RE
RURAL ELECTRIC MAGAZINE
SEPTEMBER 2015
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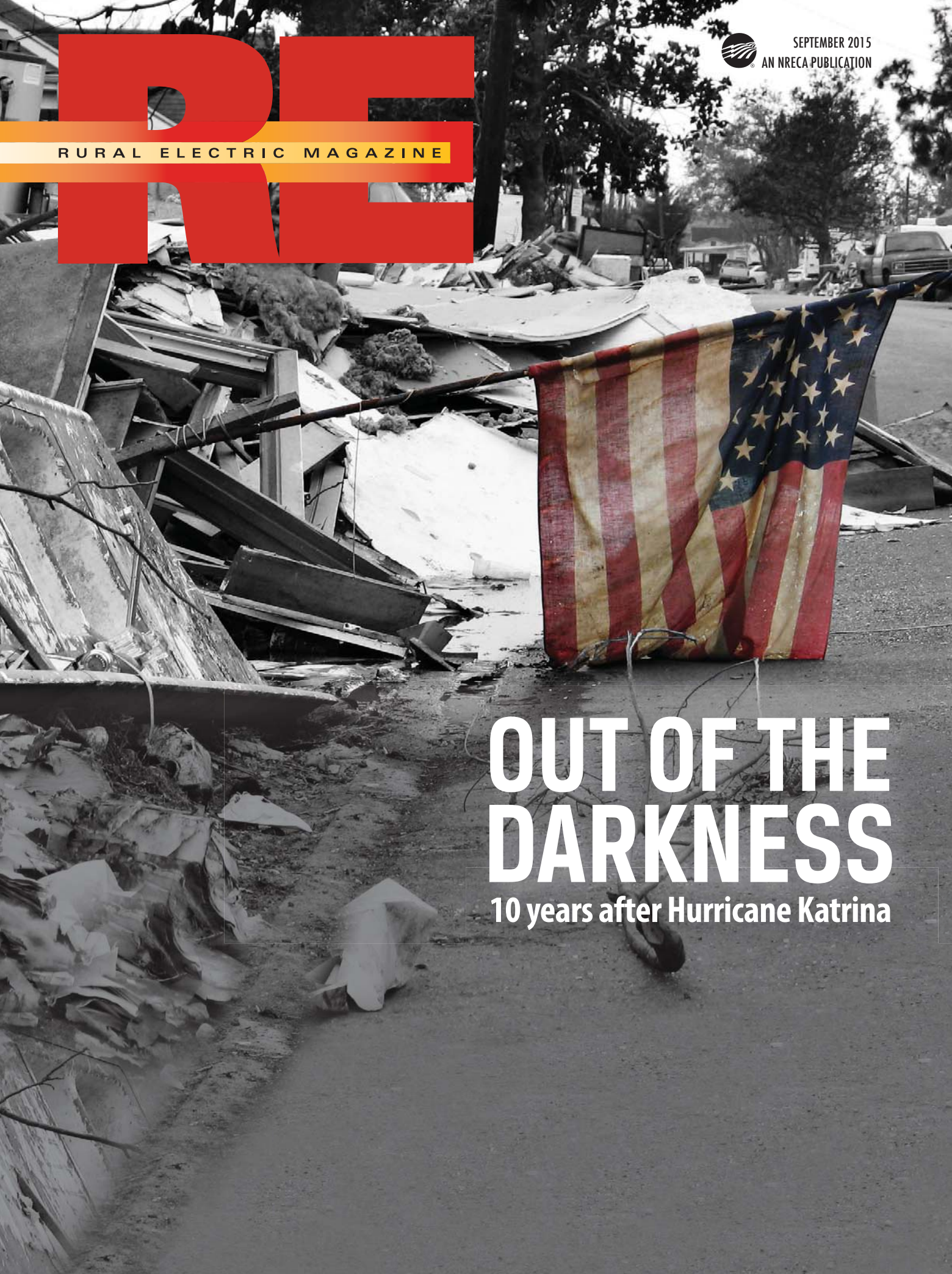

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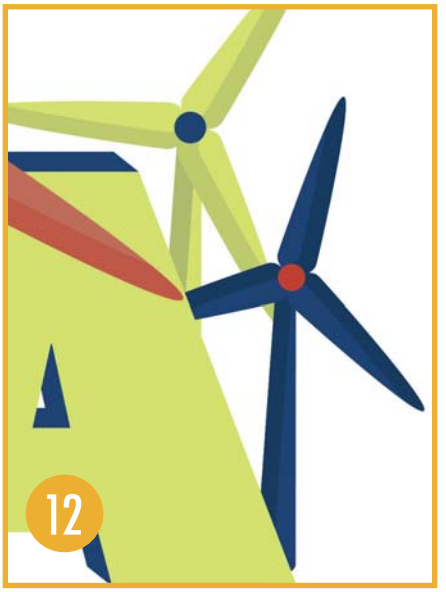

FEATURES

VOLUME 73 • NUMBER 12

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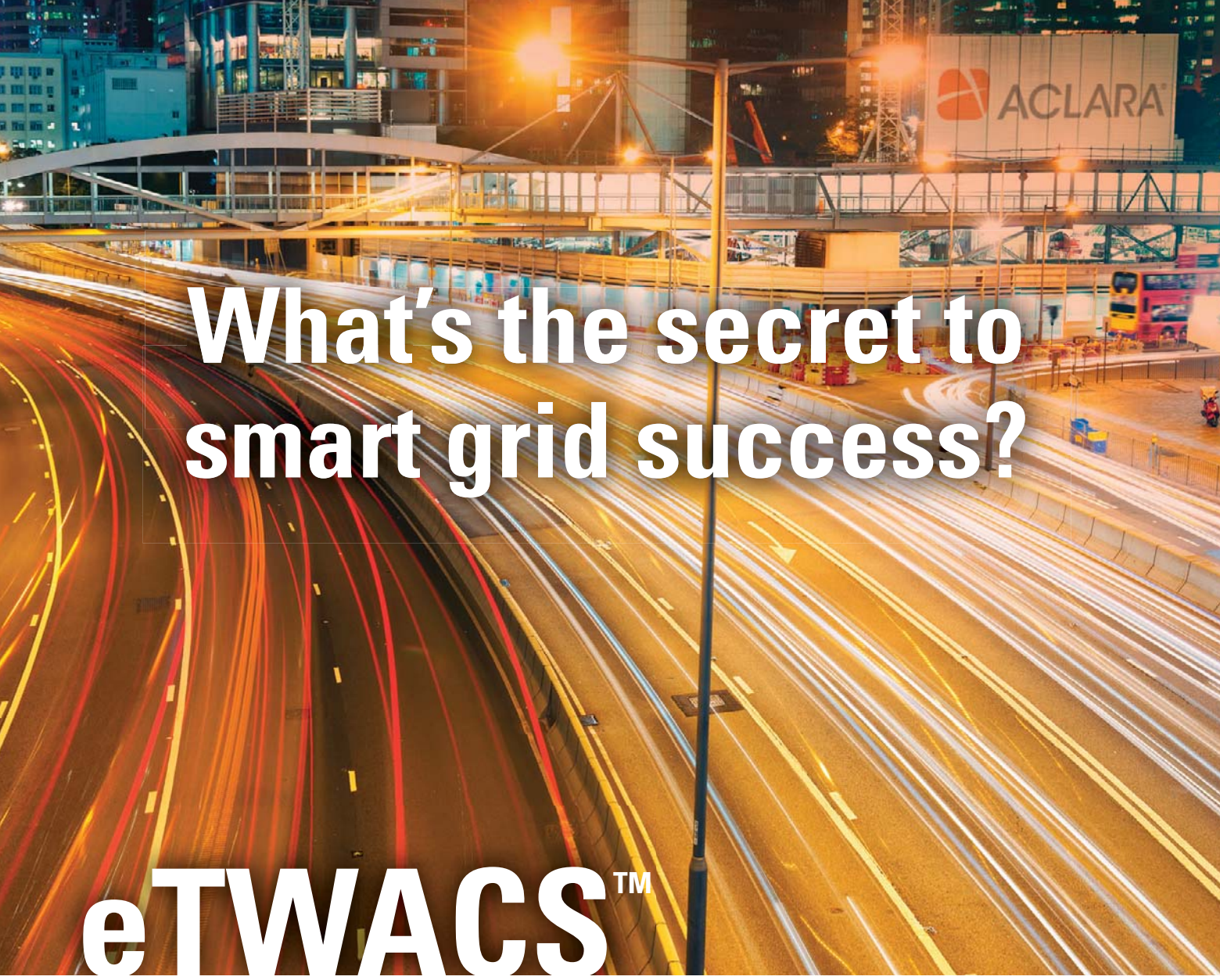
DEPARTMENTS

WHAT'S NEW ON REMAGAZINE.COOP

KATRINA AND RITA

Visit REmagazine.coop for continuing coverage of this month's article on the 10-year anniversary of Hurricanes Katrina and Rita.



