can now see your doctor without leaving your home...a virtual house call. Your health can be monitored by your doctor while you remain in your home. Medical experts can be consulted without having to travel to the larger hospitals they work within. This field is in its infancy, and will continue to grow allowing our older patrons to live in their homes longer without the fear that no one will be around to help them if needed or to look in on them periodically.

Home shopping...a two edge sword that is putting many stores out of business as people buy what they want online and have it delivered to their doorstep. Yet, many people want the convenience of shopping online, shopping on

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Dedication to
History of Miniatures

"It takes dexterity."

Mary Ann Carradus,
Dundee

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their schedules and not just when the store is open. On the other side, the internet opens the market of existing businesses to the world. A small shop in eastern Iowa can sell to anyone in the world and like J&P Cycles, become one of the largest suppliers in the country.

The internet will open up new opportunities for people to work from home, will provide opportunities for grandparents to videoconference with their grandchildren and will significantly enhance our way of life just as electricity has.

Lastly, high speed internet service in rural America will create significant economic development opportunities as businesses look to go into rural areas. The internet today is a necessity for any business, and rural areas have been left behind in growth opportunities from new business because they cannot provide this infrastructure.

After considerable debate and frankly waiting for others to do it, your cooperative made the decision to once again invest in our local communities to install a high-speed communication system. While installed primarily to give us a high speed communication path to our members, it has the side benefit of allowing us to provide internet and phone services to our members. The same strand of fiber that we will use to communicate with future devices inside our member's homes, will also allow for us to bring high speed internet service into the home for our member's to use. No additional fiber or equipment is needed to handle both tasks.

This was not an easy decision, and is not without its risks. We have never operated within a competitive business, and the internet and telephone businesses are very competitive. Our competition sees us as cutting into their revenue stream, and while they do not plan on serving all of the rural areas we serve, they do want to serve the more densely populated areas we serve. We developed a business plan and by offering service to our complete service area, we are able to make this project cash flow. Our competition is already lowering their prices and increasing their speeds to keep our members from converting to our new system. Our membership, and their communities are benefiting just by the threat that we will offer this service.

The project itself is a significant undertaking. With a

planned budget of nearly \$65 million, it will almost double our investment in the communities we serve. The contractors working to install the system are staying locally, and eating locally as they work in your neighborhoods. Our business model shows a need for us to add an additional 21 employees before the project ends. These employees will live in our communities.

The project is scheduled to be completed by the end of 2019. This is an aggressive schedule, but one we believe we can achieve. Our commitment to reliability and customer service will continue with this new service. We are not contracting out the final installation into the home because we want to control the interaction with the member to ensure they receive the same quality service they have always received from their cooperative.

Once complete, the project will provide the cooperative with a reliable communication path not only to our substations, but to all the various line devices and meters needed to operate the electric grid. It will provide us with a communication pathway into yet to be developed smart appliances, thermostats and similar devices located within our members' homes. It will provide new load control opportunities such as coordinating appliance usage all aimed at lowering our members' cost of power.

This new system will also allow every member connected to the system to send and receive electronic data over the internet at speeds not yet available in our area. New technologies will become available to our membership once high speed internet is available. "Build it and they will come."

Just as we have seen tremendous success with our efforts to electrify rural Iowa, we believe this new project will once again demonstrate how **Cooperative's Build a Better Community.**



Larry Swanson,
President



James Lauzon, CEO/
Executive Vice President



Farmers Urged to Be Aware of Electric Hazards

It can be an exciting and exhausting time, the culmination of a season of hard work. However, the rush to harvest can also yield tragic outcomes. Each year, dozens of farm workers are killed and hundreds are injured in accidents involving power lines and electrical equipment.

“Things people see every day can fade from view and in the busy-ness of harvest time, it’s easy for farm workers to forget about the power lines overhead,” says Richard McCracken of the Safe Electricity Advisory Board. “But failure to notice them can be a deadly oversight.”

