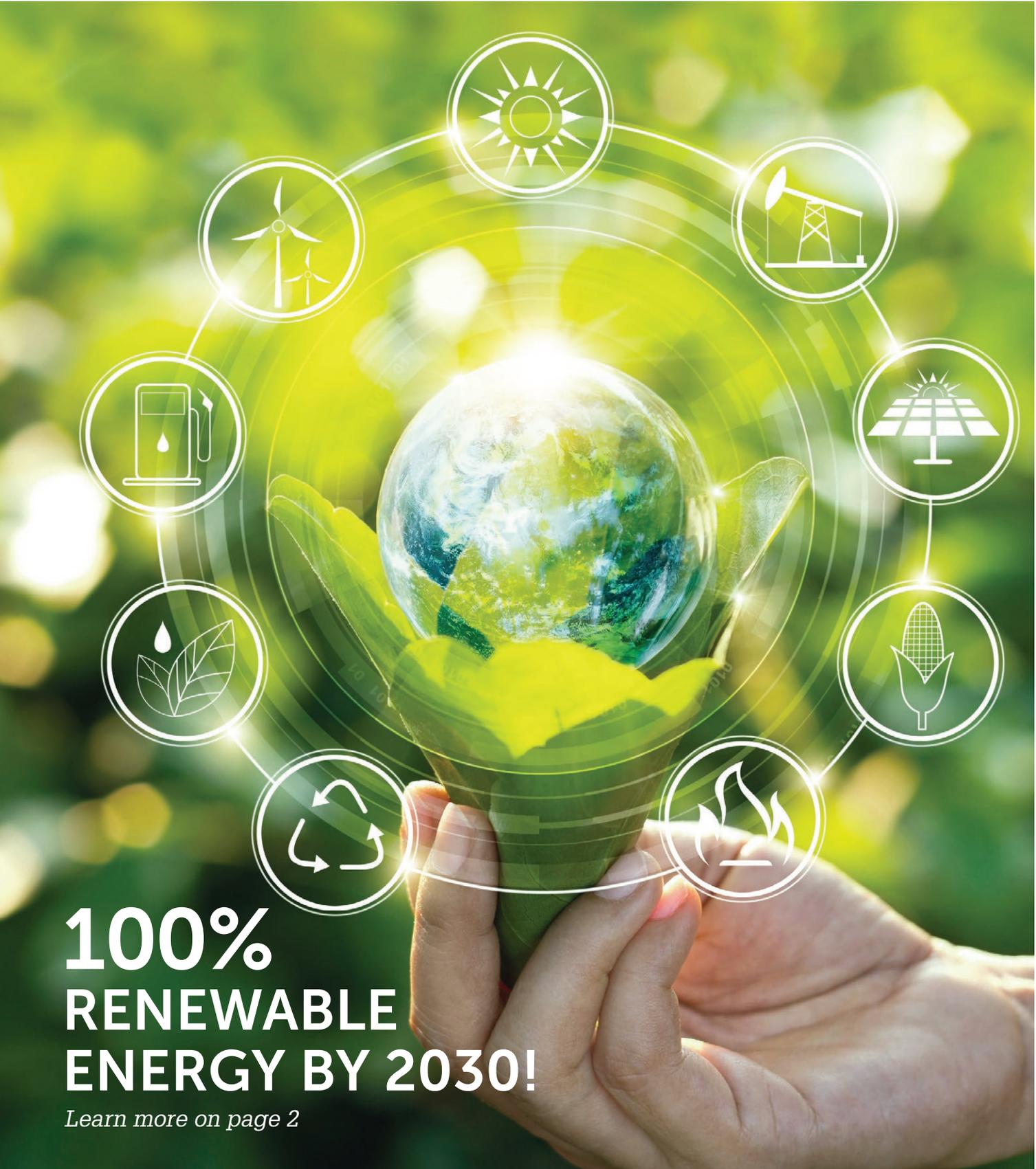


RPU *Plugged In*



**100%
RENEWABLE
ENERGY BY 2030!**

Learn more on page 2





100% Renewable Energy by 2030!

