

WATTS *Current*

February 2020

For Our Members

Survey Results

Periodically, Maquoketa Valley Electric Cooperative conducts surveys to help us learn what we are doing well and what we need to improve on. These surveys can be all-encompassing about our services and performance, or may be more strategic around electricity usage and energy efficiency.

Our member satisfaction surveys include an American Customer Satisfaction Index (ACSI). This index is our nation's only multi-industry measure of customer satisfaction, rating industries from airlines to banking, healthcare, utilities and more. MVEC scored an 83 on the survey completed in 2019. In comparison to significantly larger electric utilities, and competing broadband companies serving urban areas, we believe this rating demonstrates our ability to respond to, and meet, our member's needs.

This survey also captured member engagement, telling us if our members are true advocates of MVEC and supportive of the cooperative business model. MVEC was pleased to surpass the National benchmark with a score of 76.3, however we know we have work to do to educate our younger members on the value of cooperative membership, letting them know that we are working on their behalf.

We learned a great deal from this survey and we are already focusing on ways to improve the level of service we provide.

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Energy Efficiency Tip of the Month

Laundry Tip: Dry towels and heavier cottons separately from lighter clothing. You'll spend less time drying the lighter-weight items.

Source: energy.gov



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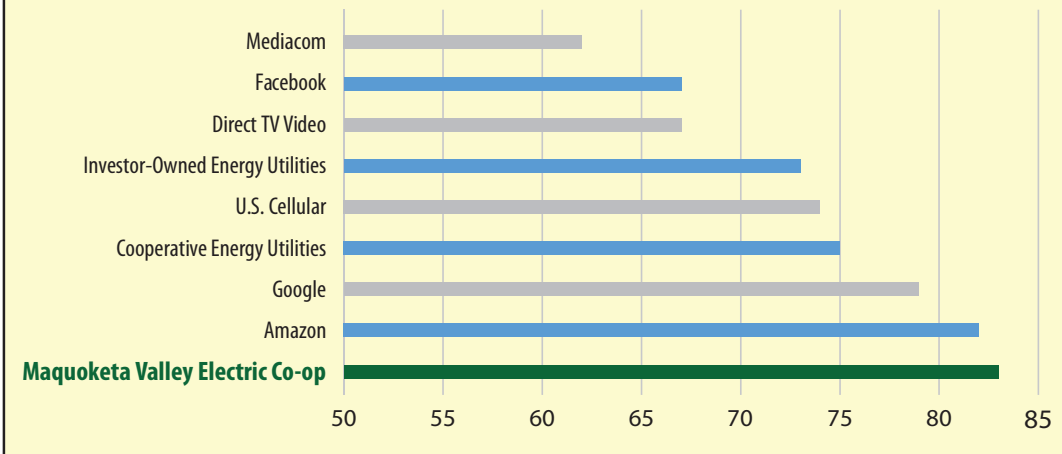
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2019 Customer Satisfaction by Company





Survey Results

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A few of the key take-aways include:

- Our members trust us and appreciate our entry into broadband services
- We must remain focused on controlling member's costs and helping them become as energy efficient as possible
 - Continually educate about the impact of peak hour energy use (4 pm-9 pm)
- Increase awareness of the ways we support our local communities
- Educate members about renewable energy; citing the impact to individual users as well as the cooperative as a whole
- Continue respect for member privacy; while we have multiple policies in place for member privacy, we heard how important this issue is and will continue to ensure we meet that need

Thank you to all of the members who responded to this telephone or email survey. While we want to hear from our members regularly, these surveys help ensure your voices are heard.

2020 Tri-State Home & Builders Show
Grand River Center
Dubuque, IA **February 28: 4 - 8 p.m.**
 February 29: 10 a.m. - 6 p.m.
 March 1: Noon - 5 p.m.



MVEC members thinking about building, remodeling, or looking for ways to save money on their electric bills, should plan to stop by our booth (#176).