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IN MANY WAYS, RURAL ELECTRIFICATION WAS A WOMEN'S MOVEMENT

BY FRANK K. GALLANT

Before the much-heralded women's liberation movement of the 1960s and '70s, there was the lesser-known women's movement out of darkness in the 1930s and '40s—better known as rural electrification.

Men piked poles and strung wire, but women trooped to organizational meetings and raised their hands when seats on committees and boards of directors needed to be filled. They pushed reluctant husbands to pay the $5 membership fee to join an electric co-op and see it through to success.

Women were motivated to get central station electricity in their homes because they, by most measures, had the harder life. They bore and raised children without lights or indoor plumbing. They cooked meals over a woodstove on sweltering summer days, washed clothes by hand, and swept dusty wood floors with calloused hands so often, it seemed to their husbands and children they never put the broom down.

continued on page 63

Photo from The Next Greatest Thing

Electric irons were among the first appliances rural women bought after getting electricity.

MEL COLEMAN, PRESIDENT

Ten years ago, the Gulf Coast was ravaged by hurricanes that devastated the region.

This issue of *RE Magazine* looks back at Hurricanes Katrina and Rita and the massive recovery efforts that followed.

The folks at my co-op, North Arkansas Electric Cooperative, are no strangers to natural disasters. We sent linemen to help with restoration along the Gulf Coast after Katrina and Rita and even sent a crew to New York after Hurricane Sandy in 2012. We've also been through our fair share of ice storms and floods in our own territory.

back into a rut of us-versus-them.

I say we're in a time when we can't afford that kind of thinking. Right now, our industry is in the midst of a different kind of storm. It's a storm of regulatory uncertainty and unprecedented technological change.

At various times, this storm will impact different parts of Co-op Nation. At the moment, it's hitting our coal fleet and our relationship with members in the form of third-party solar power providers. On the horizon could be natural gas volatility, cyber security concerns, infrastructure challenges, or maybe something unanticipated.

> "Our industry is in the midst of a ... storm of regulatory uncertainty and unprecedented technological change."

Storm recovery efforts present many challenges: long hours, difficult conditions, weeks away from loved ones. But despite these obstacles, I think in some ways these are the least-complicated projects to tackle. The circumstances are so dire and the need is so great that there's no time to squabble over details. You just buckle down and get the job done.

Disasters like these strip away our differences and lay bare our shared humanity.

But eventually the crisis ends, and we all go home and return to our normal routines. If we're lucky, lasting friendships forged during the ordeal remain as living souvenirs of our experience. But before you know it, human nature takes over, and we slip

No cooperative is immune to this storm. Eventually its impacts will be felt in every part of the country. And just like any other storm, electric co-ops will weather it best by sticking together.

There's a profound difference between the human tragedy of a natural disaster and the metaphorical storm of which I write. But the stories of triumph and cooperation in the pages of this issue are a testament to what we can accomplish when we tap into the better parts of our humanity.

It's a powerful reminder that we are all members of Co-op Nation. And we are strongest when we stand together as one nation, indivisible, with a genuine and abiding concern for all. **RE**

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Photo courtesy Garrett Hubbard Studios

Newly released EPA power plant regulations could force Seminole Generating Station in Palatka, Fla., to close.

UTILITIES WILL BE STRETCHED TO MEET EPA RULE

Fitch Ratings says the power sector could be challenged to meet new carbon dioxide regulations because the United States lacks the infrastructure needed to handle a splurge of natural gas and renewable energy.

The final version of the Environmental Protection Agency's Clean Power Plan (CPP), released on August 3, is less onerous on states and utilities than an earlier draft, Fitch says, in part because it pushes back a first round of emissions cuts from 2020 to 2022.

But the plan projects ambitious growth in renewable energy, which will force utilities to act quickly and spend money to beef up the transmission and delivery network, the ratings service says.

Since planning and building those systems can take years, meeting the 2022 target date "could still be a challenge for some states," Fitch states. "Compliance with the CPP will require significant infrastructure investment in building out renewable power generation and associated transmission networks as well as investments in natural gas pipeline infrastructure to facilitate coal-to-gas switching."

Fitch also points to the details of EPA's proposal to add more renewable energy to help achieve a 32 percent reduction in carbon dioxide emissions from existing power plants by 2030, compared with 2005. Renewables account for about 13 percent of U.S. generation, according to the Energy Information Administration. EPA projects renewables will reach 21 percent by 2030, an assumption Fitch says "appears aggressive."

Fitch expects the rule to be fought out in court, which could affect the timing and severity of its implementation. However, there is little doubt that it is mostly aimed at coal-based utilities, the service notes.

"The CPP has far-reaching implications in terms of how electricity is produced and consumed and is likely to result in upward pressure on capital expenditures plans, [operating and maintenance] expense, and electricity rates," it adds.

—Steven Johnson

A CHANCE TO 'REVOLT'

Great River Energy is offering electric co-op consumers in Minnesota a chance to Revolt.

That's the Minneapolis-based G&T's playful name for its new electric vehicle (EV) program. It promises to provide participants' EVs with 100 percent wind power for the life of the vehicle.

"Energy comes from all kinds of sources: wind, natural gas, coal, and so on," the G&T says on its website. "Once it hits the grid, there's no way of telling where it came from. However, when renewable energy is added to the mix, a renewable energy credit [REC] is created that embodies all of the environmental benefits of that energy.

"When you claim your upgrade, we'll dedicate wind energy RECs on your behalf, completely offsetting the energy used to power your electric vehicle."

Specifically, Great River Energy will dedicate 5,000 kWh of wind energy a year for 10 years for owned cars and three years for leased cars. Up to four cars per household are allowed.

Each one must be a plug-in electric vehicle or a plug-in hybrid electric vehicle. Hybrid electric vehicles that have a gas tank but no plug are not eligible because they charge through regenerative braking and by drawing power from the engine.

Revolt has been lauded by Minnesota organizations that promote the use of renewable energy. "Refueling with renewable electricity is a great vision for Great River Energy to advance," says Michael Noble, executive director of clean-power advocate Fresh Energy.

GLOBAL CALL FOR CLEAN COAL

For a number of years, the London-based World Coal Association (WCA) has been calling for greater investment in clean coal technologies to meet global energy demand, alleviate "energy poverty" in developing nations, and minimize carbon dioxide emissions.

Speaking in June at an energy conference in Tokyo, WCA CEO Benjamin Sporton put the spotlight on the Asia-Pacific Economic Cooperation (APEC) region, where, he said, "greater political commitment is needed ... to achieve global climate ambitions."

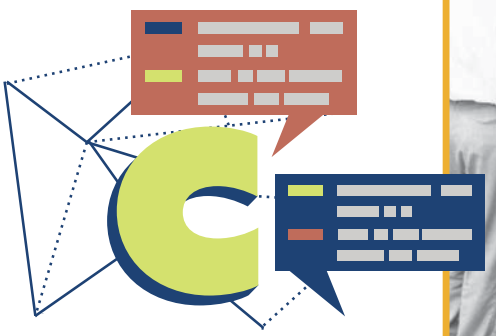
Coal is the fuel of choice for many APEC countries because "it is easily accessible, affordable and reliable, [and] helps build strong, competitive economies," he said.

Coal demand is expected to grow by 4.8 percent a year in Southeast Asia and even more in China, he continued. Coal will be the dominant fuel for generating electricity in the APEC region through 2040.

"The huge role that coal is playing and is forecast to play in the APEC region for decades to come highlights the imperative of international action on cleaner coal technologies," Sporton told the conferees. "High-efficiency, low-emission coal-fired power generation can provide significant near-term emission-reduction benefits and is a key first step on the pathway to deploying carbon capture and storage."

APEC is made up of 21 Pacific Rim countries, including the United States and Canada.