Message from Our General Manager Mark Kotschevar

March 31, 2030, will be a watershed date in Rochester's energy future. On that date, our power supply contract with the Southern Minnesota Municipal Power Agency is set to expire, and RPU

has an opportunity for a new era of self-determination in providing for our energy needs.

In 2016, the City Council adopted an Energy Action Plan, built around sustainability goals for the City's energy, transportation, and the heating and cooling sectors. The most aggressive of these goals is an 80% reduction in greenhouse gas emissions from 2005 levels by the year 2050.

On July 23, the RPU Board took the first step in planning this era by advancing two possible power supply options that address both of the above objectives. It took a great deal of work by RPU staff and consultants, as well as input and engagement by the public, to get us to this decision point. First and foremost, I want to thank everyone who helped provide information and support to the RPU Board as they took this historic vote. However, the conversation about Rochester's energy future is just beginning.

Balancing Sustainability, Reliability, and Affordability

Power supply planning today is like a stool, balanced on the three legs of affordability, reliability, and sustainability.

Sustainability was a key feature in all five of the scenarios considered by the RPU Board, as all included some level of renewable energy starting at 25% and ramping up to 100%. In fact, our consultants discovered the "least cost" renewable scenario had no less than 40% renewables!

Reliability is an important feature that might not be obvious to the casual observer, although we certainly all notice when the lights go out. To keep the power grid stable, generation and load must match at all times during the day. Further, federal regulations require utilities to have enough generation capacity to meet "peak load" – the one hour of highest energy use over an entire year. Renewable energy sources are growing fast, but many of these sources are variable and intermittent. Therefore, four of the five scenarios considered by the RPU Board included firm generation, in the form of a natural peaking plant, and one scenario used battery storage, to back up renewables when they are not available.

Last but not least, **affordability** was a factor considered in all five scenarios. RPU frequently hears from both residential

and commercial customers who are concerned about their electricity rates. In our most recent customer survey, 57% of our residential customers said they would be willing to pay up to \$5 per month more for clean energy. All five scenarios considered by the RPU Board included the relative cost differences on a net present value basis over a 20-year period.

The least cost option proved to be 40% renewable energy with a natural gas peaking plant. To achieve 50% renewable energy is an additional \$1.16 million over a 20-year period. The 100% renewable energy scenario, with the natural gas peaking plant, is roughly \$8 million more. Switching out the peaking plant for battery storage, again with 100% renewable energy, is \$115 million more.

What Does This Mean for You?

What would this mean for customer rates? Starting with the 40% renewable base case, the rate impact of moving up to 50% would be about 1%; to 100% renewable with gas backup, 2%; to 100% renewable with battery backup, 18%. Put another way, the 100% renewable option with gas backup is estimated to increase the average residential customer bill by about \$2 per month. The battery backup option would cost about \$18 more per month, a rate increase to which only 15% of survey respondents were receptive.

After hearing and considering the sustainability, reliability, and affordability impacts of all five scenarios, the RPU Board voted unanimously to further pursue the two 100% renewable scenarios, one with a natural gas fired turbine generator and one with battery storage. Both scenarios call for the purchase of enough wind and solar energy to equal Rochester's annual energy consumption.

Both of the 100% renewable energy options endorsed by the RPU Board will hit the Energy Action Plan's 80% greenhouse reduction goal 20 years early. But we have a lot of work to do before 2030, and as I mentioned earlier, the conversation is just beginning. RPU will continue to engage with residential customers, as well as commercial customers for whom the dollar impact would be greater.

The detailed presentation given to the RPU Board is available at www.rpu.org under the July 23rd Board meeting. In addition, the video archive of the Board meeting is also available on the City's website. I encourage you to review the presentation and provide your feedback to the Board using the Board's email link on our website.

