



CAPITAL ELECTRIC
COOPERATIVE

CAPITAL ELECTRIC COMMENTS

Capital Electric Cooperative • Bismarck, N.D.
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SEPTEMBER 2014

PHOTO BY CARMEN DEVNEY

We shine as one

Last winter's snow melt and heavy spring rains raised water levels to a historical high, flooding out and toppling a single-phase distribution line that fed a pasture well owned by Capital Electric Cooperative members Curtis and Brenda Eichele, Driscoll. In this month's local pages, learn why the co-op invested in solar energy to power the well ... and how it is benefiting the cooperative, the cattle, the Eichele family, and members like YOU.

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The completed solar-powered pasture well is protected by corral panels to prevent livestock damage to the equipment. In the fall when the cattle have been removed from the pasture, owner Curtis Eichele will open a valve and drain the water from the storage tank, and turn off the circuit breaker for the pump. In the spring, he will close the valve and turn on the breaker; then the system will resume pumping.



Solar-powered pasture wells

A smart solution for remote areas

STORY AND PHOTOS BY CARMEN DEVNEY



This spring, high water levels toppled a single-phase distribution line that ran through a slough to a pasture well northeast of Driscoll. A Capital Electric Cooperative line crew found the downed poles floating in the slough during line patrol, and contacted the co-op's member services department. They knew

Josh Schaffner, foreground, inserts the last solar panel under the guidance of **Tom Jespersion**. Each panel produces 60 volts, so the entire system will produce roughly 240 volts DC. Once the panels are producing energy, the only way to de-energize them is to cover them with a blanket to stop the sunlight from penetrating.

PHOTO BY DOUG MORK



Capital Electric members Curtis and Brenda Eichele would need the power restored to provide a mid-summer to late-fall clean water supply to their cow/calf pairs.

In the spring and early summer, the cattle can drink from the slough as long as it stays fresh. As the temperatures rise and the water warms, algae grows and contaminates the water.

The slough — which used to be land Curtis farmed years ago — had grown in width and was now at least 11 feet deep. Doug Mork, member services director at Capital Electric, says the line could not be rebuilt through the slough.

“So much water and winter ice make power poles unstable,” he says.

The co-op considered constructing a new line from another direction to get service to the well. Construction estimates were \$40,000 to serve a seasonal well that would generate less than \$300 per year in total revenue. It



Curtis and Brenda Eichele are the first Capital Electric Cooperative members to operate a solar-powered pasture well. His parents, Ted and Ruth Eichele, were the first generation to farm and ranch near Driscoll. Curtis and Brenda have four grown sons and one daughter, with sons Adam and Karl residing on the farm. Brenda and Curtis farm in partnership with Karl. Adam drives the rural mail route and helps on the farm as time allows. Brenda says farming is definitely a family affair.

would have been a significant expense for the co-op’s membership that would never have paid for itself.

Mork suggested that Capital Electric install a photovoltaic (solar panel) pumping system to power the well. Verendrye Electric Cooperative, a co-op that serves the surrounding areas of Minot and Velva, has been installing these solar systems for several years. Tom Jespersen, energy management advisor at Verendrye Electric, says the co-op delved into solar because their membership also has pasture wells in remote areas that do not create revenue for the co-op.

“These types of pasture wells use very little energy. When we build a mile of line out to them, we never recover our investment out of that mile of line. We started installing solar panels for that reason,” he says.

The keys to solar-powered well systems are well depth and the potential water flow rates required to safely provide water to the cattle through the hottest days of the summer.

“The Eicheles have a relatively shallow well of 60 feet, and the solar pump can produce a more-than-



Under the leadership of **Tom Jespersen**, Verendrye Electric Cooperative has installed more than 300 solar-powered pasture wells in its service area. When the co-op had about 225 systems, Jespersen added up the miles of line that Verendrye didn’t have to build or maintain. He figures the co-op saved 300 miles of line ... and more than \$1 million. Those numbers continue to grow.



