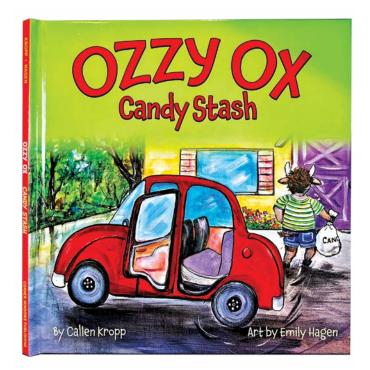


BY BRITTNEE WILSON



f you have been a longtime member of Northern Plains Electric Cooperative (NPEC), Connie Krapp's name may ring a bell. Krapp provided members with countless feature stories and editorials for NPEC's local pages in *North Dakota Living* during her 20 years of employment with NPEC.

If you never had the pleasure of meeting Connie on one of her treks across the Northern Plains, I will tell you she is a bright light of a human, who is eager to get to know you and hear your story. I had the honor of meeting with Connie at her Jamestown home to see what she has been doing after retirement. She shared her latest adventure and lifelong dream of becoming a published author and getting to share her stories with the world.

Connie grew up in rural Windsor as "a very busy farm girl." Once married, she continued to help with farm duties, including raising cattle and bison, alongside her husband, Oren, in addition to her job as director of communications and public relations at NPEC. They raised three children and Connie declared her favorite memories were during storytime before bed. As Connie was amidst writing other's stories, she always said to herself, "One day when I retire, I'm going to write children's books." Well, Connie retired in 2013. But it was a medical scare last fall that pushed her to pursue her lifelong dream 10 years later.

"I was in the ambulance and all I could think of was, 'I haven't written my books!" Connie said.

After she was discharged and recovering at home, Connie wrote a series of children's rhyming books. The series takes place in the Land of Ox, where young rascally



NORTHERN PLAINS Electric Cooperative

Author and former Northern Plains Electric Cooperative employee, **Connie Krapp**, who writes under the pen name, Callen Kropp, has written a four-book series of children's rhyming picture books to be released in the summer and fall.

Ozzy Ox finds himself in one dilemma after another, learning the lessons of life with guidance from his inexhaustible MomOx.

Connie credits the inspiration of the series to the years of raising bison (a cousin of the oxen family) and the bedtime stories she and her husband would make up.

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SEPTEMBER 2023

INSIDE THIS ISSUE

- A life-changing experience
- Welcome back, students
- Solar project ends



Back in his room, he finds his stash; Is eating candy in a flash! So many wrappers hit the floor; He eats just one, then twenty more.

Unwrapping quickly, he eats fast Until a lone piece is his last.



continued from previous page

These endearing stories provide everyday life lessons. Through the lovable young ox, children learn to make good choices, admit mistakes and learn that life's everyday difficulties can best be overcome by honesty, acceptance and forgiveness. By reading these rhyming books, children will also learn about word and language formation.

Connie already had a relationship with a West Fargo artist, Emily Erickson Hagen, whom she thought would be perfect to illustrate the book.

"Illustrations are depended on a lot in children's books," Connie said.

Hagen, who is a mother and grandmother, knows the joy picture books bring to children. Hagen's vibrant illustrations really brought life to the Land of Ox.

Now with four books written, the NPEC member had to figure out how to get her books into the world with the new field of publishing. Connie had to obtain an International Standard Book Number, as well as start her own publishing company so she could be registered through the Library of Congress.

"This was a definitely a learning curve," Connie said, referring to the legwork to get the books published. Once that was all in place, she contacted Amazon for printing and distribution.

Connie, who writes under the pen name, Callen Kropp, also has plans of getting her books in local stores around Jamestown and Carrington.

The first book of the series, "Ozzy Ox: Candy Stash," which was released on Amazon in July, received a "FIVE-STAR Reader's Favorite" editorial review: "Callen Kropp's picture book story, 'Ozzy Ox: Candy Stash,' is a great way to teach young readers about responsibility, making good choices and owning up to mistakes made."