RPU is currently scheduled to give this presentation to the City Council on September 4th as a public hearing. This conversation will continue in the future as RPU invites the community to further participate in resource plan discussions.

Simple and Applicable Ways to Save Energy in Your Home!

Customers have asked us for easy ways to save energy in their homes without breaking the bank. One of the best ways to get easy tips and ideas for saving energy and money is to attend a Neighborhood Energy Challenge (NEC) workshop.



The workshop is a full-service home efficiency program for Rochester residents that helps folks improve comfort in their homes and reduce energy waste. We provide solutions that are low-to-no cost and offer guidance for larger issues that may be affecting the overall efficiency and durability of your home.

NEC begins with a FREE educational workshop that provides techniques for saving energy and money. After attending a workshop, participants are able to schedule a customized, discounted home energy audit (free audits are also available for income-qualifying households). The audit includes a blower door test that measures air leaks, an insulation inspection, a heating system and water heater safety test, and installation of energy and money-saving materials.

These materials may include:

- LED light bulbs
- High-efficiency faucet aerators and showerheads
- Hot water pipe insulation and more

Participants will also receive information about rebates and innovative financing, only available to program participants (for those wishing to complete larger projects).

Here are some of the comments from past participants:

"Informative, friendly, convenient, and helpful." – Mark

"I wrote down a lot of things that I didn't know I could do to make my home more efficient." – Lindsay

"The person that came to my house was very knowledgeable." – Todd

"Very informative – time well spent. I had an energy audit and plan to complete the recommendations. I'm sold on this process. Thank you for making it easy to understand." – Suzanne

Upcoming Workshops:

- Thursday, September 19th at 6:30pm
- Saturday, November 16th at 10am

Northrop Community Education Center, Room 308
201 8th St. NW | Rochester, MN 55901

To reserve your spot or for more information, contact Stacy Boots Camp at **888.734.6365** or sbootscamp@mncee.org.

Neighborhood Energy Challenge is provided by Minnesota Energy Resources and Rochester Public Utilities in partnership with the Center for Energy and Environment.

RPU is RP₃

DIAMOND MEMBER

What does that mean for you?



Currently, only 14% of public power utilities hold an RP₃ designation.

An RP₃ designation recognizes the utility for providing its community with:

- 1) High Quality Reliability
- 2) Safety
- 3) Workforce Development
- 4) System Improvement



An 18-member panel of national public power experts award the RP₃ designation based on the extent to which they meet program criteria:

- **Diamond: 98-100%** (RPU's designation)
- **Platinum: 90-97%**
- **Gold: 80-89%**

2) RP₃ = SAFETY

Utilities must create a culture of safety with commitment from top management. All aspects of operations from power generation to line work require safety protocol. The delivery of safe and reliable electricity demands benchmarking safety metrics, focusing on frontline workers, and implementing rigorous safety training. Utilities must indicate an accepted safety manual is used across the utility and everyone follows safe work practices.

(Learn more about RP₃ in the next issue of Plugged In!)

RPU Commercial Customer Corner: DLC Lights and Why You Should Choose Them

Are you searching for a high-performing LED solution, but not sure where to start? If so, DesignLights Consortium (DLC) approved products may be your answer. The DLC promotes lighting solutions within the commercial sector, through collaborative efforts throughout the U.S., with the goal of bringing about higher quality and efficiency standards in commercial lighting. DLC is much like the ENERGY STAR® program for residential products, however DLC's primary focus is commercial lighting products.

DLC approved lighting products signal a high level of quality and energy efficiency. For a lighting product manufacturer to achieve DLC qualification for a particular product, they have to submit a paid application and participate in extensive third-party testing on the product to prove whether it performs as the manufacturer claims it will. The DLC maintains a list of approved products that are held to their high standards of quality and efficiency. This list is called the QPL or Quality Products List (www.designlights.org).