PHOTO BY DOUG MORK

A simple gravity flow piping system is used to feed the drinking tank from the storage tank. A mechanical float valve closes when the drinking tank is full, allowing the solar pump to refill the storage tank. An electrical float valve in the storage tank shuts down the solar pump.

adequate flow of 10 to 12 gallons per minute for the herd,” Mork describes. “Overall, it pointed to a perfect application.”

In July, Capital Electric Lineman Steve Harrington and Lead Lineman John Frey cleared an area in the pasture and set up the storage tank. Then Mork and Josh Schaffner, member services assistant, installed the solar panels, pump, wiring and related system equipment, with assistance from Jespersen.

“The staff at Verendrye Electric are experts in these installations, as they have installed more than 300 systems. They are also a dealer and distributor for solar pumping materials,” Mork says.

The system utilizes four photovoltaic panels, 60 volts DC each, installed to face south and capitalize on the sun’s rays. The existing submersible pump is replaced by a specially designed solar pump and a 4,000-gallon storage tank set up adjacent to the drinking tank. The solar pump keeps the storage tank full as the water gravity flows to the drinking tank through a mechanical

float valve. The storage tank is black, so it limits algae growth. If the sun doesn’t shine for several days, the cattle have the stored water to draw from, plus it will be cooler and the cattle will require less water. Curtis can also plug in a generator and run the pump, should an emergency arise due to extended cloud cover or system repair. He lives nearby and can frequently check the well.

Capital Electric’s investment came to about \$9,000, versus the \$40,000 it would have cost to build the new distribution line. Mork says the Eicheles will continue to pay a seasonal minimum charge.


Mork expects more Capital Electric members to consider a solar pasture well service when installing new pasture wells, where the cost to electrify the well is paid up front by the member. The co-op is in the process of implementing a policy for solar well systems and will have it ready for 2015.

The system is a win-win, for the co-op’s farmer-producers and the entire membership. In addition, solar power is renewable energy, and the

cooperative is proud to be a good steward of the environment.

It’s also a win for the cows grazing in the Eichele’s pasture.

“The value of having a fresh supply of clean water is very important to the health and weight gain of those animals. That is why we are so appreciative of having a fresh water supply brought to us by solar power,” Brenda says.

Capital Electric Cooperative thanks members Curtis and Brenda Eichele for sharing their story, and for helping to educate the membership on this innovative technology brought to them by their local Touchstone Energy® Cooperative. 



Josh Schaffner connects the gravity flow piping and valves for the drinking tank. The storage tank can hold 4,000 gallons of water. If the cattle consume large amounts of water on extremely hot days, the pump may not keep up without using a storage tank. When a mechanical float valve in the drinking tank opens, water flows from the storage tank. The pump starts when the level in the storage tank drops and will continue until both tanks are full.



**Move over,
Willie
Wirehand!**

Capital Electric has a new mascot. A Swainson's Hawk is perched near its nest in an evergreen located behind co-op headquarters in north Bismarck. You will often see Swainson's Hawks on fence posts in rural areas, eyeing the prairie for insects and vertebrate prey. In the fall, flocks of these majestic birds will fly to Argentina for the winter in what is one of the longest migrations of all predatory birds.



Back to school

Capital Electric Lineman **Steve Kuball** (right) learned a new climbing technique that incorporates fall protection at hotline school. Hosted by the North Dakota Association of Rural Electric Cooperatives (NDAREC), the annual safety training was held July 21-25 in Mandan next to the line school. NDAREC's Apprenticeship Training and Safety (AT&S) team, with help from seasoned linemen as instructors, taught apprentice linemen how to work safely on energized lines. Journeymen linemen like Kuball also attended the annual training, to get a refresher and learn new ways of doing maintenance and repairs. Linemen Lance Diebold, John Frey, Rick Gieser, Jesse Goehring, Matt Hagen, Jeff Holzer, Brad Johnson, Seth Lothspeich and Braden Martin also attended on behalf of Capital Electric.

Key Trend Ratios: How does Capital measure up?