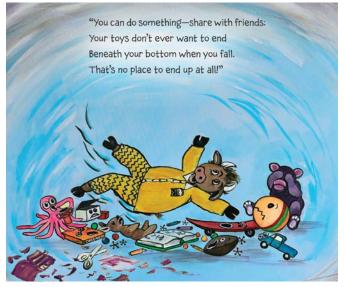
The rest of the story

Ozzy Ox has many more adventures in store. Look for him and MomOx in these upcoming titles: "Toy Trauma," "Moody Morning" and "Takes a Stand Against Socks."

Connie said she has enjoyed retired life, but is really enjoying her time as a published author.

"I'd rather be too busy than not busy enough," Connie said.

You can find more information on the book series on Connie's website, www.callenkropp.com. ■



The second book in the series, "Toy Trauma," is now available.



The North Dakota students visited many memorials, including Ford's Theatre. The theater is infamous for being the site of the assassination of Abraham Lincoln.

or over 50 years, teens from rural America have been coming to Washington, D.C., on the "trip of a lifetime," the Electric Cooperative Youth Tour, courtesy of their local sponsoring electric cooperative.

This June, 15 North Dakota high school students enjoyed an intensive week packed with touring museums, monuments and memorials, as well as learning about government, history and the cooperative business.

Among those students was Kaitlyn Erickstad, a senior at Starkweather High School and daughter of Northern Plains Electric Cooperative members Jonathan and Jodi Erickstad of Webster.

Kaitlyn joined teenagers across America as they heard national speakers address the important role electric cooperatives play in their local communities at Capitol Hill Day. After touring the Capitol, the North Dakota students met with Sen. John Hoeven and Rep. Kelly Armstrong in a private setting. They learned about issues concerning their home state and even got to ask any questions they had.

In a letter to the cooperative, Kaitlyn expressed her gratitude, "Thank you all so much for this amazing D.C. trip! I feel honored to be selected for this amazing opportunity. We have seen amazing memorials, met lovely people and learned about our nation's history. None of this would have been possible without you!"

For more information on the Electric Cooperative Youth Tour, email Brittnee Wilson at brittneew@nplains.com.



Kaitlyn Erickstad (middle) enjoys a Baltimore Orioles baseball game with fellow Youth Tour participants.





A group of 19 junior and senior students from Fessenden-Bowdon High School visit the legislative session on March 15, partially sponsored by Northern Plains Electric Cooperative.



Harvey High School brought 20 seniors in February to view the Legislature in action as part of the Northern Plains Electric Cooperative legislative tour program.



Eighteen seventh- and eighth-graders from Maddock Public School took advantage of NPEC's power plant tour program in May.

Welcome back, students!

s the new school year kicks off, Northern Plains Electric Cooperative (NPEC) would like to share the many educational opportunities provided to students. You can find more information on each program by visiting our website, www.nplains.com, or be sure to read future issues of *North Dakota Living* for announcements. Any questions can be directed toward Brittnee at 800-882-2500.

Power plant tour program

A full-day tour provides students with great insight into one of North Dakota's brightest and most important industries. Students will come away with an understanding of the complexity of electrical generation and will learn about the many job opportunities available in North Dakota's energy industry. To help defray costs, the co-op offers financial assistance to schools located within NPEC's service area that book a tour.

Legislative field trip

Electric cooperatives were born in government. An understanding of, and involvement in, government is critical to our success and the successes of the communities we serve. That's why NPEC encourages students to visit the state Capitol to view North Dakota's legislative process in action. Recognizing that school budgets are often tight, NPEC will help defray trip



expenses to any high school in the cooperative's service area that takes a student group.

Scholarships

The Basin Electric Power Cooperative scholarship program recognizes and encourages the academic achievements of students in the region. It also serves as an investment in the economic future of rural areas. Yearly, together with Basin Electric Power Cooperative, a \$1,000 scholarship is given to one lucky winner of an NPEC member dependent.