APEC Asia-Pacific Economic Cooperation



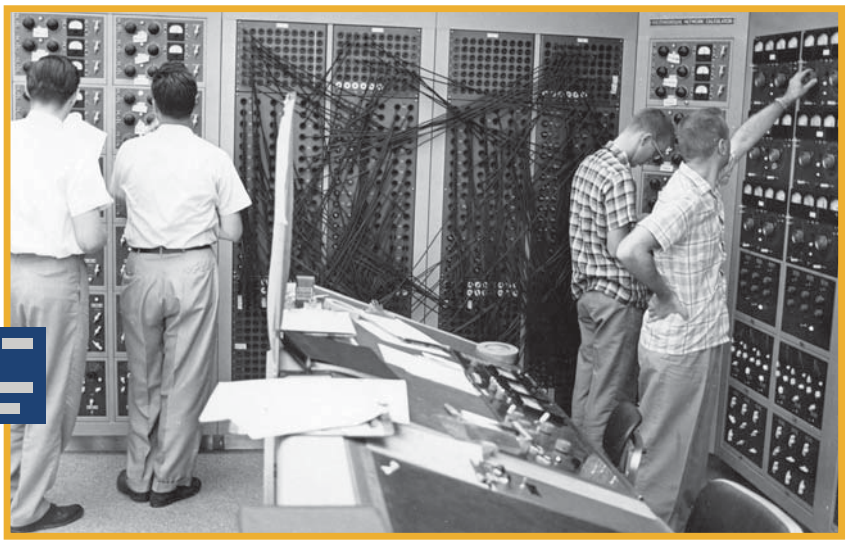


Photo courtesy M&A Electric Cooperative

CO-OP HISTORY ON FACEBOOK

An early computer at the University of Missouri funded by Missouri's G&Ts in the early 1960s. This is one of hundreds of historical co-op photos on facebook.com/REAphotos.

Grace Derr wanted electricity so much, she offered a deal to her electric co-op in 1941. Grace wanted to trade her brood mare to Crawford Electric in exchange for wiring for her home in Cuba, Mo. "She is a good brood mare, a little wild now, but she has plowed many gardens in St. James," she wrote.

There is no record of whether the co-op took her up on the offer, but this and many other stories from the early days of rural electrification are available on Facebook thanks to the efforts of Jim McCarty.

McCarty, vice president of communications at the Association of Missouri Electric Cooperatives (statewide), Jefferson City, and editor of its *Rural Missouri* magazine, launched the Facebook page **(facebook.com/REAphotos)** in 2011 as many electric cooperatives around the country celebrated their 75th anniversaries. It now has more than 1,000 followers, including many from countries helped by the NRECA International program.

"I had this huge collection of photos from the early days of rural electrification," says McCarty, who's authored 10 electric cooperative history books. "Every co-op has photos, but most never see the light of day. They are in danger of being lost forever. This page offers a way to showcase the hard work of the electric co-op pioneers who built their systems from nothing."

To add photos to the collection, contact McCarty at jmccarty@ruralmissouri.coop or 573-659-3402.

EIA.GOV TURNS 20

The U.S. Energy Information Administration celebrated 20 years on the Internet on June 30. EIA.gov, the very first Department of Energy website, launched on July 1, 1995.

This was before Google or Facebook, when there were only 40 million Internet users worldwide and 23,500 websites, compared to 3.3 billion users and 1 billion websites today.

"The seven users who visited EIA.gov on its first day of operation had access to a few dozen web pages and 200 files," EIA said in *Today in Energy*, the anchor of EIA.gov's landing page since February 2011. "Although the initial version of the website looked rather primitive, the website quickly established itself as the agency's primary communications channel."

Today, EIA maintains 207,000 web pages and 1.2 million data sets for its more than 2 million monthly visitors.

And EIA.gov keeps adding new energy data and analysis, including a soon-to-be-released page that tracks the operating status of the U.S. electric grid on an hourly basis.

RURAL INTERNET ADOPTION AT 78 PERCENT

As much as any other business, electric co-ops know how important fast communications service is in today's economy. They couldn't deliver "smart" electric service without it.

Electric co-ops also know that rural consumers tend to lag behind urban and suburban consumers in Internet adoption. This is borne out by 97 national surveys the Pew Research Center has conducted since 2000.

The 2015 survey shows that 78 percent of rural residents are Internet users, compared to 85 percent of urban and suburban residents. The good news is that the rural figure is up from 42 percent in 2000, thanks in part to co-ops that are building broadband in their service territories.

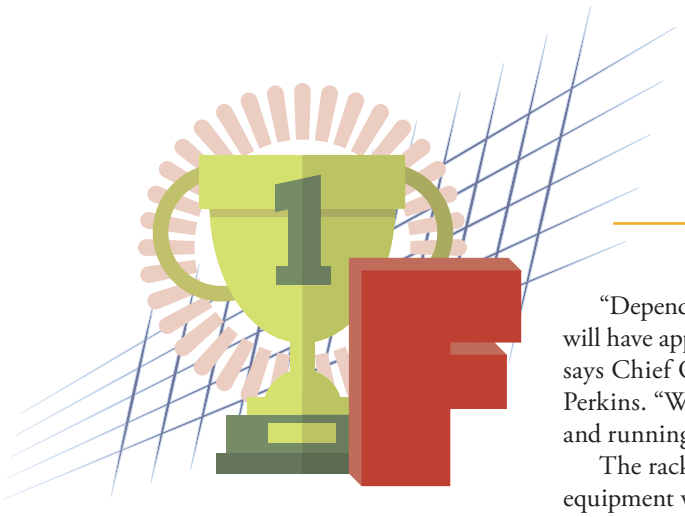
"Rural communities tend to have a higher proportion of residents who are older, lower-income, and have lower levels of educational attainment—additional factors associated with lower levels of Internet adoption," Pew says in a report about the survey.

Age: Of Americans age 65 or older, 58 percent now answer "yes" when asked if they use the Internet. That's up from 14 percent in 2000, the steepest climb of any group.

Income: Of adults living in households with annual income of at least $75,000, 97 percent say they use the Internet, while only 74 percent of adults whose income is less than $30,000 use it. But the popularity of smartphones may be closing the gap. "Lower-income Americans are increasingly smartphone-dependent for Internet access," Pew notes.

Education: Pew calls this "one of the strongest indicators" of Internet use. Of college-educated adults, 95 percent use the Internet, compared to 76 percent for those with only a high school diploma and 66 percent for those without one.

Pew also looked at race, ethnic group, language, and gender in its survey.



FIRST IN SOLAR

Tri-County Electric Cooperative will soon become the first utility in Oklahoma to offer community solar to its consumers. The 23,000-meter distribution system will put up a 1-MW array behind its headquarters in Hooker, a small town in the middle of the state's panhandle.

"Depending on the final design, we will have approximately 4,000 panels," says Chief Operating Officer Zac Perkins. "We expect the array to be up and running by January of next year."

The racks, panels, and electrical equipment will be installed by Today's Power, Inc. (TPI), a subsidiary of Arkansas Electric Cooperatives (AEC; statewide), Little Rock. Earlier this year, AEC became an authorized distributor and installer for Minneapolis-based tenKsolar photovoltaic systems.

"Our members showed a strong interest in renewable energy in our recent survey," Perkins notes. Nearly 70 percent said they were either "extremely" or "somewhat" interested, up from 36 percent in 2013.

"The TPI solar product will provide our members access to reasonably priced renewable energy," Perkins says. "Ultimately, the energy produced at the facility will be consumed by our membership, resulting in savings in wholesale power fees and related costs. The end result is lower cost to our members."

Consumers will pay between $350 and $400 per panel.

(*Be sure to check out the Solar Insert in the August 2015 issue of* RE Magazine.)

FIVE EARN GLENN ENGLISH SCHOLARSHIPS

In his 19 years at the helm of NRECA, Glenn English was known for his razor-sharp political sense and tireless dedication to the cooperative business model. So it is quite an honor for a young man or woman to be awarded a scholarship from the Glenn English National Cooperative Leadership Foundation.

Five college students who participated in the Electric Cooperative Youth Tour won awards this year, one for $10,000 and four for $1,000. The top award went to Hayden Hefner, a junior studying broadcast and electronic media at the University of Oklahoma. He was sponsored by Oklahoma Electric Cooperative in Norman.

