

SEPTEMBER 2022



Local Volunteer Wins lowa Shine the Light

2

We Pay You to Pull the Plug 2

Operation Round-Up Update 3

Manager's Report 4-5

Youth Tour Update 6

> Energy Trail Tour Returns

Power Quiz 8

Switch Smart? 8

We're looking for high school students who are interested in public service and leadership.

Students who attend our Zoom sessions in October will have a chance to win AirPods and a \$1000 college scholarship!

Guided by our cooperative commitment to community, North West REC has a long history of supporting students in the communities we serve through scholarships and leadership opportunities. We've also been sending deserving high school students to our nation's capital every summer for years as part of the national Electric Cooperative Youth Tour program.

lowa's electric cooperatives are pleased to once again offer a virtual opportunity for rural students to learn more about advocacy, electric cooperative career opportunities and the cooperative business model with a three-part webinar series in October. The Iowa Youth Leadership Academy is open to any high school student in our service area and they are invited to register at www.lowaYouthTour.com by October 1.

"This new program is perfect for rural lowa students who have a passion for public service, leadership or government," remarked Lyle Korver. "We want to raise students' awareness of how local electric co-ops power people's lives and empower communities. We also want to talk about exciting cooperative career paths that are available in smaller communities."

Once students register online for the Iowa Youth Leadership Academy, they can attend the webinars from their own computer or mobile device. Each Zoom session will last around 45-60 minutes and focus on a specific topic:

- Thursday, Oct. 6, 7:00 p.m. Cooperative Business Model
- Tuesday, Oct. 18, 7:00 p.m. Rural Iowa Advocacy
- Thursday, Oct. 27, 7:00 p.m. Civic Involvement and Leadership

At the end of each live session, one lucky attendee will be selected at random to win a pair of Apple AirPods. Students who attend all three sessions will be entered into a random drawing for two \$1,000 college scholarships. All students who register online by October 1 will receive a special box of co-op goodies in the mail.

During the Zoom sessions, students will be inspired by our lineup of speakers and presenters. Participants will learn how to advocate for issues that are important to them and build leadership skills from a motivational speaker. Attendees will also hear from former lowa Youth Tour students who pursued their passion for government service and leadership after attending the weeklong trip to Washington, D.C. The 2023 Youth Tour is slated for June 17-23 next summer.

Learn more at www.lowaYouthTour.com.



Iowa Co-ops Shine the Light on Local Volunteers

Buckets of Joy receives \$2,000 donation in honor of Sharon Van Beek of Primghar.

Earlier this summer, the Touchstone Energy Cooperatives of Iowa sponsored its second statewide contest to highlight our cooperative commitment to community. During the month of June, the Shine the Light contest invited member-consumers and employees of Iowa's locally owned electric cooperatives to nominate deserving volunteers in their communities.

"The Shine the Light contest gave our members and employees a unique opportunity to show their appreciation for family, friends and neighbors who are making a positive difference in the community," remarked North West REC CEO, Lyle Korver.



68 nominations were submitted from across the state, highlighting the work of many incredible lowans. Three volunteers were selected as winners from the entries received, including a local volunteer:

Sharon Van Beek of Primghar was nominated by Laura Leonard of Westfield, who is a member-consumer of North West Rural Electric Cooperative. Sharon was selected as a 2022 Shine the Light winner for her work with the Buckets of Joy program. Started by Sharon's parents, Buckets of Joy provides holiday buckets of supplies and hygiene products for kids in surrounding communities. A retired teacher, Sharon works hard to find the best deals for supplies like pajamas, books and toothbrushes as the need grows each year.

Each winning volunteer was honored with a \$2,000 donation to their local charity. The 2022 Shine the Light winners will also be featured in the September issue of Living with Energy in Iowa magazine. All of the contest's 68 nominators and nominees were highlighted in the August issue of the magazine.

The Shine the Light contest will return next summer. We encourage cooperative member-consumers to make plans to nominate local volunteers during the month of June at www.lowaShineTheLight.com.