Additional scholarship opportunities have been given at our annual meeting in a luck-of-the-draw format.

Electric Cooperative Youth Tour

This essay-writing contest is an opportunity for one lucky winner to enjoy a week filled of educational learning and site seeing in an all-expense-paid trip to Washington, D.C., compliments of NPEC.

Kids safety poster contest

By hosting a safety poster contest, our intent is to initiate conversations between children and parents/ teachers about the dangers of electricity and ways one should practice safety. The yearly contest is open to elementary-aged students and the cooperative offers cash prizes to the winners.

Do you have electric heat? Check that breaker!



ften, members turn off their breaker to their heat meter through the summer months and forget to turn it back on heading into fall. If the breaker is off to the meter, the meter will not register, and the member will not be credited for the lower rate of electric heat.

If you already have an off-peak meter and your breaker is switched to the "on" position, you do not need to do anything.

Don't have an electric heat meter?

One thing that can help members save during cold winter month is having a heat meter installed. An electric heat meter records your heat usage only. When electric demand and market prices are high, an off-peak device in the home automatically switches from an electric source to a backup source, such as propane or fuel oil. In exchange, participating members receive discounted off-peak rates, which are competitive with fuel oil and propane. Our off-peak program is designed to reduce electric demand during peak times and save money.

If you are heating with electric heat and do not have a heat meter, please contact the Northern Plains Electric Cooperative office at 800-882-2500 to learn more.

Don't aim at electrical equipment!

As various North Dakota hunting seasons approach, please remember that electrical insulators, conductors and electrical equipment are NOT on the hunting list.

Northern Plains Electric Cooperative encourages hunters to be aware of electrical equipment while enjoying the great outdoors this season.

Hunters and other gun owners should not shoot near or toward power lines, power poles and substations. A stray bullet can cause damage to equipment, could be deadly to the shooter and potentially interrupt electric service to large areas. Be aware of what's behind that big buck or it might cost big bucks. Repairs can be costly and damages cause outages to our members. As a nonprofit cooperative, owned by the members, we all share in this expense.

We encourage experienced hunters who are familiar with the area to identify the locations of utility properties and equipment to young or new hunters in their group and remind them to avoid shooting toward these facilities. Enjoy the great outdoors. Just be sure to hunt only what's in season.

HUNTING SAFETY TIPS:

- Do not shoot at or near power lines or insulators.
- Familiarize yourself with the location of power lines and equipment on land where you shoot.
- Take notice of warning signs and keep clear of electrical equipment.
- Do not place deer stands on utility poles or climb poles. Energized lines and equipment on the poles can conduct electricity to anyone who comes in contact with them, causing shock or electrocution.
- Do not shoot at, or near, birds perching on utility lines. That goes for any type of firearm, including pistols, rifles or shotguns.
- Do not place decoys on utility equipment. Anything attached to a pole besides utility equipment can pose an obstruction – and a serious hazard – to electric cooperative employees as they perform utility operations.





Failing equipment contributes to end of solar project

BY BRITTNEE WILSON



A s reported previously, the 6.56-kilowatt solar system installed at our headquarters facility in Carrington has run into some hardware issues. In the early months of 2022, one set of micro inverters failed on the solar system, which has been impacting its overall production.

The cooperative would normally replace the broken equipment, but the original equipment manufacturer went out of business. As of today, a direct replacement cannot be found on the open inverter market without replacing the entire panel system. As a result, Northern Plains Electric Cooperative (NPEC) has made the decision to decommission the solar system this fall.

The system has experienced a continual decline in production over the past year and investing additional resources into maintaining the system would not be practical. We were able to achieve our primary goal of sharing lessons learned from owning and operating a solar system.