Review with all workers the farm activities that take place around power lines. Inspect the height of farm equipment to determine clearance. Keep equipment at least 10 feet away from power lines – above, below, and to the side – a 360-degree rule.

Farm workers should take these steps to ensure a safer harvest season:

- Use care when raising augers or the bed of grain trucks around power lines.
- Use a spotter when operating large machinery near power lines. Do not let the spotter touch the machinery while it is being moved anywhere near power lines.
- As with any outdoor work, be careful not to raise any equipment such as ladders, poles, or rods into power lines. Remember, non-metallic materials such as lumber, tree limbs, ropes, and hay will conduct electricity depending on dampness, dust, and dirt contamination.
- Never attempt to raise or move a power line to clear a path!
- Don’t use metal poles to break up bridged grain inside bins. Know where and how to shut off the power in an emergency.
- Use qualified electricians for work on drying equipment and other farm electrical systems.

Operators of farm equipment or vehicles must also know what to do if the vehicle comes in contact with a power line: Stay on the equipment, warn others to stay away and call 911. Do not get off the equipment until the utility crew says it is safe to do so.



If the power line is energized and you step outside, touching the vehicle and ground, your body becomes the path and electrocution is the result. Even if a power line has landed on the ground, the potential for the area nearby to be energized still exists. Stay inside the vehicle unless there’s fire or imminent risk of fire.

If this is the case, jump off the equipment with your feet together, without touching the ground and vehicle at the same time. Then, still keeping your feet together, hop to safety as you leave the area.

Once you get away from the equipment, never attempt to get back on or even touch the equipment. Some electrocutions have occurred after the operator dismounts and, realizing nothing has happened, tries to get back on the equipment.

It is very important that all farm workers and seasonal employees are informed of electrical hazards and trained in proper procedures to avoid injury.

For more information on farm electrical safety, visit www.SafeElectricity.org.

Safe Electricity is the safety outreach program of the Energy Education Council, a non-profit organization with more than 400 electric cooperative members and many others who share the mission of creating a safer, smarter world.



Dedication to History of Miniatures

Grace Zimmerman, Anamosa, Iowa

On a lovely sunny day, my little red Chevy headed north on Highway 13. After making a left turn to go west on Highway 20, I took exit 266 to travel to my goal of Highway 187. I met sisters, Mary Ann and Donna Carradus of Dundee, at the Lamont Feedmill Antiques, Flowers & Gifts at 640 Washburn Avenue at the entrance of Lamont. The reason they provided me for not going on to Dundee was,



Mary Ann & Donna Carradus

“Our house is covered with miniatures as it is where we manufacture and store them. We even use the kitchen table as a work area.”

Here, I was greeted with faces wreathed in smiles of happiness by Mary Ann and Donna in the office of one of the best arranged and loaded antique stores which I’ve visited. Each gal carried two small plastic bags and immediately placed plastic containers on the desk which were about an inch high. If you look at the above photo of the item on the calendar with a pen off to the side, you can get an idea as to how small these miniatures are!



Patriotic decor, cupcakes, and the Statue of Liberty.

To say I was surprised is a misconception. At the MVEC office, it was presumed that the miniatures were small furniture for doll houses. “Surprise, surprise,

Gracie,” was my quick interpretation. To top it off, they kept exhibiting more plastic encased miniatures about half the length of my thumb. I had to wonder as to how I could take photos of these extraordinary handmade beauties. So, I have to admit how proud I was when I obtained one by placing my camera practically right on the miniature, whereby what developed makes it easy to see the Statue of Liberty encased in the plastic pictured here.