DLC continues to push the lighting industry into a more energy efficient and customer focused future. DLC is currently in the refinement phase of technical requirements version 5.0. The new requirements will continue to accelerate broad-scale energy savings by improving the quality of light and controllability of DLC-listed products.

Version 5.0 Goals

- Differentiate lighting with a focus on health and wellness that can provide comfortable, safe environments for people.
- Increase lighting controls adoption to better realize energy savings and enable improved quality of light.
- Ensure persistent energy savings through increases in efficacy and enhanced user experience with DLC approved lighting.
- Make more product data available for lighting decision-makers.

When you purchase a product with DLC certification, you can rest assured that you've chosen a highly scrutinized product that has been produced to some of the highest industry standards for quality and efficiency. Due to increased performance, RPU offers a greater incentive for lighting solutions that have been DLC approved or ENERGY STAR® certified. For questions and more information regarding DLC lighting, contact an RPU Account Representative today.



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CONSERVE & \$AVE®

Vegetation Management Guidelines

Valuable information for you as a homeowner.

In previous editions of RPU *Plugged In*, we've covered the reasons why RPU is so proactive on tree trimming and the safety and reliability benefits for customers. Now, we want to cover the guidelines that we use when we trim and what we do or don't do during certain trimming times.

Clearance Requirements

Tree trimming clearances vary depending on the type of tree, accessibility to the location (backyards), voltage near the trees, and proximity of tree branches to overhead lines.

- ✔ **Clearance.** RPU maintains a clearance around poles and electrical equipment which is necessary to allow maintenance work.
 - A minimum 5 foot clearance is required around poles free of trees and shrubs.
 - A minimum 5 foot clearance around service wires from pole to house.
 - A minimum 10 foot clearance around distribution and transmission line conductors.
 - A minimum 10 foot clearance is required in front of a pad-mounted transformer, pedestal, or equipment doors so that crews can access the equipment and make repairs. Additionally, a 3 foot clearance is required around the other sides of the equipment.
- ✔ **Overhang Removal.** For large trees with branches hanging over power lines, RPU requires at least 15 feet of clearance above distribution line conductors. With transmission lines, no overhang is allowed.
- ✔ **Pruning Methods.**
 - "V" Pruning – When utility wires run through a mature tree, a V-cut is made to allow branches on either side of the wire to grow naturally.
 - Side Pruning – Interfering side branches of trees adjacent to power lines are removed from the side of the trees nearest to the power lines.
 - Vegetation within the clearance distance will be removed. It may be necessary to remove vegetation outside of the clearance area, depending on the species and amount of trimming required. Additionally, no vines are allowed to grow on RPU poles or equipment.
 - Tree trunks and branches that are broken, diseased, or otherwise might pose a hazard to the power line or public safety will be removed.
- ✔ **ANSI Standards.** When RPU clears the distribution power lines, we follow national norms published by the American National Standards Institute (ANSI) for tree trimming and trim for a four-year growth cycle that is species-specific for the kinds of trees that are near power

lines. Fast-growing softwood trees will be cut back more than slow-growing hardwood trees in order to maintain the necessary clearance throughout the four-year growth cycle.

- ✔ **Right-of-Way and Privacy.** RPU removes undesirable vegetation from transmission or distribution power line rights-of-way based on a growth cycle schedule and available resources. Right-of-way vegetation growth is not meant for privacy or yard barrier purposes. When it is cleared or trimmed, it is **NOT** RPU's responsibility to add or return privacy barriers such as trees, bushes, or fencing. Homeowners are responsible for maintaining their property's privacy.
- ✔ **Tree Health.** RPU and its contractors follow national guidelines for maintaining tree health.
 - RPU will not top or round over trees that are directly under electrical lines. This is harmful to the health of the tree.
 - RPU follows City Forestry Division guidelines to reduce the risk of Oak Wilt disease.
 - RPU follows City Forestry Division guidelines to properly handle tree waste infected by Emerald Ash Borer and Dutch Elm disease.
- ✔ **Customer Communications.** Communication efforts will be made prior to scheduled tree trimming work. Communication is usually done by mail, but may also use door tags or other means.