"I'm humbled to receive this scholarship," Hayden says. "It's a tremendous blessing that will allow me to graduate without a large financial burden. I'd like to thank NRECA and the Glenn English Scholarship committee for having the vision to help ordinary college students like me."

The other winners were:

Justin Korth, a sophomore at the University of Nebraska at Omaha, who represented Cedar-Knox Public Power District in Hartington, Neb.

Jordan Geisert, a sophomore at the University of Nebraska-Lincoln, whose local co-op is Midwest Electric in Grant, Neb.

Sarah Hempen, a junior at Southern Illinois University-Edwardsville, who was sponsored by Monroe County Electric Cooperative in Waterloo.

Samantha Rhodes, a junior at the University of Toledo in Ohio, whose local co-op is Kosciusko REMC in Warsaw, Ind.

The application season for the next round of Glenn English scholarships begins on January 1, 2016, says Rebecca Hill, the Glenn English Scholarship political events coordinator at NRECA. Visit NRECA.coop/GEscholarship to learn about eligibility requirements and how to apply.

Photo courtesy Ampcontrol

A mobile substation

SAVING FOR A DARK DAY…

Eight large electric utilities say they intend to create a national stockpile of spare transformers that could be rapidly deployed if a catastrophic event like a cyber attack, weather disaster, or solar storm were to knock out a major transmission line.

The utilities—American Electric Power, Berkshire Hathaway Energy, Duke Energy, Edison International, Eversource Energy, Exelon, Great Plains Energy, and Southern Co.—plan to launch an independent organization called Grid Assurance next year.

Grid Assurance would purchase mobile transformers, circuit breakers, and other equipment and maintain them at strategic locations around the country. Utilities would pay cost-based subscription fees for access to the inventory.

The group filed a petition with the Federal Energy Regulatory Commission in June seeking confirmation that its service would satisfy the agency's mandates for grid resilience.

The Department of Energy highlighted the importance of a transformer stockpile in its Quadrennial Energy Review issued in April. The report said, "Despite expanded efforts by industry and federal regulators, current programs to address the vulnerability [of large transformers] may not be adequate" if catastrophic events should take down multiple units.

TALKING ABOUT CONSOLIDATION

At 205,000 member-consumers, Middle Tennessee Electric Membership Corporation (MTEMC) is one of the biggest distribution co-ops in the country. And it could get even bigger.

The co-op has begun talks with its neighbor, Murfreesboro Electric Department (MED), about acquiring the municipal utility. Both sides see benefits in joining forces.

"Middle Tennessee Electric approached us with a memorandum of understanding that said, 'Let's talk about this,'" Murfreesboro Mayor Shane McFarland says. "Since we are two electric systems in the same rapidly growing vicinity, we are both making major infrastructure investments, sometimes in the same places, to keep pace."

Middle Tennessee EMC President Chris Jones says the conversation will be about "bringing two great utilities together to make an even better one for the communities we serve."

The co-op distribution system surrounds the municipal system, which serves about 55,000 meters. Both utilities believe a consolidation would cut down on duplication of effort and boost efficiency.

Jones assured Murfreesboro Electric employees that no one would lose his or her job. "Not only will we need all of MED's employees to continue doing the good jobs they do," he said, "it's also the right thing to do to make sure all of these employees would keep their jobs and are taken care of appropriately. We would just become a larger team, and I would assure the city's citizens and MED employees that the notion of team is fundamentally important to me."

Neither would a consolidation cause a rate increase, Jones says. "An acquisition itself would not cause a rate increase. Rates would be the same the day after the acquisition, and a great advantage of such a move for all the consumers affected—existing MTEMC and MED consumers alike—would be greater rate stability in the long term." RE

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DEVASTATION & REBIRTH

The cooperative spirit helped turn the tide for Gulf Coast communities battered by Hurricane Katrina

BY STEVEN JOHNSON

Photo by Alexis Matsui

Charles Hill waited anxiously, day after day, for a ray of good news in a world gone dark.

After Hurricane Katrina struck, it took Hill four and a half hours, instead of the usual 45 minutes, to weave through a maze of dismembered trees from his home to the headquarters of Washington-St. Tammany Electric Cooperative in eastern Louisiana. Not one of the cooperative's 46,000 meters was spinning. Though utility crews were on the case, nothing glowed for days on end, not even a single lightbulb.

It was a week into the restoration before a dispatcher at co-op headquarters looked at Hill, manager of engineering and operations at the time, and reported a flicker of power. And Charles Hill did a little jig.

"That made me so happy," Hill, now the co-op's general manager, recalls with a smile. "I knew somebody had lights—somebody. Not many, but somebody. Half a megawatt out of 300. So that's where the good part rolls in."

The worst was over. The long, costly, emotionally draining process of putting lives and communities back in order could get under way.

On the 10th anniversary of Hurricane Katrina, attention is mostly focused on the recovery of New Orleans, where harrowing images of death, despair at the Superdome, and devastation in the Lower Ninth Ward linger to this day.

But the rest of the Gulf Coast has a comeback story too, thanks in part to the spirit of co-op staffers who worked day and night to overcome the greatest reconstruction challenge in the history of the electric cooperative movement.

Consider The Promenade, a new 700,000-sq.-ft. retail development powered by co-ops north of downtown D'Iberville, Miss., which Katrina had transformed into a mass of muck and debris. It represents a commercial vitality and freshness unfathomable on the morning of August 29, 2005.

"It's really a huge success story because everything was so centralized on the beach that people realized, 'Hey, we need to get off of that,'" says Ron Barnes, vice president of marketing and public relations at Coast Electric Power Association in Kiln. "It has been a boom for us that we never would have thought of at the time."

THE UNIMAGINABLE

Dan Wooten had tears in his eyes as he drove his truck down U.S. 84 in Waynesboro, Miss.

A serviceman at Dixie Electric Power Association, based in Laurel, he'd never seen anything so bad. Trees and power lines were down everywhere. So extensive was the damage that Wooten enlisted a co-op member he knew to ride a horse around an otherwise inaccessible circuit and take notes.

"The trees was so big, he would have to go way out in the woods on his horse, and he would have to come back to the next pole and take a damage report on that," Wooten says.

The most remarkable fact in that remarkable story is this: Wooten was 150 miles inland.

Even after 10 years, the reach of Katrina's fury remains beyond comprehension. In Mississippi, nearly half-a-million co-op meters were without service. Nine distribution systems were totally down. Electric cooperatives in Mississippi and Louisiana suffered more than $360 million in damages. The day before Katrina, Coast Electric had 70,000 meters; the day after, it had 56,000.

More than 100 electric co-op staffers lost their homes; mercifully, no co-op employees lost their lives.

Photo by Billy Gibson

Coast Electric Power Association secured air-conditioned tents to house out-of-state crews

"We had 27 feet of water in our neighborhood," says Kim Carpenter, then a clerk and now member service representative supervisor at Washington-St. Tammany Electric's Abita Springs office. After Katrina, she took a rowboat to find her family's three-bedroom home, which had been built on peglegs four-and-a-half-feet high near a tidal strait in Slidell, La.

"It was in the road. It was off its stilts," she recalls. "Somebody [who stayed during the storm] had to be rescued from the end of our road. So they just left a note that they had to drive through parts of the house to get down the street to rescue somebody."

Carpenter went back to work, just like hundreds of electric co-op employees who put their personal situations on hold so they could tend to their members.

The home of Kevin Kennedy, a line supervisor at Washington-St. Tammany Electric, suffered a different kind of devastation. Trees toppled onto it; one pried up the slab of his house and destroyed everything. Friends checked on his wife while he went to work.

"We didn't have any way of communicating. So it was kind of tough," he says. "It was a stressful time, but this is what we do. We train for this. And it's just what we do."

The Kennedys ended up living in a camper for two-and-a-half years.

Melissa Russo says seeing how caring co-op employees came together was a career-changing event for her. Returning from Alabama, Russo drove to work past the remnants of her house, wrecked by a tornado, and did not look back.

"I knew I had a bigger purpose," says Russo, the community services executive at Coast Electric. "It was just so eye-opening to see that your employees were your brothers. These were your family members. It was not just coming to the co-op every day to keep the lights on. It was much different than that. It was a deeper relationship with your fellow co-workers."

THE RESCUERS

Glenn Foreman spent the morning of August 29, 2005, rescuing people. The resourceful serviceman at Lucedale-based Singing River Electric Power Association fashioned a makeshift flotation device from rope and lifejackets and ventured into the raging waters around his home in the Porteaux Bay subdivision of Jackson County, Miss.