We Pay You to Pull the Plug

If you currently own an older, inefficient refrigerator or freezer unit, North West REC will pay you \$50 to "Pull the Plug" on the unit and recycle it at any certified recycling or de-manufacturing facility, such as a county landfill. Up to three (3) appliances may be recycled per calendar year. We no longer accept air conditioning units.

Appliances must be clean, empty and in working order when recycled/dropped off at a certified location. A dated copy of a receipt by the certified vendor/landfill/recycler must accompany the rebate application form which is available from our office or can be found on our website.

Here are a few of the certified recyclers for North West REC members:



Plymouth County Sanitary Landfill 34898 150th St Le Mars, IA 51031 712-546-6071 Northwest Iowa Landfill Center 4540 360th St Sheldon, IA 51201 712-324-4026

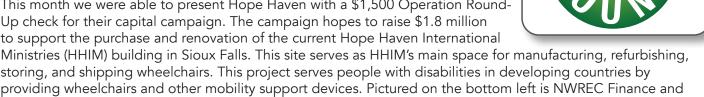
lowa's member-owned electric cooperatives have been offering cost-effective energy efficiency programs for almost four decades! North West REC provides energy efficiency rebates and incentives for a variety of qualifying energy-efficient products to our members and continues to evaluate our programs on a regular basis to ensure they remain a good value to those we serve.



Operation Round-Up Update

Operation Round Up funds are generated through a voluntary rounding up of cooperative members' electric bills to the next nearest dollar, and dollars are used to assist worthy causes and organizations right in your local area.

This month we were able to present Hope Haven with a \$1,500 Operation Round-Up check for their capital campaign. The campaign hopes to raise \$1.8 million to support the purchase and renovation of the current Hope Haven International



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storing, and shipping wheelchairs. This project serves people with disabilities in developing countries by providing wheelchairs and other mobility support devices. Pictured on the bottom left is NWREC Finance and Office Services Director, Curt Arenholz (right), presenting the check to Hope Haven Director of Development, Mark Siemonsma (left).

We were also able to present a \$750 Operation Round-Up Check to Mid-Sioux Opportunity in Sioux Center to support them in their work of helping people and changing lives. Mid-Sioux helps families and children grow through educational, health, and financial assistance. Pictured on the bottom right is NWREC Communications/ Member Services Coordinator, Emily Vander Velde, presenting the check to a Mid-Sioux Employee.

If you are currently not participating in Operation Round Up and would like to become a part of this worthwhile program, please call our office for more information. To receive an application of assistance, please call the office at 800-766-2099.





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Don't receive Smart Choices? Subscribe by scanning the QR code with your mobile device or visit our website:

www.nwrec.coop/smart-choices-sign-up





Each month North West REC hides a code in our Smart Choices news stories. Find the code below in the Smart Choices article, complete the prize entry registration form and submit for a chance to win a Sharper Image® One-Gallon Ultrasonic Cool Mist Humidifier in September.

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MANAGER'S Report

Lyle D. Korver

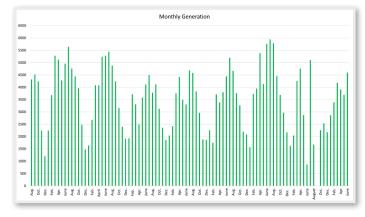
Solar Demonstration Project Reaches 8 year Anniversary

It's hard to believe, but July was the eight year anniversary month of when we installed our solar demonstration project at our Orange City office location. This solar array is a 34 kW AC system. The solar array is interconnected to our headquarters electric service and provides a portion of its electric supply.

As we stated at the outset, our purpose for doing this demonstration project was to learn more about how solar generation performs in our area, how the solar generation peak times compare to the peak usage times of our members, what types of maintenance issues there are, etc. We have learned a lot over the last eight years and we thought it would be timely to provide our members with an update.

How has the solar array performed?