BY WES ENGBRECHT

Businesses will often look to financial ratios to determine their operational efficiency. Cooperatives have the benefit of the National Rural Utilities Cooperative Finance Corporation's (CFC) Key Trend Ratio Analysis (KRTA) to help them assess their operational performance. CFC has been providing ratio analysis through KRTA to the nation's distribution cooperatives since 1975. The financial information used to develop the ratios is gleaned from each cooperative at year-end through the use of a standard reporting process. The advantage of using CFC's KRTA is that all cooperatives provide comparable data in the same format and it is easily compared.

Capital Electric Cooperative has long been a leader among cooperatives with a strong financial profile and positive

key trend ratios. Many of the ratios in the KRTA show that Capital Electric is an extremely efficient cooperative when it comes to utilizing our members' money. We are in the bottom 10 percent in operating revenue per dollar of investment in electric infrastructure and lowest 20 percent in electric revenue per kilowatt-hour sold, which means we have low overall electric rates compared to the nation's cooperatives. We also really shine in the categories relating to expenses per consumer. Our total controllable expenses per consumer rank in the bottom 3 percent of more than 800 cooperatives. Compared to other cooperatives our size, we are in the bottom 2 percent of that same category. This means we are running a very efficient operation and controlling our expenses extremely well.

Our key ratios continue to be very

strong in spite of the fact that we are in the top 2 percent in the category of annual growth in number of consumers. As you may expect, we are one of the fastest-growing cooperatives based on number of consumers in the country. Even with all of our growth, Capital Electric continues to receive high marks in service interruptions. Not only do we run in the lowest 7 percent of cooperatives relating to the duration of outages, but our system service availability of 99.99 percent places us in the top tier as well.

As cooperative members, we can be proud of the operational performance that Capital Electric has been able to maintain over the years. We thank our consumer-members for being active in the management of the cooperative through the board members you elect. We are doing great things together! **CEC**

“My goal in life? To someday be able to step back and see ‘Wehri Farms, Mott, N.D.’ in crisp, bold decals on the door of a semi. To know that what I am doing is feeding thousands. To wake up every morning and be proud of my accomplishments and excited to start the day. To be able to look around me and see for miles all the hard work I have put into my life. To have a loving wife who helped me raise beautiful children to whom someday I can pass it all down to. Someday.”

– Michael Wehri, 2013



COURTESY PHOTO

Michael Wehri was full of life and eagerly anticipated the day he could farm on his own. Those dreams were cut short after he died in 2013 when his tractor contacted a power line.

Your safety matters to us

THE WORLD LOST A FARMER...

BY LEXUS HAUT

At the age of only 19, Michael Wehri knew what he wanted out of life. He knew his responsibilities, and he was more than ready to undertake them ... but as willing and eager as he was, Michael never got his someday. He had just finished double-checking the clearing of his equipment when the wind took a power line and caught the sprayer unnoticed.

He died on June 10, 2013.

On that day, the world lost a son, brother, nephew, friend, classmate ...

The world lost a farmer.

Although this happened in western North Dakota, it could have happened anywhere in the state, where agriculture is more than a job — it's a way of life. And in life, it's all about the people we love. Farm safety is important wherever you may be!

What I'm learning in my internship scares me. The number of accidents involving farm equipment and power poles has more than tripled since 2009.

Safety is a huge priority for the state's farmers and ranchers, and for electric cooperatives like Capital Electric. In addition to spreading safety messages through radio ads and billboards, your co-op also works with members to raise the height of lines or install underground cable where appropriate.

Michael Wehri was a classmate of mine at Mott-Regent High School and also one of my best friends. Not only was he a one-of-a-kind guy, he was a role model. He was a leader who always gave a thumbs up of encouragement and reassurance; he was the most optimistic person I've ever known.

Farming truly ran through his veins. In his free time, he'd read magazines or manuals on farm equipment. It was just what he loved. It was his God-given purpose, and he carried that through his last day.