Nondiscrimination Statement

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by:

- (1) mail: U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410;
- (2) fax: (202) 690-7442; or
- (3) email: program.intake@usda.gov.



Indoor Air Quality

We spend a lot of time indoors, approximately 90% of our lives according to the U.S Environmental Protection Agency. Research has linked health impacts to many characteristics of indoor environments, such as moisture, allergens, particulates, radon and combustion byproducts, including carbon monoxide and nitrogen oxide. These impacts can be both immediate and long-lasting, so understanding indoor air quality and the common pollutants can greatly reduce your risk.

Mold is a common air quality culprit. Though there is not one single way it affects our health, some molds can be highly toxic, whereas others cause reactions only in people with conditions like asthma or specific allergies. The health symptoms of mold growth include eye, nose and skin irritation, dizziness, fatigue, respiratory diseases and possibly even cancer. In addition to these health effects, mold can also weaken your home's walls, ceilings and floors. It can survive practically anywhere, and if left untreated, mold spores can reproduce and cause more extensive damage.

The presence of mold indicates the presence of excess moisture. Locating the source of that moisture may be straightforward, such as identifying a leaking pipe, an unvented heater or an exhaust fan that doesn't work well. Other times, a combination of factors may be at play and make finding the source more complicated.

Quickly clean the moldy area. The more recent the growth is, the easier it will be to clean up. The process usually just entails scrubbing with water and detergent. However, if the mold has rooted into the drywall causing extensive damage, walls may need to be replaced. Consider installing fiberglass-covered drywall rather than the traditional paper-covered drywall.

There are several ways to control the moisture in your home to avoid mold growth. Make sure bathroom and kitchen exhaust fans work correctly and are used when needed. An oversized air conditioner can also be to blame for moisture. Make sure to have a proper load calculation done to determine the right size unit for your house.

Carbon Monoxide is an odorless, colorless, tasteless gas that is formed when fuels burn, such as gasoline, kerosene, oil, propane, wood, coal and natural gas. Whenever these fuels are burned to create power or heat, carbon monoxide is produced from the reaction. Examples of sources include space heaters,

grills, clothes dryers, furnaces, water heaters and car exhausts. Carbon monoxide is responsible for numerous health problems, most often causing flu-like symptoms that clear up after leaving the space. However, if exposed to a high concentration for too long, it can result in loss of consciousness or even death.

Here are some helpful tips from the Centers for Disease Control and Prevention to stay safe:

- Have your heating system, water heater and any other gas, oil or coal-burning appliances serviced by a qualified technician every year.
- Install a battery-operated carbon monoxide detector in your home, and check or replace the battery when you change the time on your clocks, spring and fall. If the detector sounds, leave your home immediately, call 911.
- Go to an outdoor fresh air space and seek prompt medical attention if you suspect carbon monoxide poisoning and are feeling dizzy, light-headed or nauseated.
- Do not use a generator, charcoal grill, camp stove, or other gasoline or charcoal-burning device inside your home, basement or garage.
- Do not use a generator, pressure washer or any gasoline-powered engine less than 20 feet from a window, door or vent.

Radon is odorless and colorless, making it very dangerous. It is a naturally occurring radioactive gas that is emitted when uranium decays, and it finds itself trapped in buildings after seeping through soil and groundwater below. The concern for presence of radon in homes and buildings stems from research showing an association between radon and lung cancer. Though a far smaller risk than smoking, radon is the second leading cause of lung cancer. A short-term radon test typically requires assembling the test in the appropriate location and mailing it in for analysis within a certain number of days. If your test detects a problem, it can be a relatively affordable home repair comparable to installing an exhaust fan. You will want to find a certified radon mitigator to perform the work. Most importantly, don't assume your home is in the clear. Testing for radon is essential, and if a problem exists, understanding and addressing it will reduce future health risks.

The buildings we live in can affect our health in many ways so indoor air quality continues to be critical concern.

For more information, visit www.advancedenergy.org.