Down the street, he brought a family of four and their dog to the relative safety of his house, set on slightly higher ground near the Back Bay of Biloxi. Floodwaters were lapping at the roof eaves of another residence, so Foreman and his compatriots swam, lifejackets in tow, and pulled the family from the attic. In all, 17 people and four dogs found safe haven on the second floor of Foreman's house, which had 4 ft. of water in the living room.

"Wild birds are flying in the window," Foreman remembers with a laugh. "Everything's trying to get out of the storm, you know? And we just had to wait it out there until the water went down."

Among the strongest threads of the story of Hurricane Katrina is the work of linemen who rescued people from trees, skirted leg-chomping alligators in swamplands, toiled in 100-degree weather, and put the lights back on in a few weeks.

Call them the rescuers.

"We had 30,000 poles to replace, either to totally replace or to push back up that were leaning or damaged in some way," says Barnes of Coast Electric. "I probably feel that in their minds it was, 'Will this ever end?' because I know I thought that a few times myself. I just have the most respect in the world for those guys and the difficult and dangerous job they do, and how well and cheerful that they do it."

Early on, it was apparent that

Photo by Steven Johnson

Mississippi's Bay St. Louis rail bridge sustained heavy damage from Katrina, but the support piers withstood the storm and were used to rebuild the structure.

despite the diligence of on-site crews in Mississippi and Louisiana, they needed help. Katrina was so massive that it affected neighboring states, including Alabama, Florida, and Tennessee, which Gulf Coast co-ops usually count on for mutual assistance during lesser storms.

"At the height of the storm, we had approximately a thousand people in to assist us," says Mike Smith, CEO and general manager of Singing River Electric, who was assistant general manager at the time. "Due to the broad impact of the storm, we had to reach out to cooperatives outside of our region, such as Illinois, Indiana, Missouri. We received help from co-op and contract crews from a total of 13 states."

Workers from Delaware Electric Cooperative in Greenwood even made the 1,100-mile trek. "It took them two days to get to us, but they came and assisted," he says.

Electric cooperatives in 27 states sent more than 12,000 emergency-work crew members to Mississippi and Louisiana to help with repairs. Prior to Katrina's landfall, Washington-St. Tammany Electric's Hill told his general manager that he could use 750 additional workers. "We ended up with 2,000," he says.

Tommy Ulmer, then a journeyman lineman at Dixie Electric, says without that helping hand from other states, there is "no way" the co-op could have restored power in about three weeks to everyone who could accept it.

"Not with the manpower that we have here and the severity that we had," he says, remembering the bonds formed during 18-hour workdays. "We had two crews that were with Sawnee Electric out of Georgia. And just a great group of guys. I mean, I still keep in touch with them today. But they just became like family, you know? They worked with us every day."

Billy Gibson, director of communications for the Association of Louisiana Electric Cooperatives, the Baton Rouge-based statewide, still gets misty-eyed when he thinks about the rescuers. Gibson was in the field shooting video when he talked with David Woyicki, manager of operations at Riverland Energy in Arcada, Wis.

"After I got through with that first question—'How is your experience here?'—his face just sort of lit up, unexpectedly. And again, he was dirty, sweaty. He smiled at me, and he said, 'You know, it's been an honor and a privilege to be down here to help you all. And we know that if we were in the same situation, that we would appreciate and want and need the help too.'"

Woyicki's answer took Gibson's breath away. "I mean, when you are laid the lowest you can possibly be laid out, and cooperative folks come just at a snap of the finger or a phone call," Gibson says. "They come prepared, and they come with that spirit in their heart."

Photo by Alexis Matsui

LESSONS LEARNED

As CEO of hard-hit Coast Electric, Bob Occhi knew he would have a lot of out-of-state crews. He just didn't know how he would pay for their accommodations.

Katrina sidelined Gulf Coast motels and hotels that ordinarily hosted outside help in emergencies. Suddenly, Occhi was staring at a $1 million deposit to secure three air-conditioned tents that each could house 500 linemen. In stepped the National Rural Utilities Cooperative Finance Corporation (CFC), the electric co-op lender based in Dulles, Va.

"I remember our vendor. He got in contact with us. We had satellite phones; that was our only communication," Occhi recalls. "He said, 'We can't ship the tents unless we get a deposit of a million dollars,' and all the banks were out of business. So we called CFC, and CFC wired them the

money, and they were able to ship the tents. That was a big help for us."

Ten years later, the question of logistics remains one of the most important for electric cooperatives that feel the wrath of Mother Nature. Where do you house 1,000 linemen? How do you get fuel to prevent utility trucks from running on fumes? How do you communicate when there is no phone service?

Pat McCarthy, who works as operations manager at Dixie Electric's Laurel office, says it starts with good vendor relationships. Take his example of diesel fuel for utility trucks that surveyed the co-op's 4,800 miles of line.

"All our local suppliers were out—could not get any fuel. I had one supplier in Waynesboro, Miss., that helped me out. He would bring enough fuel to get by for the day," says McCarthy, who was materials and facilities supervisor at the time. "And he would do the same thing at this office, the Waynesboro office, and at our Petal office. If it was not for that, we would have run out of fuel."

Those relationships should extend to public officials, Barnes says. His co-op, Coast Electric, has assigned a liaison between the co-op and local government offices. "That has been tested in a couple of subsequent natural disasters and has really played effectively for us and for the municipalities as well," he says.

Washington-St. Tammany Electric also has taken the liaison approach, with an internal twist, to help employees deal with hardships.

"Some of them, they lost their home, and their spouse was at home trying to take care of those things if they didn't evacuate," says Coylean Schloegel, manager of marketing and economic development. "So now we have a liaison within the cooperative who handles those needs. Do they need a generator? Does their family need things? So, to me, that was just a wonderful thing that we've done."

At Singing River Electric, Smith says the co-op has arranged to provide emergency generators to motels in certain areas in return for housing. Feeding everyone is still a learning curve, though.

"We tried to prepare a hot meal at lunch and at dinner. And we probably will not do that again and instead provide a sack lunch in the morning as the crews leave, then try to have a hot meal at night, because it got too difficult trying to deliver meals in the field at lunch," he says.

Photo by John Lowrey

Photo by Alexis Matsui

Hattiesburg-based South Mississippi Electric is the G&T for 11 distribution co-ops in Mississippi, some of the hardest hit by Hurricane Katrina.

Whether it is fuel or food, co-op leaders agree that Katrina represented a watershed in the way the Federal Emergency Management Agency (FEMA) and auditors from the Department of Homeland Security approach emergency spending. It's not enough to restore power posthaste; it must be restored with proper accounting procedures.

"They were very responsive during Katrina," Occhi says of FEMA. "Now there's a lot more hoops that we have to jump through and more documentation that we need and contracts and so forth, so it's going to be more difficult moving forward now."

Walt Sylvest, manager of finance at Washington-St. Tammany Electric, says the co-op is still dealing, 10 years later, with FEMA, auditors, and state emergency management

officials. He stresses the importance of keeping contracts and preapproved rates in order because co-ops have the same burden of accountability that they would assign to an ongoing daily operation with a contractor—except the paperwork involves 2,500 linemen, instead of 25.

"You need to prove that you competitively chose contractors. You need accountability for all time. And … unlike previous years where you just said, 'Oh, we worked—you know, we had outages,' you need to document where they are," Sylvest says. "We all understand now, but it was a hard thing to get over."

BACK IN BUSINESS

Ten years ago, across the street from Coast Electric's Bay St. Louis operations building, Katrina launched a boat through the drive-in window at a Burger King. Down the street, it ripped apart the 2-mile-long bridge that connected Bay St. Louis and Pass Christian. Inside the building, 100 employees, stranded residents—some with their pets at their side—had huddled, praying they could ride out the storm.

When Hurricane Isaac hit in 2012, the co-op's employees, ensconced in a new building, barely felt it pass by.

In the electric cooperative world, there is no more visible sign of the changes that have happened in the past decade than Coast Electric's move to a fortified headquarters, located about 15 miles north of Bay St. Louis.

The co-op sold its old building to the city of Bay St. Louis, which used it to replace its ravaged municipal offices. Employees worked in trailers for most of five years during the design and construction process. "We're very happy up here, high and dry, and, quite frankly, more centrally located in our service territory," Barnes says.

