

WATTS *Current*

March 2022

For Our Members

Three Interesting Facts About Electricity

Electricity turns dark into light, makes hot foods cold and cold foods hot, washes the dishes and searches the internet. It is essential to our everyday lives, so much so that we rarely think about it. Here are three interesting facts about electricity.

1 Electricity must be used or stored after it's generated

A rechargeable battery stores electricity, but the kind of electricity you use in your home needs to be used after it's generated. Electricity produced from power plants, solar panels, wind turbines and hydro dams needs to be perfectly timed for when you decide to use it to cook dinner, wash clothes or watch TV.

A vast and intricate system of devices controls that power flow in a precisely balanced way. It's one reason utility operators must be strategic when adding renewable energy to the nation's fuel mix. Solar energy and wind power depend more on the whims of Mother Nature, which adds an extra degree of difficulty to power management. However, technology advances could be a gamechanger.

Large-scale battery storage technology is rapidly improving, creating another way for electric utilities to better balance the flow and timing of electricity. Battery technology could also make it much easier to add more solar and wind energy to our grid - by storing energy when it's breezy and sunny, then using it at night and during calm weather.

2 Blame a squirrel for power outages

While severe weather causes most outages, if it's nice out and your electricity goes off, it could be caused by a squirrel. They scamper and chew around transformers, and utility poles where they can disrupt high-voltage equipment, shutting down power and fiber. But it's not just squirrels. Snakes, birds and other critters can find their way into dangerous places. There's no official recordkeeping of wildlife-caused power outages, but estimates run as high as 21% for MVEC.

3 Highways could charge electric vehicles (EVs) in the future

If researchers have their way, EVs could charge while they're being driven! "Wireless dynamic charging" projects are underway around the world. The idea is similar to wireless chargers you can buy for your home electronics, the kind you can set near a charger rather than actually plugging in the smart phone or other device.

Charging cars while they're driving along the freeway is of course a lot more ambitious. But some developers predict that within five years, there could be stretches of vehicle-charging lanes.

Electricity is such a basic part of our everyday life, so it's easy to forget about it. But every now and then it's good to think about all its benefits and mysteries.

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Blu Track: Putting Kids on the Fast Track to Success

For Blu Track President and Inventor, Randy Belding, educating and engaging our youth to prepare them for success in the future is engrained both in his product and his manufacturing methodology. Blu Track manufactures configurable, flexible race tracks that encourage kids to think while playing. Blu Track opened the doors on its 9,500 foot manufacturing facility in Anamosa’s Industrial Park in September of 2021. The company formerly manufactured its distinctive blue race tracks in Ohio.

Belding launched Blu Track back in 2004 after his son Jay purchased an off-the-shelf two-loop race track with his own hard-earned money only to have the track not function as advertised. Belding and his son spent 90 minutes fixing the track and had a lot of fun doing so. Afterwards, his son only played with the track for a few seconds and then went on to something else. Belding realized that the real fun was in modifying the track to make it work and kept thinking of ways to improve the track. He came up with the original design, sketched on a TWA napkin, while on a business flight for his former employer, Pella Windows.

The track is its distinctive blue color because of a mistake with the original shipment of resin material. Belding quickly realized that having a different color could help the track stand out amongst competitors when neighborhood kids would come to his door asking to borrow the blue track to play with; thus Blu Track was born.



Blu Track serves two markets: the consumer/toy and educational/commercial markets and is in all 50 states and 15 countries including Greece, UK, Germany, Italy and Switzerland to name a few. In 2021, Belding estimates that Blu Track produced more than 500,000 feet of product!

Belding and his team at Blu Track offer a variety of kits and configurations:

- **Consumer Series:** Classic Starter Kit, Performance Series, Stunt Set, Super Stunt Set and Outdoor Series

- **Educational Series:** Intro to Force and Motion, Engineering Coasters and Motion, Advanced Force and Motion and Car Coaster Challenge to engage all ages from grades pre-K through college



Blu Track currently has 3 full-time employees (with one more just hired) plus two high school students doing work study at the Anamosa facility. All production, assembly, packing, and shipping happens in Anamosa and it is Belding’s goal to get local students involved in all aspects of the business. Randy and his wife were attracted to Anamosa and Jones County for several reasons. They are originally from Independence and wanted to get back to Eastern Iowa. Plus, key Blu Track employees (his brother, John and son, Jay) already resided in Eastern Iowa. Additionally, according to Belding, “Jones County has a lot going for it—it’s 20 minutes from Marion with a 4-lane highway, 45 minutes from Dubuque, one hour from the Quad Cities which is helpful for workforce attraction and product distribution. I like the small town work ethic in Anamosa and the school district seems to be open to working with businesses to give students real-world experience. This partnership is critical for rural areas to solve the current workforce issue. Anamosa gave us the best chance to be successful





- we liked the workforce, school district and proximity to Cedar Rapids.”