In the end, it truly is the little things. Those small memories we hang on to. The way Mike impacted my life will live on. I promise.

Stay safe out there.

Your safety matters to us. **CE**

Editor's note: This article was written by Lexus Haut, intern, Dakota Valley Electric Cooperative and Northern Plains Electric Cooperative. We are grateful to Lexi and the co-ops, and the family of Michael Wehri, for sharing this powerful story and message.

CAPITAL CREDIT CLAIMS

Listed below are the names of former Capital Electric Cooperative, Inc. members who had capital credit checks mailed to them in June of the year 2008. These checks have been returned to Capital Electric Cooperative by the postal service because they could not locate the members at the address on file. A further search by Capital Electric personnel has not turned up their whereabouts.

If you received electrical service from Capital Electric Cooperative, Inc. any time during the year 1992 and your name is on this list, please contact our office. If you know of the whereabouts of members on this list who received electrical service from Capital Electric Cooperative, Inc. any time during the year 1992, please have them contact our office at 701-223-1513.

Please keep in mind that not all of the capital credit amounts are large. However, we desire to get the money due to those who earned it, and clear up our records.

We will redeem capital credits for those members on the following list who notify us prior to Dec. 1, 2014. Notice is hereby given that any of the aforementioned unclaimed capital credits outstanding after Dec. 1, 2014 will be forfeited pursuant to Section 10-15-34.1 and 10-15-23 of the North Dakota Century Code. **CEC**

3RD NOTICE – SEPTEMBER 2014

AMYOTTE, MYRA	FAITH INDEPENDENT	LICHTENWALTER,	ROBERT'S INC.
ANDERSON, DAVID W.	BAPTIST CHUCH	ERNEST R.	ROBINSON, MARK D.
ANDERSON, GARY	FARRELL, KEITH	LINCOLN CABLE TV	ROBINSON, WM A.
ANDERSON, KAREN	FIRST TRUST COMPANY	LIND, RICHARD	ROEDER, JAMES
BAKER, PAULINE	OF ND	M & M PIZZA FACTORY	SAFEAIR SYSTEMS
BAKER, RICHARD	FONTENOT, JOHNNIE W.	MARTIN, GEORGE A.	SCHERR, ALVINA C.
BARNHARDT, BRENDA	FRANK, GENE	MAT PAC WRESTLING	SCHILL, DAMUS L.
BAUER, JASON N.	FREADHOFF, KIRK	CLUB	SCHILL, ELIZABETH
BEAUCLAIR, MICHELLE M.	FRENCH, CRAIG ALAN.	MCILROY, SHELLIE	SCHMIDT, BRIAN
BECKER, TED	FROHLICH-MILLER, KIM	MCKAY, DALINDA	SCHMIDT, VALENTINE
BENDER, BRUCE	GARRETT, DANAE L.	MEAD, EUGENE D.	SCHNEIDER, DAVID M.
BENJAMIN, GLADYS	GELLNER, EDITH J.	MEIDINGER, ANN	SCHNEIDER, NADINE
BLOOM, JOYCE M.	GELLNER, MARTIN A.	MEREDITH NEW HERITAGE	SCHNITZLER, ALLEN
BONINE, BRET J.	GLASS, LESLIE	MEYER, DEBRA	SCHNITZLER, CAROL
BONINE, KIMBERLY S.	GOYNE, DAVE P.	MISSOURI VALLEY	SENNIE, DELLA
BOOTH, JUDSON M.	HALL, LORI A.	SPEEDWAY	SHAFER, DANIEL J.
BORCHERT, AUGUST	HALVORSON, LORA	MOHN, DENIS J.	SHAFIR, GLENN J.
BRADLEY, GARY	HARTMAN, REUBEN A.	MORRISON, LLOYD G.	SHULTZ, LORRAINE
BROWN, FRANK N.	HAYDEN, GARY	MOSBRUCKER, PHILIP	SMITH, CARLA J.
BROWN, JOAN	HILKEN, MERWYN	MUELLER, DEAN A.	SODERFELT, AL
BUCHAN, EVERETT	HORNBERGER, MARLYN	NEIL-URBAN, SHERRY	SPERLE, JOE
BUS SERVICES INC.	HUNNICUTT, MARY	NELSON, CARRIE	STUART, RUSSELL
CBA WHOLESALE	HYTTINEN, KATINA	NELSON, MICHAEL	THIBERT, DELENA
CHRISTENSEN, JEAN	J M C INVESTMENTS	ODERMANN, NANCY	US WEST NEW VECTOR
COHAN, DAN	JENSEN, MARK	OKSEND AHL, JOANN M.	GROUP
CONTRACTORS	JOB, MARK J.	ORTH, TOM	VANDERBILT, MONICA
ASSOCIATES INC.	JONES, JANET M.	OVERSON, CLAUDIA	VANDERBILT, STEVEN
CORNOG, MARCIA A.	K/J ENTERPRISES	PIETZ, DAWN	VETTER, LINDA F.
CREATIVE PRODUCTS	KELLERMAN, KAREN L.	PIETZ, RICHARD	VONDAL, LORI
DAYSRING BAPTIST	KEMP, FRANK W.	POLIVODA, NADEZHDA	WALL, LEN
DEMSKY, G. A.	KESSLER, SHARON	POLIVODA, VASILY	WHITE, LONNIE C.
DEMSKY, KATHY	KIRBY, JAMES A.	PRICE CONSTRUCTION	WHITE, SHEILA M.
DENGEL, HARLAN F.	KLUTH, EDWARD W.	PRICE HAULER INC.	WILDROSE PROPERTIES
DEWALD, MONICA	KUNTZ, ED	RAUGHT, ARLENE	WILHELM, DAN P.
DIETZ, DEAN R.	KUNTZ, MICHELLE	RAYGO, BEATRICE	WILSON, DONALD J.
DINIUS, GEORGE L.	KURIHARA, CATHERINE M.	RAYWALT, KELLY	WILZ, WILLIAM J.
DINIUS, MARILYN M.	KVEUM, LEONA	REISENAUER, LAURA	WUNDER, JOHN
DIZAYEE, AHMED	LANDGREBE, LORI	RENSCHLER, BRENDA S.	WYNSTRA, BETTY
EADES, JIMMY D.	LANG, TOM	REUPPEL, DIANNE M.	ZUBROD, TOM
ENGELHARDT, JERRY A.	LICHTENWALTER,	RHONE, KATHY	
	ANGELA R.	RITTENBACH, KELLY	