Tree Debris Removal

- ✔ **Routine Trimming.** During normal trimming projects, RPU and their contractors will remove and/or chip the tree limbs and debris from the customer's property. With the exception of Ash and Elm trees, RPU or its contractors will leave the tree limbs and trunks in manageable sized pieces for firewood purposes. Ash and Elm tree limbs and debris must be removed from the property following City Forestry Division guidelines.
- ✔ **Emergency Trimming.** RPU does not remove tree debris caused by a storm or emergency situation. Crews may need to cut broken and uprooted trees to make repairs to RPU infrastructure, but it is the responsibility of the property owner to remove the tree debris.
- ✔ **Hazard Trees.** Trees with trunks and branches that are broken, diseased, or pose a hazard to the power line or public safety are considered "hazard trees." Such hazard trees identified near a power line may require significant trimming or removal during an emergency situation. Hazard trees require trimming or removal to ensure safety for property owner and RPU crews. Tree debris removal of the hazard tree(s) is the responsibility of the property owner.

Solar Energy for Your Home or Business

Learn about solar electric and heating systems from the experts. Many installation photos will show you how they look and how they are installed. Many questions addressed such as: How well does solar energy work in Minnesota? How much energy do systems produce? What are the costs involved and economics? What incentives are available? Is there maintenance? There will be plenty of time for questions and discussion.

Instructor: Micah Johnson
Bio: Micah is the operations manager for Solar Connection of Rochester, MN. In business since 2010, Solar Connection installs solar energy systems for commercial, residential, and farm applications. Solar Connection is a licensed general contractor and NABCEP™ Certified for PV Installation. NABCEP is the National Board of Certified Energy Practitioners.

DATE: Saturday, October 5, 2019
TIME: 10am-12pm
COST: FREE
LOCATION: Northrop Community Education Center, Room 308; 201 8th St NW, Rochester, MN 55901
REGISTRATION: Call **507.328.4000** to register by phone. Online registration is open for the solar class. <https://rochester.ce.eleyo.com/course/12439/2019-fall-adult-1/solar-energy-for-your-home-or-business>



CONSERVE & \$AVE



WATER MAIN BREAK IN DOWNTOWN ROCHESTER

A water main break in downtown Rochester caused some issues for customers and visitors back on July 23. Due to the location of the main and safety for water crews on site, the entire stretch of 2nd Avenue SW from 2nd Street to 3rd Street was closed down for the repair. The repair required placing a sleeve around the main to fix the 6-inch cast iron water main.

FUN FACT

The stretch of water main that was repaired was installed back in 1887. Water mains from that time period have historically been very dependable types of water mains for RPU.

What will you do with the money you save?



Find out how much you could save on your utility bill!
 Attend one of our FREE energy efficiency workshops and qualify for a \$50 home energy audit!

Thurs, Sept 19 • 6:30-7:30pm | Sat, Nov 16 • 10-11am
 Northrop Community Education Center (free childcare available)



TO REGISTER:

Call:
888.734.6365

Email:
sbootscamp@mncee.org

Learn more:
www.rpu.org





Environmental Achievement Awards Call for Nominations

The 2019 Environmental Achievement Awards will mark 28 years of recognizing local individuals, businesses, and organizations for extraordinary efforts to benefit the environment in Rochester and Olmsted County. We need your help to identify deserving groups and individuals this year!

Here's how you can help! Simply visit RPU's website (www.rpu.org) and fill out a nomination form and submit it by October 4, 2019.

By taking time to make a nomination, you are helping to reinforce these great efforts and could inspire others to join in. Don't miss out on this opportunity!

Check out some of the winners from last year's Environmental Achievement Awards.



Lincoln K-8 Faculty Beekeepers

Honeybees are all-star pollinators. The U.S. Department of Agriculture claims that managed colonies add at least \$15 billion of value to U.S. agriculture annually through increased yields and quality harvests. With the overall health of the species in question, faculty members at Lincoln K-8 District-Wide School found a way to introduce their students to these amazing insects.