Energy Demand and Your Bill

Our members understand they are billed for the energy they use, but explaining how demand enters into that bill is a bit more difficult. It may help to understand how electricity is produced and then delivered to your home and how having that electricity ready when you need it enters into the calculations.

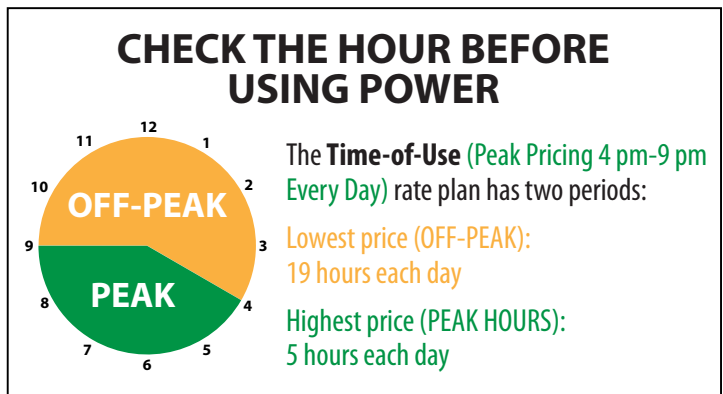
Electricity for our membership is generated by a generation and transmission cooperative. MVEC is a member of Central Iowa Power Cooperative (CIPCO) and we purchase the power they generate. Once generated, electricity then travels over high voltage transmission lines to each of MVEC’s substations where it is reduced to a lower voltage for distribution. From the substation, MVEC’s distribution electric lines travel down your road to your home, farm or business. Your electric bill is made up of the cost to generate the electricity, as well as the cost to distribute it, and can be thought of in terms like ‘energy consumption’ and ‘energy demand’.

Energy consumption occurring over a longer period of time is measured in kilowatt-hours (kWh), and is the measurement unit you are billed on. Demand, measured in kilowatts (kW), is the instantaneous need for energy and makes up a significant portion of MVEC’s power bill from CIPCO and is incorporated into MVEC’s electric rates.

For explanation, we will use 100 watt lightbulbs. Regardless of whether a lightbulb is on for one hour or ten hours, each bulb “demands” the same amount of energy from the generating station producing electricity the entire time it is lit (in this example each bulb demands 100 watts). One lightbulb that is on for ten hours would consume 1 kilowatt-hour of energy and have an associated

instantaneous demand of 100 watts. Ten lightbulbs turned on for only one hour would also consume 1 kilowatt-hour of energy, but would have a significantly higher instantaneous demand of 1,000 watts. During peak usage hours, the cost for MVEC to provide the energy needed to serve the ten lightbulbs on for one hour is significantly more than one lightbulb for ten hours due to the higher demand when the ten lightbulbs are turned on at the same time.

Higher demand values require CIPCO to produce more power in a shorter time period in order to meet your energy needs. MVEC purchases kilowatts from CIPCO based on the demand of our members during peak hours. As you understand through our Time of Use rates, peak demand refers to the time of day when the demand for electricity is the highest and the most costly to produce. For MVEC, that peak time is between 4:00 pm and 9:00 pm and is the reason for the higher \$0.16/kilowatt-hour ‘on-peak’ rate that you see on your bill. When you can shift your energy use away from those peak hours, both MVEC and you as members can save on your energy costs with the lower ‘off-peak’ rate of only \$0.08/kilowatt-hour.



The chart below can further help you understand the difference between demand and energy.



Demand can be thought of as the speedometer reading in your car. It is the rate at which energy is being consumed.

Energy Usage is like miles driven on the odometer.

In this example, a car travels at a rate of speed of 80 mph for 30 minutes; the miles driven is only 40 miles. In terms of electricity, the member’s rate of consumption is 80 kilowatts (kW) for 30 minutes, and the kilowatt-hours (kWh shown on your bill) is 40.