Board minute excerpts July 18, 2014

The regular meeting of the Board of Directors of Capital Electric Cooperative, Inc., was held on Friday, July 18, 2014, at 9 a.m. at co-op headquarters in Bismarck.

Financial review (June 2014): Prior to the board meeting, Directors Haugen-Hoffart and Liuska reviewed the June 2014 check register and expenditures. Haugen-Hoffart reported that all checks were in order. It was moved, seconded and carried to approve the June expenditures in the amount of \$3,306,229.34.

Business department report: The business manager reviewed the June financial and statistical report with the Board. The total kilowatt-hour (KWH) sales for June 2014 were below budget by 2.6 percent. The actual monthly electric revenue is up 1.9 percent from budget. Year-to-date, KWH sales are up from budget by 5 percent and electric revenue is over budget by 6.4 percent. The financial margin for June is -\$197,107, versus the budgeted margin of -\$229,957, above budget by \$32,150. The year-to-date margin is \$369,038, under budget by \$456,904.

In June, 58 new services were billed, bringing active services to 17,931 versus 17,267 at this time last year. This is a net increase of 664 accounts over the last 12 months.

The business manager reviewed the comparison of actual-to-budgeted expenses for the month of June and for the year to date through June 2014. Accounts receivable balances as of July 17, 2014, were reviewed.

Central Power Electric Cooperative consolidation: The correspondence and modified paperwork as it relates to selecting specific notes to be transferred has been submitted to the Rural Utilities Service (RUS) by Central Power.