Blu Track received initial funding from East Central Iowa Council of Governments (ECICOG) to assist with building the facility and move equipment from Ohio to Anamosa. Recently, with the help of Iowa State’s CIRAS, the company received a \$75,000 grant from Iowa Economic Development Authority (IEDA) through the Manufacturing 4.0 program to support the automation of part of Blu Track’s production line. Belding said it currently takes 43 seconds to make a section of track and with the automation improvements, they should be able to get that time down to 30 seconds.

Blu Track has laid a solid foundation with its production facility and advanced manufacturing processes. Belding said the company will execute on marketing and distribution this year with the goal of growing the educational market. He looks forward to tapping into the bright minds of local students to help the company with this focused growth.



“We worked hard to create a product that engages kids—we want them explore track designs that may not work and encourage them to determine what needs to change. Now, we also want to engage students on the back end of the

business to show them that today’s manufacturing has a cleaner look with new and varied career opportunities. We need young, innovative minds to help us continue to evolve and expand the US based manufacturing industry. “

For more information or to see Blu Track’s selection, visit www.blutrack.com.

MVEC Prepares for the Future

Jenna Kruser, MVEC Safety Director, has completed an intensive program in electric utility safety and loss control. The Certified Loss Control Program is a series of workshops offered by the National Rural Electric Cooperative Association in conjunction with the National Utility Training & Safety Education Association. Jenna is one of only a few electric utility professionals in the country to receive this certification. The program requires participants to complete a rigorous series of seminars and tests, a 30-hour OSHA course, and a detailed final course project. Congratulations, Jenna!





Get Your Ducts in a Row



For most people, the inner workings of the HVAC system are out of sight, out of mind. The system is ignored until something goes wrong. Understanding the basics of how a heating and cooling system works will help you create a more efficient, comfortable living space.

If you have a forced air system, you have ducts. A forced air system consists of the equipment that heats or cools the air and the ductwork that moves it around the home. Your furnace, or air handler, has a fan inside that pushes the heated or cooled air through the supply ducts into the rooms. The return ducts bring air back to the furnace to be heated or cooled again and sent back through the home. This continuous loop of supply and return is susceptible to inefficient practices and leakage.

Here are some steps to keep your system running efficiently and maintain a comfortable living space.

Check your vent dampers

Make sure the air you paid to heat or cool is freely moving through the home. Closing registers does not save energy. It can cause your system to work harder, shortening its lifespan and increasing duct leakage.

Seal your ducts

If your ductwork travels through an attic, crawl space or other unconditioned - not heated or cooled - space, it could have holes, cracks or gaps that cause duct leakage. This wastes energy and money by heating or cooling spaces you don't use. The U.S. Department of Energy estimates 20% to 30% of the air moved through duct systems is lost due to duct leakage. In addition to wasted energy, leaky ducts can cause air-quality issues. This can introduce dust, dirt, insulation particles and other gross stuff that is in your attic, crawl space or walls.

Sealing ducts can be difficult because they are hidden behind the walls, floor and/or ceiling. Attics and crawl spaces can be hard places to work. You can hire a professional to test your duct system for leakage with specialized equipment and seal your ducts.

One relatively easy place to seal is where the duct meets the floor, wall or ceiling. Remove the registers and look for cracks or gaps around the edges.

Change your filter

Checking your system's filter regularly and replacing it when dirty can help you improve your heating and cooling efficiency. In most cases, filters are designed to protect the furnace, not improve air quality. If you are worried about your home's air quality, getting the ducts cleaned and sealed can help. Add an air purifier if you need additional air filtration. Look for Energy Star-rated models.



Now that you know the inner workings of your HVAC system and what it needs to run efficiently, you can improve and maintain the comfort in your home year-round.

Representative Steven Bradley Visits MVEC

MVEC hosted Representative Steven Bradley (Iowa House District 58 Jackson and Jones Counties) at our Anamosa Headquarters on Friday, February 18. Bradley was interested in learning how MVEC's smart grid deployment allows MVEC to have the most reliable electric service possible and also allows MVEC to provide MVlink reliable, high-speed fiber internet to our members even in the most rural areas. MVEC CEO Jeremy Richert and MVEC Manager of Communications and Public Relations Christie Remley also discussed various legislative issues that are important to cooperatives such as Digital Sales Tax (HSB 615) and broadband expansion programs to support further MVlink growth. While at MVEC, Bradley took a tour of the operations center and did a brief video interview with Richert for his Facebook page.