109 N. Huber Street
Anamosa, IA 52205
319-462-3542
800-927-6068
www.mvec.coop



Office Hours:
Monday - Friday
7:30a.m. - 4:00p.m.
After Hours Call Center
Outage Reporting
800-582-8998

35

Account Number		Account Name		Service Address		Meter No.	Bill Date	
XXXXXXX		XXXXX XXXXXXXX		CAVES RD		XXXXXXX	01/08/20	
Meter Reading		Mult	KWH Usage	Read Type	Read Type		Charges	
Previous	Present				2 = AMI Read	3 = Cooperative Read		8 = Estimate
531	567	1	36	2	X	0.16	ON PEAK	\$5.76
1937	2124		187		X	0.08	OFF PEAK	\$14.96
POWER COST ADJUSTMENT			223		X	-0.00878		-\$1.96
BASIC SERVICE CHARGE								\$33.25
OPTION TAX								\$0.52
CURRENT ELECTRIC CHARGES								\$52.53
PREVIOUS UNPAID BALANCE								\$496.00

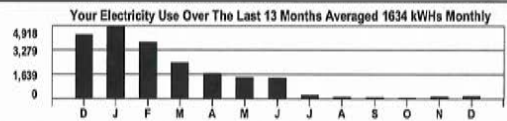
See reverse side for explanation of these charges

Energy Used 4pm-9pm (5 hours)

Cost per kilowatt hour used

Energy Used 9pm-4pm (19 hours)

Total Energy Used



Cycle	Total Due Now		\$548.53
204	Due Date	01/28/20	Bill Is Delinquent After Due Date
Rate	After Due Date Pay		\$548.53
101			

INVOICE DATE - JANUARY 8, 2020
ELECTRIC SERVICE FOR DECEMBER 2019



coop
tments:
lling@mvec.coop
nager@mvec.coop
vices@mvec.coop
fiber@mvec.coop
ance@mvec.coop
ment@mvec.coop
ering@mvec.coop

IMPORTANT INFORMATION

- Payment is due on the first business day following the 27th day of the month.
- You may have your bill automatically paid with bank draft or you may pay online at www.mvec.coop.
- You may also pay by mail or at the main office.
- Previous unpaid balance -- The due date indicated on this statement is for the current month's bill only and does not apply to previous unpaid balance. Previous unpaid balance is past-due and may be subject to service disconnection on 01/21/20

KEEP THIS STATEMENT FOR YOUR RECORDS

on the first business day following the 27th day of the month. You may pay by mail, automatic bank draft, or online at www.mvec.coop.

Previous unpaid balance: The due date indicated on this statement is for the current month's bill only and does not apply to a previously unpaid balance. A previous unpaid balance is delinquent and may be subject to service disconnection.

Member Advocate
Maquoketa Valley Electric Cooperative
109 North Huber Street
Anamosa, IA 52205
Phone: 800-927-6068 or 319-462-3542

If your complaint is related to service disconnection, safety, engineering standards, or renewable energy and Maquoketa Valley Electric Cooperative does not resolve your complaint, you may request assistance from the Iowa Utilities Board by calling 515-725-7321, or toll-free 1-877-565-4450, or by writing to 1375 E. Court Avenue, Des Moines, IA 50319-0069, or by email to customer@iub.iowa.gov.

by writing to:

Understanding Your Bill

All members are charged a Basic Service Charge. This charge represents the carrying costs of distribution plant in place to serve you with electricity and is present whether or not you use any electricity.

Your energy use is calculated based on the number of kilowatt hours used; subtract the *Previous* reading from the *Present* reading to determine this number. Multiply the total kilowatt hours used by the rate. You may notice different rates for different levels of kilowatt hour usage. For example, the first 1,000 kilowatt hours may be billed at a different rate than the remaining kilowatt hours. (The rates are determined by the Board of Directors and filed with the Iowa Utilities Board.)

The Power Cost Adjustment reflects the difference between the actual cost of power and the amount included in the base energy rates. This amount may vary monthly based on the average cost of wholesale power over the previous two months. The adjustment is applied to all kilowatt hours billed.