Imaging system: We are set up to test accounts payable and the remaining billing document scanning in National Information Solutions Cooperative's (NISC) Vault product.

Key Trend Ratio Analysis (KTRA): Manager Nygren led the discussion on KTRA. Capital Electric's ratios continue to hold strong and compare well to other cooperatives, both in North Dakota and nationally.

Capital credits: Following review of the financial condition of the cooperative and recommendation by management, it was moved, seconded and carried to authorize payment of capital credits to the following deceased members' estates:

Ray Hansen	\$1,622.38
Leslie J. Buck	\$795.37
Camillus A. Doll	\$1,285.51

Art Laib	\$167.97
Mark A Pfaff	\$1,762.79
Leonard E. Lundberg	\$2,196.58
Klint Kramer	\$735.76
Lois Thompson	\$793.89
Clarence Berg	\$5,688.02
Pat Raber	\$698.13
Lora Holden	\$281.63
Mercedes Plante	\$424.17
Doris M. Olson	\$231.02
William Reynolds	\$64.46
TOTAL	\$16,747.68

Write-offs: It was moved, seconded and carried to approve the write-offs for the quarter ending June 30, 2014.

Health Care Study release of information: It was moved, seconded and carried to allow Blue Cross Blue Shield information to be released to Middaugh & Associates, Inc. Additionally, Business Manager Fitterer is authorized to sign as Capital Electric's group leader.

Menard's Public Service Commission hearing: Oral arguments will take place on July 28, 2014. Briefs are due July 21, 2014.

Central Power report: Haugen-Hoffart and Nygren reported on Central Power matters. Discussion ensued regarding the SCADA outages and Capital Electric not qualifying in May or June for the load data credit. A significant number of easement cases are being resolved.

Engineering and operations report: Manager Nygren reviewed the written report from the engineering and operations department. This month 45 work orders were completed, adding 46 new consumers to the system.

Industrial Enterprise has poured the cement slabs for the control buildings at the Wing and Erickson substations. The Wing control building construction is currently in progress.

Fisher Contracting and The Third Generation continue to trench in cable around the Bismarck area, and VIP continues the rural rebuild in the Wing area.

Member services department:

Photovoltaic pasture well project: This project is taking shape with Verendrye Electric Cooperative ready to assist in the final install. We are waiting for the delivery of the storage tank to set up at the location, along with the installation of the array support post and the corral panels to protect the site.

Centennial road improvement:

This project requires a small amount of transmission line work. The design is complete and dirt work is scheduled to begin in early August.

Communications and public relations department: Wes Engbrecht reviewed the written report from the communications and public relations department. Some of the items discussed were the July 24 annual

co-op picnic and the United Way campaign kick-off Aug. 13.

Safety report: There were no lost-time accidents this month.

Jeff Tweten, safety instructor for the North Dakota Association of Rural Electric Cooperatives (NDAREC), conducted a safety meeting and observed construction procedures on July 7, 2014.

Dueco went through all bucket and digger/derrick trucks ensuring everything was up to code. They are all working properly.

Basin Electric Power Cooperative: The Board reviewed the written summary for the Basin Electric Board of Directors meeting.

The Basin Electric annual meeting will be held Nov. 5-6, 2014 in the Bismarck Civic Center. Wrangham will serve as the delegate. Eckroth was selected as an alternate.

NDAREC: Liuska presented on the highlights of the NDAREC meeting that was held July 8-10.

Mid-West annual meeting: The Mid-West annual meeting will be held in Denver, Colo., on Dec. 9-11, 2014. Nygren will serve as the delegate. Kramer and Patrie were selected as alternates.

Adjournment: There being no further business to come before the meeting, without objection, the regular meeting was adjourned. **CEC**

CAPITAL ELECTRIC COOPERATIVE

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BOARD OF DIRECTORS:

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David Liuska, Sec.-Treas. Wing
Sheri Haugen-Hoffart,

Asst. Sec.-Treas. Bismarck
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