MVEC Manager of Communications and Public Relations Christie Remley, Representative Steven Bradley and MVEC CEO Jeremy Richert

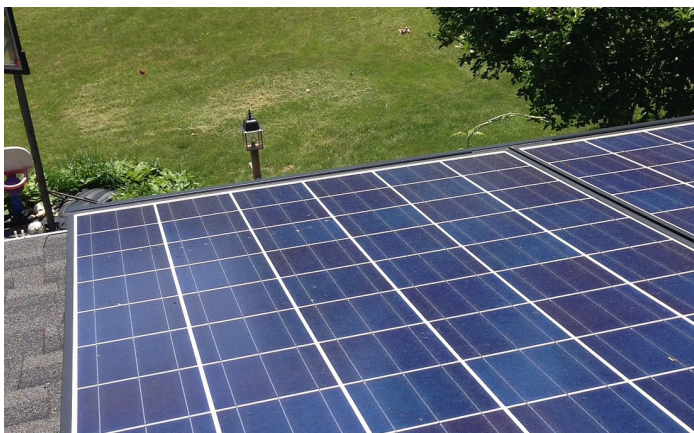


Considering Installing Solar? Take These 10 Steps First:

As a member-owner of Maquoketa Valley Electric Cooperative, we are your source for power and information. As prices decline and technology improves, installing a residential solar system - also called a photovoltaic or PV system - makes sense for some members. However, even with these recent improvements in PV, it's important to find out the facts before committing to a purchase. For a successful installation, here are 10 critical steps to take before signing a contract:

1. Understand how a solar system meshes with MVEC's distribution system and contact MVEC to discuss your specific situation.
2. Research, research, research before investing in a solar system.
3. Review your current energy use so you can determine what size PV system to install.
4. Tally upfront costs.
5. Consider the cost benefits of energy efficiency improvements against cost benefits of solar.
6. Search for incentives, rebates, and tax credits.
7. Be sure you know and understand what your responsibilities are if you purchase a PV system, including extra costs to connect to the cooperative grid, maintenance and system repairs.
8. Follow all safety precautions and electrical code/inspection.
9. Choose a reputable contractor/installer.
10. Maintain good records.

MVEC encourages you to contact us for the latest information about renewable energy options in our area. Contact us at **800-927-6068**, or visit www.mvec.coop for more information about solar and assistance in making decisions about whether solar is a good option for you.



OPPORTUNITY OF A LIFETIME: WIN A TRIP TO WASHINGTON, D.C.!



Enter our Essay Contest by March 25

SOME OF THE THINGS STUDENTS WILL DO AND SEE ON YOUTH TOUR:

- Washington Monument
- World War II Memorial
- World War I Memorial
- Albert Einstein Memorial
- Franklin Delano Roosevelt Memorial
- Vietnam Veterans Memorial
- The National Mall
- Boat cruise on the Potomac River
- Holocaust Memorial
- Ford's Theater
- Korean War Veterans Memorial
- Lincoln Memorial
- Washington National Cathedral
- Mount Vernon
- Iwo Jima Sunset Parade

OFFICIAL CONTEST RULES:

The 2022 Youth Tour Contest is open to any high school sophomore, junior or senior who's part of a member family of an Iowa electric co-op. One all-expenses-paid trip will be awarded by Iowa Electric Cooperative Living magazine, in addition to the trips sponsored by some local electric coops.

To enter, you will be required to submit an official entry form plus a short (250-word maximum) essay in response to this statement: Pick one of the seven cooperative principles and share how your local electric cooperative embodies it. Entry forms are available at www.IowaYouthTour.com. You can submit your essay online at this address or email it to youthtour@iowarec.org. Entries must be received by March 25.

*Iowa Electric Cooperative Living magazine and IAEC staff will judge all essays anonymously. The decision of the judges will be final. The winner of the **Iowa Electric Cooperative Living Youth Tour Contest** will not be announced until April 15, which is after all sponsoring local electric cooperatives will have chosen their 2022 Youth Tour participants.*



TECH LINK

What to Consider When Purchasing a Home Security System

With increasing availability and affordability of wireless security systems and doorbell cameras, you may be thinking about beefing up your home's security measures. How do you know what type of system or products would be best for your home? Consider these factors before making your purchase:

Burglar Alarm or Home Security System

Burglar alarms and home security systems serve different purposes. Burglar alarms have sensors on doors and windows that will alert you or the police that someone has entered your home. A home security system typically provides additional benefits, such as alerting you to fire, a high level of carbon monoxide and flooding.