We have learned that one of the most noticeable and predictable things about solar generation is that it changes significantly on a daily and seasonal basis. The best months for solar generation are clearly April, May, June, July, August and September, as you can see from the graph below. For example, typically the solar generation output in July is more than double the generation output in the month of December.



One of the other important things about solar generation is that there is no generation output during the nighttime hours and it drops significantly when it is cloudy. The graph below shows how the solar generation increases throughout a clear morning and then when the clouds start rolling in during the afternoon, generation output drops off and then increases again when it's sunny. This demonstrates the intermittency of solar.



Does the solar generation match up with our peak times?

We are a winter peaking system, which means that our highest peak demand periods occur during the winter months. This is largely due to the amount of electric heat load that our residential and commercial and industrial customers have. As I mentioned in the previous section, the solar generation output is lowest during the winter months, so this is not ideal. The other important fact is that our typical peak times during the winter months are between 7:00 a.m. and 8:00 a.m. Since it is dark at that time, there is no generation output during our peak times during the winter months.

We do not have batteries installed with our solar system as that would have added significant costs. If we had the ability to store the generation in the afternoon when we see higher generation levels, and be able to discharge this stored energy during the morning peak times, it would have much more value to us and work much better. As battery technology improves and the costs of batteries declines over time, this may become a much better option in the future.

How efficient is solar generation?

When we look at the efficiency of a certain type of generation, we look at the "capacity factor" of the generation. This calculation basically measures how often the generator is running at maximum capacity. If our 34 kW solar array generated at that level 24 hours per day, 365 days per year, it would generate 297,840 kWh's per year. What we are actually seeing on an average annual basis the last eight years is 45,500 kWh's. This results in a capacity factor of 15.3%. Again, there is zero generation during the nighttime hours and it drops significantly during cloudy conditions.

To compare this to other types of electric generation sources, wind averages between 40% and 50% capacity factor. Coal, natural gas, hydro and nuclear are all well above 50% and that is why they are considered "baseload" generation, because they are not intermittent like wind and solar.

What about maintenance issues?

As with any kind of new technology, we have found that the solar arrays are not maintenance free. Our employees periodically check the inverters and panels to make sure they are performing as they should, and we have had to replace a number of inverters in recent years to get the output back up to where it should be. Unfortunately the company that we purchased the solar system from has gone bankrupt so it has been a challenge to get replacement parts.



Is there a place for solar?

Yes. We believe in an "all of the above" strategy relating to electric generation resources. It is very important that we continue to have good baseload resources that are available to meet our electric needs during our highest "peak demand" periods such as hot summer days or cold winter days/nights. Intermittent renewable resources such as solar and wind are a piece of the generation resource puzzle, but it's important that we don't rely too much on these



types of generation sources or we will be faced with "rolling blackout" scenarios like some areas of the country have already been concerned about.

Please contact us if you have questions about solar.

We know that many of our members have been contacted by solar vendors and have thought about possibly installing solar. We would encourage any member who is thinking about solar to contact us and we would be willing to answer your questions and share information about our solar demonstration project.

We also encourage you to ask good questions when you are contacted by solar vendors such as "What are the vendors including in the payback analysis for future rate increases?". We have heard in some cases they factor in 5% or higher annual rate increases and it's important to note that we haven't had a rate increase in over 7 years. Obviously the projection for future electric rate increases would have a big impact on the payback analysis.

It's important that we stress again that we are not "anti-renewable". However, we believe it is important that we share the facts with our members about the limitations of this type of generation.

We are more than willing to work with any member who decides to install solar in terms of interconnecting to our system. We just don't want you to have any surprises.

Local Teens Attend National Tour Program

Hudson Oolman, Leah Langel, and Addison Arens recently participated in the National Electric Cooperative Youth Tour of Washington, D.C., sponsored by North West REC. They spent June 19-24 in Washington, D.C., with 33 other student leaders from Iowa.

Each year in June, this weeklong leadership development program provides high school students the opportunity to learn first-hand about government, the electric cooperative business model and today's pressing issues in the energy industry. Students met their elected representatives in the U.S. House and Senate, toured historic sites and ran their very own Snack Cooperative.