The Fiber Download

What's The Difference Between 2.4 and 5-GHz Wi-Fi (and which should I use)?

What's the real difference between 2.4 Ghz and 5 GHz? These numbers refer to two different "bands" that your Wi-Fi can use for its signal. The biggest difference between the two is speed. Under ideal conditions, 2.4 GHz Wi-Fi will support up to 450 Mbps or 600 Mbps, depending on the class of the router. 5 GHz Wi-Fi will support up to 1300 Mbps.

Of course, there are some caveats here. First, the maximum speed you might see is also dependent on what wireless standard a router supports

The second big caveat is that important phrase we mentioned: "ideal conditions."

The 2.4 GHz band is a pretty crowded place, because it's used by more than just Wi-Fi. Old cordless phones, garage door openers, baby monitors, and other devices tend to use the 2.4 GHz band. The longer waves used by the 2.4 GHz band are better suited to longer ranges and transmission through walls and solid objects. So it's arguably better if you need better range on your devices or you have a lot of walls or other objects in the areas where you need coverage. However, because so many devices use the 2.4 GHz band, the resulting congestion can cause dropped connections and slower-than-expected speeds.

The 5 GHz band is much less congested, which means you will likely get more stable connections. You'll also see higher speeds. On the other hand, the shorter waves used by the 5 GHz band makes it less able to penetrate walls and solid objects. It's also got a shorter effective range than the 2.4 GHz band.

The good news is that most modern routers act as dual- or tri-band routers. A dual-band router is one that broadcasts both a 2.4 GHz and 5 GHz signal from the same unit, essentially providing you with two Wi-Fi networks and the best of both worlds

A tri-band router broadcasts three networks simultaneously - two 5 GHz signals and one 2.4 GHz signal. The reason for this is to help alleviate network congestion. If you have multiple devices that really use a 5 GHz connection heavily - like streaming high-resolution or even 4K video - you might benefit from spending a bit more on a tri-band router.

Should I Select 2.4 or 5 Ghz for my devices? First things first. If you have a device that supports a wired Ethernet connection and it's not too awkward getting a cable to the device, we highly recommend using a wired connection over a wireless one. Wired connections offer a lower latency, no dropped connections due to interference, and are just plain faster than wireless connections.

That said, we're here to talk about wireless. If you currently use 2.4 GHz Wi-Fi and are wondering whether you need to upgrade to 5 GHz, it's really all about what you need to do with it. If you're experiencing dropped connections or if you need more speed for watching videos or playing games, then you probably need to move to 5 GHz. There's only so much speed you can get out of a 2.4 GHz network, even under ideal conditions. If you live in a crowded apartment complex with dozens of wireless routers, baby monitors, and other 2.4Ghz band devices, then you should definitely consider switching to the 5Ghz band if you already haven't.

Hopefully, this gives you the information you need to make a decision about whether you need 5 GHz Wi-Fi in your life and how best to use it if you do. Also keep in mind that no matter what you choose, you should also take the time to optimize your wireless signals by selecting an appropriate channel on your router. You might be surprised at the difference such a small change can make.

Sites to See

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

- <https://metro.co.uk/2019/12/30/best-new-gadgets-look-2020-11975855/> Folding phones and wireless earbuds have become increasingly popular in 2019 as well as the increasing power of 5G technology. These trends are all likely to continue next year alongside a new generation of game consoles and even more options for streaming content.
- <https://www.tomsguide.com/best-picks> Tom's Guide upgrades your life by helping you decide what tech to buy, showing you how to get the most out of it and solving problems as they arise.

Connection Speeds Glossary of Terms

GHz: Short for gigahertz, GHz is a unit of measurement for AC (alternating current) or EM (electromagnetic) wave frequencies equal to 1,000,000,000 (one billion) Hz (hertz). 2. When referring to a computer processor or CPU, GHz is a clock frequency, also known as a clock rate or clock speed, representing a cycle of time.