The Gulf Coast is, for the most part, back in business. A post-Katrina regional migration has slowed to a manageable level. At one point, Washington-St. Tammany Electric was adding 3,000 accounts a year as residents fled low-lying New Orleans; now that's a more reasonable 250, Sylvest says.

Coast Electric returned to its pre-Katrina level of 70,000 accounts by 2007. The 2008–'09 recession put the brakes on unchecked growth, and the area struggled through the 2010 BP oil spill, which hurt the tourism trade and shut down local fishing and shrimping operations.

But projects like the $150 million Promenade shopping center and accompanying housing and retail developments are signs of a community that's alive and progressing. "I love it. My home is probably about 30 minutes away, but that to me is an easy drive," says April Lollar, media services executive at Coast Electric, which serves the area along with Singing River Electric.

Not everything is back to normal, nor will it ever be. On the north side of U.S. 90, empty slabs, once the foundations of antebellum houses, stare at the waterfront amid weed and rubble. The southern section of Diamondhead, Miss., was leveled in 2005. A few homes have returned on 14-ft.-high stilts that resemble giraffe legs, but much of the community remains scarred. Here and there, abandoned houses bear the telltale slash-style count of victims removed by search-and-rescue squads.

The cost of flood insurance has priced many people out of the market; Mike Smith of Singing River Electric said it's not unusual for insurance to exceed the cost of a mortgage. Walking recently through a subdivision in St. Martin, Miss., he pointed to the uneven nature of the neighborhood.

"On one lot, a home is rebuilt. On both sides of that home is a vacant lot that's just grown up. The people chose not to rebuild. We saw a lot of that. And those vacant lots still sit there today," he says.

Overall, though, the tide along the Gulf has turned in the last 10 years. Commercial activity is stronger. Electric utility loads are growing. Co-ops have transformed the darkness that settled over the region that terrible August day into a way of defining themselves and what they stand for.

"I've had several of the guys tell me that after going through Katrina, we could deal with anything. So in my mind, that's a strength. That's a strength," says Hill of Washington-St. Tammany Electric. "Worrying does not help. You prepare yourselves, and then, when it comes, you deal with it."

Photo by Steven Johnson

Photo by Alexis Matsui

A Burger King in Bay St. Louis, Miss., after Katrina hit (left) and rebuilt (right)

RITA: THE FORGOTTEN STORM

HOW AN ELECTRIC COOPERATIVE OBLITERATED BY A HURRICANE REFUSED TO GO GENTLY INTO THE NIGHT

BY STEVEN JOHNSON

From the highest point in Cameron Parish, La., Mike Johnson looked out at Jefferson Davis Electric Cooperative at its lowest point.

Atop a nine-story bridge over the waterway that connects the Atlantic and Gulf coasts, Johnson, a co-op branch superintendent, reported to his office that Hurricane Rita had drowned half of a county. Houses were stacked against the canal. Washing machines and freezers were floating in marshes. The parish seat of Cameron was smashed to bits.

"We were about a 60-megawatt cooperative. September 24, the next day, we were a 30-megawatt cooperative. We lost half of our system overnight," General Manager Mike Heinen says before a slight smile cracks his face. "This year is the 10-year anniversary. We're back to a 60-megawatt cooperative."

The story of Jeff Davis, as it is known in southwest Louisiana, is the story of the little co-op that could. Though Rita is sometimes an afterthought to Hurricane Katrina, it was as violent in its own way, inflicting $83.3 million of damage on a co-op that includes areas so desolate they might be better measured in alligators per mile than in electric meters per mile.

"Hurricane Rita really was the forgotten storm," says Randy Pierce, CEO of the Association of Louisiana Electric Cooperatives (statewide) in Baton Rouge. "People were tired from responding to Katrina. Agencies were at their capacity. Media attention was peaked with Katrina, so when Rita happened, it was almost a nonevent in terms of attention."

Cameron Parish in Louisiana took a direct hit from Hurricane Rita on September 24, 2005, less than a month after sustaining heavy damage from Hurricane Katrina.

Photo by Alexis Matsui

'NUCLEAR WINTER'

Heinen was fresh from delivering water and supplies to a Katrina-stricken co-op in eastern Louisiana when he got word that Rita might turn ugly. Pierce helped him identify a solitary vendor that could furnish a tent city for visiting linemen to aid in storm recovery. The down payment was $500,000. Heinen had 15 minutes to decide.

"So I pulled the trigger, knowing that decision, my whole job rested on it," Heinen says. "If I was right, I was golden. If I was wrong, I had a lot of explaining to do."

Unfortunately, he adds, he was right. Rita made landfall as a Category 3 hurricane on the morning of September 24 near Sabine Pass, Texas, and the coastal community of Holly Beach, La. Downpours and winds churning at 120 mph turned inlets into rivers and bayous into lakes.

The next day, Johnson was in a National Guard helicopter flying over what was left of Cameron Parish. He couldn't recognize anything, including the location of his 3,200-sq.-ft. brick home. Eventually, a woman found one of his family photo albums after it had floated for 15 miles. "It was like nuclear winter with water," he says.

Eight of the co-op's employees and two board members lost everything they had. Rita breached 38 of 40 cemeteries in Cameron Parish. More than 340 caskets and their remains wound up in swamps and treetops as far as 30 miles away. It destroyed Jeff Davis's Cameron Parish office, along with 1,600 miles of transmission and distribution lines.

Yet some good can come from even the most horrific situation. Except for a couple of stragglers who survived in the county courthouse, residents took the lessons of Katrina and New Orleans to heart and evacuated the area. That prevented a repeat of Hurricane Audrey, which killed more than 300 in the parish in 1957.

"It's sad to say, but in one way for us, Katrina was a blessing," Johnson says. "If Katrina hadn't hit when it did, we would have probably lost several hundred people in Cameron because they had got to the point they had evacuated so many times, nothing ever happens."

Photo courtesy courthouses.co

After Hurricane Rita hit, the sturdy white-granite Cameron Parish Courthouse was among few structures in the area to remain intact. Jefferson Davis Electric Cooperative mounted 6,000-watt lights around the building as a beacon visible nearly 20 miles away.

KATRINA FATIGUE

Heinen received a stark message when he met with a member of the Louisiana Public Service Commission in late September 2005. At just 10,000 meters, you're too small to fix things, he was told. Sell out to another cooperative or an investor-owned utility large enough to deal with the mess.

Heinen's response: Just give me a chance.

That chance came to pass in a hospital meeting room not far from Jeff Davis's headquarters in Jennings, where Derrell London of Dulles, Va.-based National Rural Utilities Cooperative Finance Corporation (CFC) joined in on behalf of his boss, CEO Sheldon C. Petersen.

"Derrell insisted, with Sheldon's approval, to come to the meeting and make sure we all stayed calm and make sure that we all understood that Jeff Davis Electric Co-op is going nowhere," Heinen recalls. "Hang on. They're here. We will survive."

Money was one thing. Resources were another. Between them, Rita and Katrina had every cooperative in Louisiana reeling.

Supplies were tight; no one expected another Category 3 hurricane to arrive so soon after the first. Katrina-fatigued volunteer linemen from across the country already had spent three weeks restoring service to hundreds of thousands of co-op members.

"The resources and the help to bring to it were very difficult and, frankly, more expensive because we had to go two, three, four states away, as opposed to being able to get the help that we would normally call upon both within the state and the states that are right around us," Pierce says.

Jeff Davis and federal auditors went back and forth for years over the lack of competing price quotes for $6.2 million spent on the tent city company. Eventually, the Federal Emergency Management Agency (FEMA) sided with the co-op, saying it had no other choice given the emergency situation.

"Without FEMA and FEMA funds, our members would be stuck with rates that were astronomical trying to get electricity back to make a community survive," Heinen says. "It normally shouldn't have taken $83 million, but when you have to go all across the United States and Canada to get things you need because everything else is exhausted, you're going to pay a premium for it."

ONE LIGHT

Rita took down every power pole between the base of the Gibbstown bridge, from which Johnson first stared out at the loss, and the Gulf of Mexico. So the bridge was a logical starting point for the 800 linemen and volunteers who came from far-flung places like California and New Hampshire.

"I just don't know how you describe it, to see that many people lined up working," Johnson says. "And when we would come out every night, you would look back and see the progress you made every day."

As line crews worked through the crossroads community of Creole on Highway 27, Johnson was struck with inspiration. As soon as the area could accept power, he arranged to string up a single streetlight.