The Electric Cooperative Youth Tour has been a joint effort of local owned electric cooperatives, such as North West REC, their statewide trade associations, and the National Rural Electric Cooperative Association (NRECA) for nearly 60 years.

In addition to taking in the sights of the nation's capital, all the state groups convened for the Rural Electric Youth Day, sponsored by NRECA, to learn from public figures and other inspirational speakers. This year's Youth Day agenda included Mike Schlappi, a four-time Paralympic Medallist and two-time world Wheelchair



Basketball champion. Schlappi shares his inspiring message for every American, young or old: "Just because you can't stand up, doesn't mean you can't stand out."

Since 1958, Iowa's electric cooperatives have sponsored high school students for visits to their U.S. congressional delegations, energy and grassroots government education sessions, and sightseeing in Washington.

For more information on how you can participate in North West REC's 2023 Youth Tour program, visit nwrec.coop. Search for "Iowa Youth Tour" on Facebook, Instagram and Twitter to see the group's recent adventures from 2022.



How do you get a switch if you are do not currently have one?

To join Switch Makes Cents you need to have equipment that can be hooked up to a switch. This includes: electric water heaters, electric air cooling and heating systems, electric irrigators, and electric generators. To get a switch you can stop by one of our

offices and pick one up to have an electrician install for you. Let us know once your electrician gets it installed and we will connect it to our load management program. We do not install new switches, but we will maintain them if they ever need to be replaced, disconnected or have new equipment hooked up to them. You can always call the office if you have any questions about the Switch Makes Cents Program.

It Pays to Read!



Congratulations to Alan Lucken (*pictured left*) on being drawn as this quarters Are You Switch Smart Newsletter Contest. He won a SunJoe Electric Pressure Washer.

Congratulations to Kevin Hodgson (Wife & Daughter Pictured Right) for finding the code in the June Smart Choice Articles and winning the Honeywell® QuietSet Whole Room Tower Fan! You too can win bill credits and prizes by signing up on our website to receive our monthly Smart Choice emails full of great energy efficiency tips and important information form NWREC.



2022 Energy Trail Tours Hit the Road After 2-Year Hiatus

Flip a switch, and the lights come on. Behind this simple action is a complex network of people, power plants, and transmission lines that work around the clock. Their mission: to ensure safe, affordable, reliable electricity flows to more than 140 member cooperatives in nine states.

North West REC, through its generation and transmission cooperative Northwest Iowa Power Cooperative (NIPCO), is a member of Basin Electric Power Cooperative's power supply system. This regional wholesale power supply cooperative has nearly 7,000 megawatts of generating capacity and 2,300 miles of high-voltage transmission lines - all managed with you, the member-owner, in mind.

Following a 2-year hiatus due to the Covid pandemic, 23 members of North West REC joined members from six other electric cooperatives within NIPCO's system on a three-day excursion through the Dakotas to learn about where their electricity comes from while having fun along the way.

North West REC encourages members to get the inside story of how electricity is made. Learning about the big energy picture helps us all make smart choices from our households and businesses to the public policy arena.



Trip 1 participants L to R: Nate and Rhoda Van Ravenswaay, Wilmer and Diane Wynia, Jay and Juanita Anliker, Kim Wiltman, Dean Lohrberger, John Lohrberger, Lois Boone, Don Konopasek

"NIPCO and its member cooperatives feel it is essential to provide an opportunity for members to get up-close and personal with the source of their electricity," explains Angela Catton, NIPCO's Manager of Member Relations and Development. Catton serves as the host of the Energy Trail Tour. "NIPCO purchases approximately 80% of its power supply from Basin Electric Power Cooperative and 20% from Western Area Power Administration (WAPA) which markets power generated from the Missouri River Dam System. NIPCO's total blended generation portfolio from these suppliers includes electricity generated from coal, water, wind, natural gas, solar, and other sources."