In May 2018, the school purchased a Flow™ Hive and built a foundation for it to sit on. This style of hive allows the students to see what's going on inside the hive without disturbing it. The school worked with the Boy Scouts of America to locate the hive at the Gamehaven Council Headquarters. Doing so provided more space for the bees and ensured the hive wouldn't get hit by an errant playground pass. Additionally, the University of Minnesota Extension was crucial to the project's success in educating the teachers on how to properly care for the bees. The school's hive will serve as an active learning opportunity for many classes to come, fostering an appreciation for, rather than a fear of bees.



Sierra Student Coalition at UMR

The Sierra Student Coalition (SSC) at the University of Minnesota Rochester (UMR) believes that through teamwork and creative collaboration, citizens can contribute to scientific discovery and the advancement of a local policy designed to protect people and the environment. In March 2017, the SSC began collaborating with the following organizations to develop a community-driven air quality study:

- Rochester Sierra Club
- Rochester Energy Commission
- RNeighbors Association
- Zumbro Valley Medical Society
- Minnesota Pollution Control Agency

- Mayo Clinic Pediatric Asthma Epidemiology Research Unit
- Fresh Energy Board
- UMR Faculty and Staff



De Cansler

"People protect what they love, they love what they understand, and they understand what they are taught."

These words from Jacques-Yves Cousteau stuck with De Cansler throughout her teaching career and beyond. For many years, De used monarch butterflies donated by the University of Minnesota Monarch Lab, as a focal organism in her middle school science classes. The students were able to watch science come to life as the butterflies progressed through their life cycle's various stages. In 2006, she furthered her monarch expertise by spending a yearlong sabbatical in the U of M's Monarch Lab. The knowledge she gained through the experience proved especially valuable once the Monarch Lab stopped distributing eggs and larvae to classrooms in 2008.

De began breeding and raising her own monarchs. She retired from teaching in 2010, but her work with the butterflies continued. De has delivered countless eggs, larvae, and chrysalises to schools and organizations across Southeastern Minnesota at no charge. She has also shared her knowledge with teachers across the U.S. Thanks to her work, thousands of students have a better understanding of the natural world around them.

**The nomination deadline
is October 4, 2019.**



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www.rpu.org

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Where to Find RPU

Find us on social media for the latest RPU news and updates!

- @rpuoutages for outage information
- @rpualerts for RPU news and general information
- Rochester Public Utilities



Snowbird? Leaving for the Winter?

Make sure your contact information is up-to-date in case of an issue with your water or electric service.

If you are a customer that leaves Rochester for an extended amount of time over the winter, there are a few things you can do to help ensure that your electric and water services are safe and working properly while you are away.

- **Call RPU before you leave to make sure your contact information is up-to-date.** If there is a question regarding your bill or irregular usage is seen at your home, RPU may need to call you.
- **Tell RPU how long you will be away.** A note can be made on your account notifying RPU Customer Relations that you will be away.
- **Put a backup contact on your account.** Adding a backup contact of someone in the Rochester area can help you in the case of a utility emergency. Their name and phone number must be on your account,

and they must be noted as an authorized person on your account.

- **Check to see if you are signed up for Service Assured®.** RPU's underground utility repair coverage could save you expensive out-of-pocket repairs to your electric and water services. Don't be stuck with a surprise expense while you're away. (Some restrictions apply.)
- **Ensure your RPU bill is forwarded to your winter location.** Having your bill forwarded to your winter location is as easy as calling RPU customer service and leaving your winter address with them.

HAPPY
Labor Day

RPU SERVICE CENTER Holiday Hours

The RPU Service Center will be closed on:

Monday, September 2, in observance of Labor Day

Contact RPU Customer Relations Monday-Friday, 8am-5pm, at **507.280.1500.**