The 16-panel system was jointly installed with former sister co-op, Dakota Valley Electric Cooperative, in 2015 as a research project to collect data to present to members as a reference when considering solar options. The co-op initially wanted to learn more about the cost to install, the cost to maintain, how reliable a system would be and what sort of return would members see on their investment. Lessons were learned on all parts, which is summarized below.

How much electricity is generated?

Before the failed inverter in 2022, the solar system produced an average of 8,650 kilowatt-hours (kWh) per year, for an average savings of about \$950 per year. Of course, the output varies from month-to-month with the total energy generation mostly dependent on sunny days. In North Dakota, the winter months will see less electricity production from a solar array due to the limited hours of available sunlight and the number of overcast days we experience.

In the winter season, November through April, the system produced an average of 528 kWh per month. By contrast, the summer months, May to October, have a greater potential for solar production with an average of 904 kWh per month. Total energy generated was affected by the failed equipment.

Maintenance

Over the eight years commissioned, NPEC saw minimal maintenance required on the overall system, with basic cleaning of dust, leaves and snow and resetting of the inverters when they trip. Besides the current inverter issue, the only major maintenance took place in 2018, when high winds bent the aluminum supports, causing four reflector panels to fall and break. The cost of materials to repair these damages was \$373, plus labor to reinstall the parts.

During those times of repair and maintenance, it was noted that access to fix the inverters and panels would have been much more difficult, especially in the winter, if our system had been roof-top mounted. NPEC was fortunate to have the space for a ground-mount system, free from obstruction that would have impacted the on-peak sun hours.

Return on investment

Before the detrimental failed equipment, the



cooperatives were looking at a 20-year return on their \$19,000 investment, which was the net installed cost after receiving \$10,000 in grants. Any repairs to the system extend the payback period. It is important to note the life of inverters on any system is shorter than the solar panels themselves. A typical life of an inverter may be 10 to 14 years, while the solar panels have an expectancy of 20 to 25 years.

Our geographical location is our biggest downfall when it comes to solar. Typically, in North Dakota, the break-even point financially for investing in and installing a solar array will take 18 to 20 years. This assumes you can receive the 30% to 33% tax credits or grants such as those used by NPEC.

Using electricity while the sun shines is a key factor if you are hoping to see a return on your solar array investment. One needs to utilize nearly 100% of the electricity a solar array generates. Otherwise, there may not be a financial break-even point during the lifetime of the equipment.

"The key is to size the system for your own use. Do not overbuild," said IT Manager Scott Buchholtz.

NPEC's actual energy production was close to the estimated output for the location, which was calculated using the PVWatts Calculator before installation.

This online tool can be used by homeowners to estimate energy production of grid-connected photovoltaic energy systems throughout the world. It can be found on the official government website, www.pvwatts.nrel.gov.

For more information, visit www.nplains.com and click on the "Distributed Energy Resource" tab on the homepage or call us at 800-882-2500.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	\$ Saved
2023	367	386	340	343	387	376	408	-	-	-	-	-	2607	\$287.00
2022	324	562	709	643	726	862	861	793	739	583	262	237	7298	\$803.00
2021	231	590	853	885	997	1063	1036	923	866	607	378	265	8694	\$957.00
2020	321	678	868	947	1019	1048	1188	1012	818	601	445	329	9273	\$1,020.00
2019	303	190	879	814	958	942	1138	978	710	474	250	190	7825	\$861.00
2018	398	593	765	1113	1015	1051	1142	1004	757	584	266	257	8945	\$984.00
2017	276	538	723	759	905	1016	1208	1011	760	721	426	332	8675	\$954.00
2016	325	484	831	821	975	1104	991	1042	730	536	440	248	8527	\$938.00
2015	-	-	-	-	530	961	1065	1019	861	607	413	232	5689	\$626.00



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CARRINGTON OFFICE: 1515 West Main Carrington, ND 58421 **OFFICE HOURS:** Monday-Friday 8 a.m. to 4:30 p.m.

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