Wireless vs. Hard-Wired System

With a wireless home security system, there are no wires to run other than the electrical cord on the control interface. Hardwired systems usually require you or the installer to do a lot of drilling in walls to run cable and connect everything to your home's circuit breaker box. With a wireless system, you will need to consider your internet bandwidth. If installing a camera or sensor on the outside of your home, your wireless connection will have to extend to your porch (and go through the exterior barrier of your home—brick, stone, siding). You may need a Wi-Fi booster or mesh unit to reach the exterior of your home with a quality signal.

Battery Backup Option

Most systems will continue to operate even when your home loses power. A traditional electric home security system is usually low voltage, so it doesn't take a lot of power to run the system. And most systems also contain a battery backup or battery backup can be added.

Size of System

There's no one-size-fits-all when it comes to a home security system. A small DIY system may be great for an apartment, condo or small home. However, if you're looking to secure a larger home, you'll need a system that can handle a larger amount of information and monitoring. The larger system might include multiple cameras with recording and a monitoring service.

Live Video vs. Recorded Video

If you are considering installing surveillance cameras, you will need to understand the difference between live video and recorded video. Do you want to be able to watch a live feed of what's going on in and around your home while you're away? Or would you rather be able to just watch a recording? IP (internet protocol) cameras offer a live view, while a system with a DVR allows you to save and watch recordings at a later time.



Possibility of Home Insurance Discount

Check with your homeowner's insurance, you may be eligible for a discount on home insurance premiums for having a home security system with a monitoring service.

Consider Other Measures to Secure Your Home

In addition to installing security cameras or systems, there are other steps to keep your home and property secure:

- Install motion-sensing lighting on the exterior of your home
- Connect your light fixtures or lamps to timers or smartphone apps that can turn them on when you're away
- Make sure all windows and doors are locked; consider installing deadbolt locks
- Don't mention travel on social media until you return

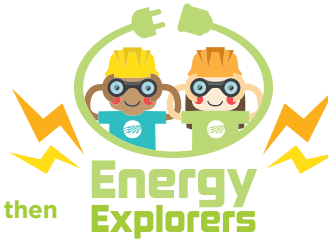




ELECTRICAL EQUIPMENT WORD SEARCH

Did you know we use a variety of equipment to send electricity to your home?

Read the below to learn about the equipment we use, then find and circle the bolded words in the puzzle below.



• **Transformers** look like large metal cans on top of utility poles or big green boxes on the ground. They reduce the voltage of electricity for safe use in your home.

• **Power lines** hang overhead or are placed underground to carry electricity from where it's generated to homes and businesses.

• Lineworkers use **bucket trucks** to reach power lines and poles when making repairs and updates to the electrical system.

• **Electric meters** are placed on the outside of homes to measure the amount of electricity you use.

• **Substations** are facilities that contain equipment to help control the flow of electricity.

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

Watts The Answer?

1. There's no official recordkeeping of wildlife-caused power outages, but estimates run as high as _____.
2. As a member-owner of Maquoketa Valley Electric Cooperative, we are your source for power and _____.
3. You may need a Wi-Fi booster or mesh unit to reach the exterior of your home with a _____ 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

January winners:

Mike Spoerl, Sherrill

Richard Lynch, Cascade

Ready To Re-Connect Your Meter?

When you are ready to have your meter re-connected this spring, Maquoketa Valley Electric Cooperative will need two weeks notice. Please contact Jeane at 800-927-6068, extension 357.

February MVEC Board Update

- Reviewed the Cooperative's 2021 Safety Report and 2022 Safety Improvement Plan.
- Discussed the impact material price increases and lead time issues could have on Cooperative construction.
- Discussed items of interest with legislative bills that are in play at the Iowa Capital this session.
- Reviewed the final 2021 year-end financials and approved a revenue deferral plan to defer a portion of 2021 margins to 2022.
- Reviewed and approved changes recommended by staff to several employment policies.
- Discussed and approved proposed changes for 2022 line construction costs.
- Presented Director Zumbach with a certificate for obtaining her Board Leadership Certification from NRECA.



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Electric Cooperative
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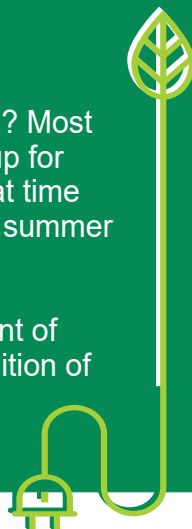
**Spring Forward
on March 13!**
Set your clock forward one hour

Energy Efficiency Tip of the Month

When was your cooling system last serviced? Most manufacturers recommend an annual tune up for your home's cooling system. March is a great time to schedule this service so you can beat the summer rush when the pros are busiest.

A qualified professional can check the amount of refrigerant, accuracy of the thermostat, condition of belts and motors and other factors that can greatly impact the efficiency of your system.

Source: Dept. of Energy



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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Internet/Phone Service: fiber@mvec.coop

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