Frequency Bands: The main difference between these two frequency bands are the range and bandwidth that they provide.

Device: A device is a unit of physical hardware or equipment that provides one or more computing functions within a computer system. It can provide input to the computer, accept output or both. A device can be any electronic element with some computing ability that supports the installation of firmware or third-party software.



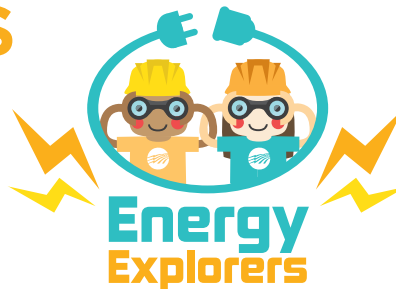
Please Cash Dividend Checks!

Dividend checks were issued to Maquoketa Valley Electric Cooperative members on October 21, 2019, and automatically become void on February 18, 2020. If you have not cashed your check, please do so soon. Dividend checks not cashed by February 18, 2020, will be retained by the Cooperative and redistributed next year when dividends are paid. Please call the office at 800-927-6068 and talk to Jan if you have any questions. As a reminder, if your dividend was under \$5, it is being held until the accumulated amount in the future is over \$5.

ENERGY SAVINGS WORD SEARCH

Did you know there are many ways you can help save energy in your home?

Read the energy efficiency tips below and circle the **bolded** words in the puzzle.



O E S P W F W A T E R S Y E S
 A L L R S A E T D E I A L S R
 T E X K E J T O G H C E P X E
 L C O O G G Z E N X C N M N W
 B T B F M X R R R T B X Q K O
 G R I S M M R A R H C L I D H
 X I S Y K Y E O H X E V A F S
 I C B X X I N Y B C N A P J I
 A I G Y Z I H F H X C F T Y E
 U T U N C W U Y X Z O M B E S
 U Y Z S E M F P O R V N V T R
 R E F R I G E R A T O R H E Q
 E V J M Q S D M D F V G N Y L
 W M E O F P N T K W I H X Q I
 G N I H T O L C R L S S B R D

- Turn off **lights** any time you leave a room.
- Keep the **refrigerator** door closed to save energy.
- Wash **clothing** in cold water to reduce the load on your **water heater**.
- Unplug items that consume **electricity** even when they're not in use, like cell phone **chargers** and coffee makers. These are known as "phantom load" **electronics**.
- Take **showers** instead of baths – showers require less **water** use.

Watts The Answer?

1. Thank you to all those who responded to our surveys. We always want to _____ from our members and ensure your voices are heard.
2. _____ is measured in kilowatts (kW) and is what MVEC sees on their bill from CIPCO, which is in turn passed on to our members through our electric rates, and the Power Cost Adjustment.
3. These numbers refer to two different "_____" that your Wi-Fi can use for its signal.

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

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

Please complete the following:

Name

Address

December winners:

Tara Westhoff, Dyersville
 Kevin White, Dubuque



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

PRSRT STD
U.S. POSTAGE
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Cedar Rapids, IA
Permit 174



**Our Office Will Be Closed Monday, February 17
In Observance Of Presidents' Day**



Watts Current by Email
If you would prefer to have the Watts
Current emailed to you, please sign up
by emailing efletcher@mvec.coop

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.

Watts Current

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Maquoketa Valley Electric Cooperative.

Mailing Address:

109 North Huber Street • Anamosa, IA 52205
319-462-3542 or 800-927-6068

OFFICE HOURS

Monday thru Friday • 7:30 a.m. to 4:00 p.m.

This institution is an equal opportunity provider and employer.

After Hours Call Center: 800-582-8998

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www.mvec.coop

www.mvlink.coop

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Follow Us On

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billing@mvec.coop

Fiber Questions

fiber@mvec.coop

Product or Service Questions

memberservices@mvec.coop

Maintenance Issues

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Dividend Questions

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New Service Questions

engineering@mvec.coop

Management

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