Of course, this farm gal never realized or imagined anything like this even ever existed! Mary Ann informs me, “Years ago, we started attending craft shows making the figures. In the 1970’s, people would ask, ‘Do you have anything more to sell?’ ” Donna injected, “Now it’s our 40th year in business.” She then went on to say, “We used to travel south to Kansas, Oklahoma, Texas, New Mexico, Arizona, California, and Colorado. We would close up our house and used our savings to travel. We’d stay at mom and pop motels and use discount coupons to purchase food. Our mother and father, as well as the dog, traveled with us. We discovered large cities were our biggest draw. One contact led to another. By the time we would travel back to Iowa, we’d



A cat, Santa Claus, and a sock monkey.

be out of things, so we restocked. We would have enough orders by then to fill and make samples for

the following winter. Out on the road, we would have trunk shows right from our car. The trunk held lots of miniatures! Never thought we’d be doing it, but you do what you have to so you can survive. Mother had health problems due to childhood trauma. She traveled with us for five years after Dad died. It was important for us girls to be there. We had a lot of responsibility so we worked at making miniatures at home. It wasn’t that profitable, but



we made a living. When Mom couldn't travel, we began selling our products through a distributor in Ohio and they would then sell to shops all around the world. Distribution is now being done by an east coast wholesale company.

Now it was time for me to ask as to how they made the miniatures.

"The clay is available almost anywhere,"

said Mary Ann. "It takes dexterity. First, we make the article we want in miniature. I use clay to shape the item that goes into the plastic case. This would be something such as small plants, flowers, or any small article." Donna added, "Mary Ann makes the sock monkey which is a favorite of mine. I also paint designs on thimbles."



As you can see on these thimbles, the paint detail is the result of tedious work.



A few of the miniatures beside a dime to show the size comparison.

do things that are really different, such as making a teeny tiny humming bird. We also paint small metal miniature objects. We purchase 5,000 plastic display cases at a time. At the present time, we are setting up a large circular moving display here at Lamont Feedmill Antiques, Flowers & Gifts."

If you wish to contact Mary Ann or Donna Carradus, you may call 563-608-5600 and leave a message or text. If you wish to visit the Lamont Feedmill Antiques, Flowers & Gifts, they are open Wednesday-Saturday 10 a.m. to 5 p.m. and Sunday by chance or appointment. You may also contact the owner, Joyce Geistkemper, at 563-920-4791. If traveling from a distance, please call to be sure there has not been an emergency closing for some reason.

P.S. As I end my article about "Miniatures," I have to wonder if this is a new topic for you readers.

Energy Use Survey

A portion of our membership has been randomly selected to participate in a survey about their home and energy use. The information collected provides insights into energy use and changes over time, and is valuable for us and our power supplier to plan for the future. If you receive a survey in September, we ask that you complete the questionnaire and promptly return it in the envelope provided. Thank you in advance for your assistance!

Reduce Energy Use During Peak Hours

MVEC purchases the power that is distributed to our member's homes, farms and businesses and the cost of that power is higher during times of peak demand in our region. The Cooperative saves money on purchased power costs when members use less electricity during our peak hours of 4 p.m. to 9 p.m.; and you save money on your electric bill by using power outside of these peak hours. Here's how you can help during peak hours:

- Shift household chores and activities away from peak periods. Wait to run your dishwasher until you go to bed, for instance.
- Use the most energy efficient appliances you have. Your microwave oven, for example, uses considerably less energy than your stove or cooktop.
- If you're buying a new appliance, make sure you get a highly efficient one. Look for ENERGY STAR labels when you're evaluating different models.
- Be aware of your energy consumption, and try to get in the habit of using energy efficiently year-round.

Use the energy you need, but use it wisely! You'll help your cooperative avoid building expensive new power plants—and that, in turn, will help keep your electric rates stable.



Not All Air Filters are Created Equal

Forced air heating, ventilating, and air conditioning (HVAC) systems require effective air filtration for optimum energy efficiency, maintaining clean(ish) ductwork and good indoor air quality. Air filters should be changed regularly. How often they need changing depends upon a number of factors including, but not limited to:

- Presence of pets that shed
- Amount of carpeted versus hardwood floors
- Where you live – amounts of dust, pollen, etc.
- Use of wood-burning supplemental heat sources
- Presence of cigarette smoke

The air inside our homes is full of particles originating from inside and outside sources. As the name “forced air” implies, conditioned air is blown into the house through ductwork. In order to operate efficiently, the air supplied is returned to the system for reconditioning, taking with it all the particles in the air and the occasional “tumbleweed” of pet hair that many of us are familiar with.