As the light glowed, Heinen received a phone call from a member of the Cameron Parish Police Jury, the governing body for the parish, who also was a Jeff Davis member-owner.

"That man—and I'm going to tear up again—that man from the police jury called me the next day and said, 'I sat there, and I stared at that yard light for an hour, couldn't believe it. We're going to be home.'"

The next visible sign of recovery was the repowering of the New Deal-era courthouse in Cameron, a white-granite building that was the only structure in the area to remain intact. The co-op mounted 6,000-watt lights around the courthouse as a beacon visible nearly 20 miles away.

"Once we energized the courthouse, when you crossed the Gibbstown bridge, you could see the glow of the lights at the courthouse square," Johnson says. "It gave you hope, you know, that you knew that progress was being made, but you just didn't know how fast it was going to come."

'THE NEW NORMAL'

The tombs in cemeteries around Cameron Parish have been resealed with six-inch-thick slabs of granite. A monument erected outside the courthouse wishes peace upon the dead, their families, and those who worked on recovering remains.

Photo by Alexis Matsui

A monument outside Cameron Parish Courthouse wishes peace upon the victims of Hurricane Rita, their families, and those who worked on recovering remains.

The family at the co-op is mostly whole. Jeff Davis acquired campers for employees who lost their homes, and co-ops around the country pitched in with financial support. Pierce of the Louisiana statewide pointed to a benevolent fund established in the wake of Rita for co-op directors and employees.

"We thought we'd get, I don't know, a few thousand dollars, a hundred thousand dollars," he says. "We got over $2 million. And that was strictly from employees and directors and other folks within the family. It was a tremendous response personally throughout the cooperative family that I've never seen before and will never forget."

A self-described accordion-playing Cajun, Heinen likes to talk about Jeff Davis being in a "new normal." The rebuilt system stood up well to Hurricane Ike in 2008. No dissatisfied public service commissioner talked about a buyout, though the storm once again cost a couple of Jeff Davis employees their homes.

The co-op has a franchise agreement with the city of Lake Charles, which it never has had before. Dan Feibus, CEO of Zagis USA, publicly credited Heinen with "persistence" in getting the company to expand its $9 million cotton-spinning plant in Jennings. Industrial activity is brisk, and that means more new members and more co-op growth.

The future of the co-op and the community it serves is bright. In fact, Heinen says, maybe it was bright even in the dark days after the storm. He remembers the perspective of a Cameron resident who told him, all things considered, that Rita wasn't that bad.

"I said, 'How can you really say that? There's nothing left here.' He said, 'I was here for Audrey. We had 300 people dead for Audrey. This, we can rebuild this. You can't replace life.'"

THE TIES THAT BIND

WITH SINGING RIVER ELECTRIC'S HELP, A MISSISSIPPI COMMUNITY COLLEGE GOT PAST KATRINA

BY STEVEN JOHNSON

Mississippi Gulf Coast Community College (MGCCC) is doing well. Enrollment is on the rise, instructional and workforce training programs are expanding, and the school ranks among the top 100 community colleges in the country in granting associate degrees.

But it could have been otherwise, and the college credits the help of an electric cooperative for its survival. It is part of a relationship between the college and Singing River Electric Power Association that is so strong officials have trouble putting it into words.

"When you have an entry badge to their facility or when you have employees stationed in their facility, 'partnership' doesn't describe that," says Jason Pugh, the college's vice president for Teaching and Learning/Students Services and Community Campus. "I've used the term 'symbiotic' to describe it in the past, so maybe that's a term we'll use in the future."

Lucedale-based Singing River Electric and MGCCC previously teamed up to expand the school's George County Center campus and develop an apprentice lineman training school. "The college was instrumental in helping us find a way to replace linemen who were reaching retirement age," says Mike Smith, CEO and general manager of the co-op.

The bond became a lifeline after Hurricane Katrina struck the Gulf Coast on August 29, 2005. As more than 1,000 workers put in 18-hour days to restore Singing River Electric's system, the college was facing its own crisis. Katrina hit two weeks into the fall semester, forcing the largest community college in Mississippi to suspend operations.

MGCCC, which has eight locations across the Gulf Coast, sustained $15 million in losses. Seventy-five percent of the buildings were damaged at its Jackson County Campus, a few blocks west of Singing River Electric's coastal office in Gautier.

Most troubling, nearly 3,000 of the college's 10,500 students were gone. Whether they suffered personal or family adversity, moved elsewhere, or dropped out of school, their absence cut deeply into the college's finances.

"We were seeing $4 million lost instantly in tuition when we lost a quarter of our student population," says Michael Heindl, vice president of administration and finance.

Mississippi Gulf Coast Community College credits assistance from Singing River Electric Power Association with its survival after Hurricane Katrina damaged buildings on the college's three campuses and cut enrollment by more than 25 percent.

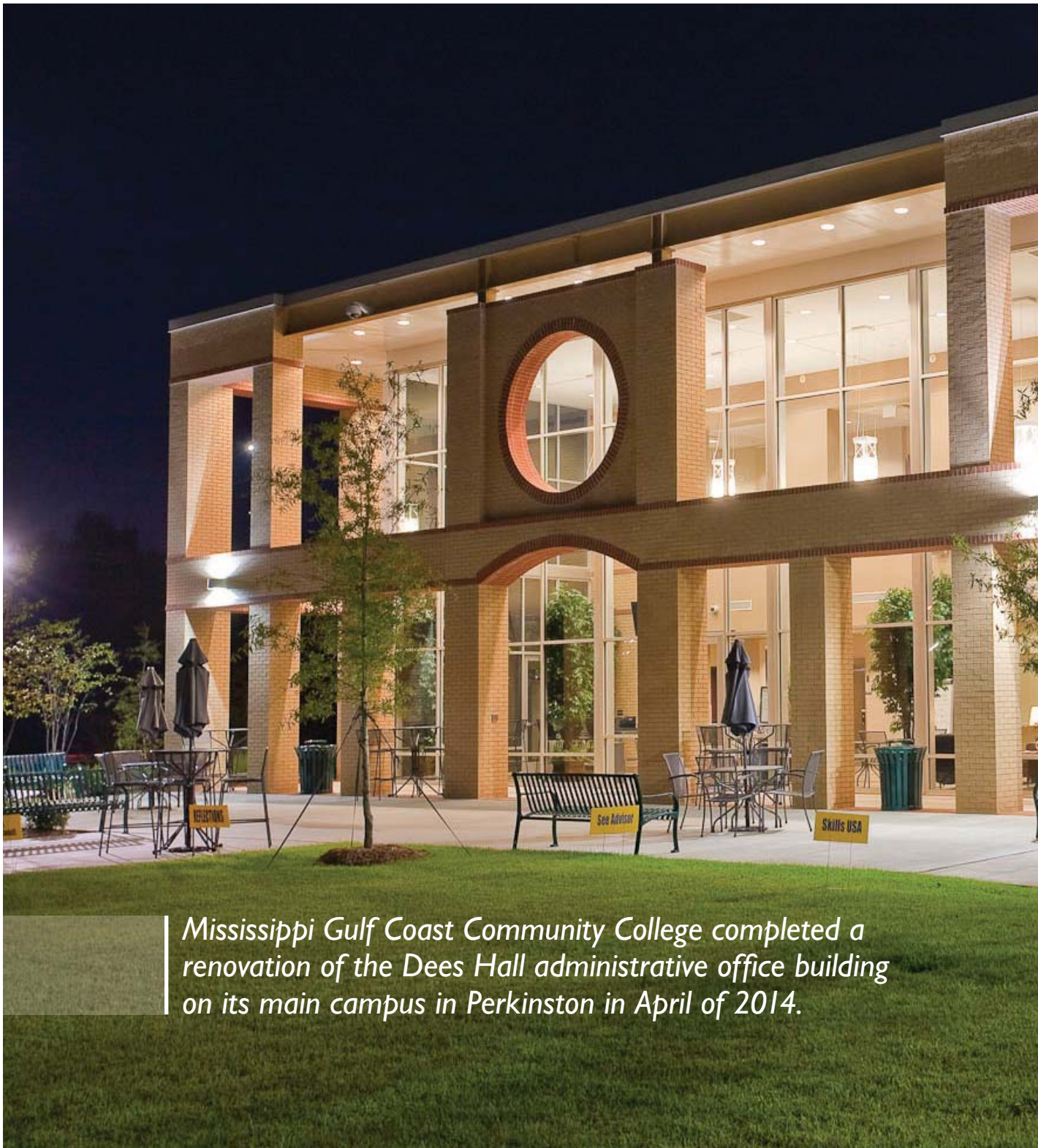
The college reopened in about 10 days, which restored an important sense of normalcy to students, staff, and faculty members. But it was wounded. The college board of trustees had already tapped an emergency fund for $4.7 million.