Trip 2 participants L to R: Dave and Deets Bosma, Dani and Roger Oetken, Sherrie and Ken Van Donslear, Betty and Garret Visser, Dennis and Deanna Roeder (not pictured)

The trip includes stops at the following:

Oahe Power Plant and Dam

The first electric-generation stop on the three-day journey brought tour guests to Pierre, South Dakota, to understand the process of hydroelectric generation and the innovation of the rolled-earth dam that created Lake Oahe, the fourth largest reservoir in the United States.

Antelope Valley Station

The tour included an overview of the model room and a guided walking tour of the power plant. The walking tour included stops at the turbine deck, control room, boiler, and observation deck on the 17th floor.

The Coteau Properties Company Freedom Mine

Tour guests learned how lignite coal is produced at a surface mine and how the land is returned to its original state. A guided drive-through tour took members through active mining areas where they witnessed giant earthmoving equipment in action.

The trip also offered insight into operations at **Great Plains Synfuels Plant** and how coal can be refined into natural gas and a variety of other products.

Energy Trail Tour participants also learned about wind generation and renewable energy resources in America's overall energy mix. The tour provides a "mobile classroom" on the process of wind generation and how a turbine works.

Over three educational and fun-filled days, members gain a deeper understanding of the cooperative difference, which includes the history of rural electric cooperatives, the Seven Cooperative Principles that guide them, and the Touchstone Energy® brand's four foundations of service: Integrity, Accountability, Innovation, and Commitment to Community.



- 1. What kinds of appliances can you recycle for a \$50 rebate?
- 2. Name one of the stops on the Energy Trail Tour:
- 3. Who recently received an Operation Round-Up Donation?

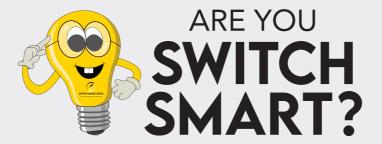
Name _____ Acct. # ____

Find the answers within the content of this newsletter, our website or Facebook posts and you could win a prize of \$10 off your electric bill. Send your answers to powerquiz@nwrec.coop or you can send your written answers to North West REC, PO Box 435, Orange City, IA 51041. You may mail your entry along with your electric bill payment, but remember the deadline is October 10. Each month, ten names will be randomly drawn from all correct entries for a \$10 bill credit. Members who answer the questions correctly and participate at least three times throughout the year will be eligible for 2 - \$250 bill credits, through a random drawing, at the end of the year.

POWER QUIZ Winners

JULY 2022

Jim Jonker - Orange City Ann Cosgrove - Le Mars Duane Mulder - Sioux Center Anita Heitritter - Archer Mark Hibbing - Paullina Danette Burrington - Maurice Marilyn Straub - Hospers James De Boom - Sutherland Tanner Eischsen - Ida Grove Robert Ver Mulm - Sioux Center



How do you get a switch?

Answer:	
Name	Acct. #

What do you know about the Switch Makes Cents program? Find the answers within the content of this newsletter, our website or Facebook posts and you could win a prize. Send your answers to switchsmart@nwrec.coop, fill out the question form online, or send your written answers to North West REC, PO Box 435, Orange City, IA 51041. You may mail your entry along with your electric bill payment, but remember the deadline is September 30. At the end of the quarter one name will be randomly drawn from all the correct entries for a prize. There will be a new question every month, participate up to 3 times a quarter!

North West Rural Electric Cooperative

P.O. Box 435 1505 Albany Place SE Orange City, IA 51041-0435

OFFICE HOURS: Monday through Friday 7:30 a.m. till 4:00 p.m.

Orange City office open during noon hour

Le Mars office closed 12:00 - 12:30 p.m.

Ida Grove office open 9:00 a.m. - 2:00 p.m. Wednesdays only

PHONE: (800) 766-2099

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Lyle D. Korver CEO & General Manager

> Curt Ahrenholz Finance & Office Services Director

Emily Vander Velde Editor





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