This junk-laden air flows through a filter before encountering the HVAC equipment. For cooling, there is usually an A-frame arrangement of what

look like car radiators. For heating, it is generally a combustion chamber. Without a filter, the cooling coils would get clogged and the heating side would burn off whatever was in the air. Ah, the smell of burnt hair in the morning.

Air filters trap a lot of debris that otherwise would end up back in the house, stuck in ductwork, clogging HVAC equipment, or in our lungs. But enough with the HVAC and air quality primer. Let’s tackle types of air filters.

Filters have more choices than you can shake a stick at. Fortunately, they can be broken down into two nicely defined categories, making the selection process manageable. The two are:

- Permanent or disposable
- Flat or pleated media (with a handy MERV rating)

Disposable are the most prevalent. Some in the flat media group look like they will stop only particles larger than a golf ball. They have flimsy cardboard frames and a thin, flat mesh you can easily see through. While they are cheap, don’t waste your money. Your HVAC system and lungs deserve better.

Pleated filters perform better using media you cannot see through. While they look impervious, air can move through under pressure leaving its airborne cargo trapped.

Remember MERV? That is a rating system that tells you how effective a filter is at trapping particles. Standing for Minimum Efficiency Reporting Value, it’s a measure of efficiency. The scale runs from one to 16 (higher is better) and is based on trapping particles 3-10 microns in diameter. Research shows that residential filters with a MERV rating between seven and 13 are likely to be as effective as true HEPA (high-efficiency particulate arrestance) filters. This class of filter is used in clean room manufacturing and at the extreme end can trap particles

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much smaller than the diameter of a human hair, as small as 1 micron.

So, should you jump in and grab a supply of high MERV filters? Not without some research. All filters increase resistance to air flow. HVAC systems are designed to operate at a particular pressure and should support MERV ratings of one to four. A higher MERV value increases resistance, making the system work harder. It loses efficiency and increases wear on operating components.



Air filters trap a lot of debris that otherwise would end up back in the house, stuck in ductwork, clogging HVAC equipment, or in our lungs.

So, how do you decide which level of filter to use? If you have your system's operating manual or can grab it online, check for recommendations. Otherwise, our advice is to go with a decent (MERV three to five) pleated filter and check it once a month to see how it is performing. Also check to see if the dust inside abates.

Spend a little more and breathe a lot easier with a regular schedule of air filter replacement. A simple change that pays big dividends.

Smart Grid MVlink Update

While some of these articles tend to repeat processes, our progress continues. We now have five substations bringing smart grid data back to our office over the new fiber network. Over 320 miles of fiber has been constructed and 360 homes/businesses have fiber drops installed. Our technicians have connected over 260 accounts and we are receiving positive feedback regarding the internet speed and quality of service. New employees and new contractors are being added regularly as we strive to connect members as quickly as possible.

Progress in Phase II, originating near Stone City, is moving along well as we work to create a fiber loop connecting the first two Phases that will provide a redundant network and ensure reliability of service is high. Test accounts in Phase II should be live by mid-September and we expect home installations in this area will be in full force this fall.



From the office perspective, we want our new MVlink members to realize that one of the values of the internet is the ability to go paperless. No paper bills are being mailed to indicate how much is due and when for your MVlink services; we do, however, send this information via email. During the installation process, our staff will walk you through how to use the member portal and how to pay your bill.

All in all, we are making progress every day as we work to bring high speed internet services to our membership.

Watts The Answer?

1. Use care when raising _____ or the bed of grain _____ around power lines.
2. Use the most energy efficient appliances you have. Your _____ oven, for example, uses considerably less energy than your stove or cooktop.
3. _____ filters trap a lot of debris that otherwise would end up back in the house, stuck in ductwork, clogging HVAC equipment, or in our lungs.

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

July winners:

Keith Parker, Manchester
Greg Swift, Bellevue



Maquoketa Valley
Electric Cooperative
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Anamosa, Iowa 52205

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