"We as an institution made a decision long ago to be able to operate for a short period of time with the funds that we had in our bank account," Heindl says. "But we saw that going away very quickly. We needed to continue to operate, to continue to pay our employees, to continue to serve this community and the four counties that we serve."

Singing River Electric filled the void. The co-op has been an active user of the U.S. Department of Agriculture's Rural Economic Development Loan and Grant (REDLG) program, which co-ops underwrite with prepayment of their electric loans.

The co-op already had a project in the REDLG pipeline but converted that into a different initiative following a discussion with then-college President Willis H. Lott.

"We knew they had sustained a lot of structural damage to the buildings,



Mississippi Gulf Coast Community College completed a renovation of the Dees Hall administrative office building on its main campus in Perkinston in April of 2014.

but what we soon learned is they had lost a lot of their students as a result of being displaced or relocated to other areas," Smith recalls.

After a fast-tracked review process—about two months instead of the usual six or eight—Singing River Electric presented the college with a zero-interest loan for $810,000. The money preserved 10 instructional positions and 10 staff positions.

"Singing River Electric was the first community partner to step up to offer assistance," said Lott, who retired in 2011.

Pugh says the REDLG loan involved less paperwork than other monetary sources would have required and was more timely because Singing River Electric was local. In addition, the loan came with a 12-month deferment period, giving the college more time to get its finances organized.

"Working with people you know locally in the same county, you can expedite things and you can get the revenue to help you get back on your feet," he says.

The loan led to accomplishments beyond the expenditure of $810,000. Studies show investments in Mississippi community colleges return $3.86 for every $1, so the efforts of Singing River Electric and the college's partners had a multiplier effect, Pugh says.

Ingalls Shipbuilding, headquartered in Pascagoula, is the state's largest employer at nearly 11,000 jobs. Katrina put its facilities under salt water, corroding sensitive equipment that had to be retested before returning to service. That work was performed at MGCCC's Jackson County Campus.

"The money from Singing River and the other money we got enabled us to keep our employees and keep the institution open," Pugh says. "Because we had the doors open and we were operational, Ingalls was a step ahead of the game getting back into production. I don't know how you put a dollar figure on it."

Heindl says the college is in a good position now. Between full-time students, adult education programs, and workforce trainees, it touches some 30,000 Gulf residents. It is implementing a robust strategic plan and has new contingency strategies to deal with natural disasters.

"When one of us rises, we all rise together," he says. "This was an experience that we all went through together. We all helped each other through and came out very well on the other side." **RE**

Photo courtesy Chris Albritton Construction Co.

Photo courtesy Tesla

SIZING UP POWERWALL

AN ANALYSIS OF TESLA'S INNOVATIVE ENERGY-STORAGE SYSTEM

BY REED KARAIM

Tesla Energy's Powerwall, a home and commercial battery system expected to be available late this year, could be an important step forward in home energy storage, according to an assessment by NRECA's Business and Technology Strategies (BTS) department.

While other residential and commercial battery storage options are already available, Powerwall appears to come with significant advantages over these systems, says Andrew Cotter, a program manager with BTS and co-author of the Powerwall analysis.

"It's not a huge leap in technology—it's a lithium-ion battery pack—but they've made a major jump in terms of cost and the form factor," Cotter says. "This is a really clean and easy piece of equipment to install, and it's a nice, slim design that people can put anywhere in their house."

The system also operates at a significantly higher voltage—350 to 450 volts—than other battery packs, generally 48-volt systems, which Cotter says is an additional advantage since it brings down the cost of power inverters, wiring, and other associated hardware.

Powerwall is being offered in a 10-kWh version intended to provide limited backup power during an outage or emergency and a 7-kWh daily-cycling version that can be used during peak periods. Tesla is also offering a larger Powerpack, essentially 10 Powerwalls, intended to provide backup power for commercial-sized loads.

The 7-kWh model costs $3,000, while the 10-kWh version is $3,500. Both come with a 10-year warranty, according to Tesla, although details of the warranty have yet to be spelled out. If purchased with a photovoltaic (PV) system and recharged primarily through the PV array, Powerwall could be eligible for the 30 percent solar investment tax credit, the BTS report notes.

The 10-kWh home-backup version is expected to be

MEET A MAG MEMBER

KENN LAMB

Even the coffee-break conversations yield useful information when a Member Advisory Group (MAG) gets together to weigh projects for NRECA's Cooperative Research Network (CRN).

At least that's been Kenn Lamb's experience after less than a year on the Transmission & Distribution (T&D) MAG. Lamb had 12 years of engineering experience with the military, investor-owned utilities, and a line construction company when he joined New Hampshire Electric Cooperative in Plymouth as its assistant engineering manager last year.

Working with the MAG offers unexpected help, he says.

"At my last meeting, a brief side-note discussion led to me investigating, and purchasing, an iPhone-compatible FLIR [Forward-Looking Infrared] device, which I've now utilized to evaluate substation connection issues," Lamb says. "I was simply not aware that such a powerful device was available for such an economical price."

He returns the favor by offering his MAG a particular perspective all his own.

"I feel I bring an opinion of operational and design elements that are representative of a northern New England-based electric utility," he says, adding that serving on the T&D MAG gives him access to a potent pool of co-op experience.

"I am looking to learn from that experience whenever possible," Lamb says.

the big seller, and for co-ops and other electric utilities, Cotter emphasized that it shouldn't affect demand. "This isn't going to take people off the grid," he says. "From that perspective, it's going to have very little impact."

The 7-kWh daily-cycling Powerwall could help reduce peak loads, but without a rate structure to encourage such an approach, it makes less sense from a consumer's point of view.

"Sales of this version are likely to be completely driven by rates, peak pricing, or tiered rates," Cotter notes. "For consumer-members at the co-ops, very few folks are going to have any use for the daily-cycling model, at least with current rate structures."

SOLD OUT THROUGH MID-2016

Energy storage is widely seen as an important part of the future of the grid, as electric co-ops and other power utilities seek to avoid building more peak generation and to operate as efficiently as possible. But high costs and cumbersome battery systems have so far slowed integration. Powerwall's cost, which doesn't include installation, still puts it beyond the reach of many consumers, but Cotter says it represents an important step forward in overall affordability.

Photo courtesy Tesla

Tesla reports that Powerwall has drawn strong initial consumer interest. A week after debuting the product, Elon Musk, Tesla's CEO, announced the company already had received 38,000 reservations for Powerwalls and was essentially sold out through mid-2016. Musk also said those reservations included roughly 2,500 for the commercial Powerpack.

Tesla's home and commercial batteries are being sold directly by the company and through vendors, including SolarCity, a leading residential PV provider that is packaging Powerwall with its solar installations.

Some electric cooperatives could find that marketing Powerwalls will provide members with a valuable option

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for backup power. Jim Spiers, NRECA vice president for business and technology strategies, says regardless of whether co-ops end up selling Powerwalls, they need to be prepared to provide advice to their members on the economics and practicality of such a system.

"Our job is to put good, objective facts in the hands of our co-op members," Spiers says. "This is another opportunity to engage with our consumer-members and help them determine if this product has enough value, based on their wants and needs."

'RIDE THROUGH THE NIGHT'

Spiers and Cotter both note that, down the road, larger versions of Tesla's commercial Powerpacks could prove useful—for example, at a substation or the end of a feeder line, where the batteries could provide additional power to bolster the system.

Assessing the practicality of those possibilities is critical, Spiers says, and NRECA is developing a modeling tool for co-ops so they can look at how integrating storage into their distribution systems could affect both economics and reliability.

But those applications lie in the future. Today, residential backup power seems to be the most immediate use for Powerwall. Each unit can provide 2 kW of continuous power and 3.3 kW of peak power. BTS's advisory on Powerwall notes that a couple of the 10-kWh units "connected to a modest-size PV array could support multiple critical household loads, including refrigeration, computers, medical equipment, well pumps, sump pumps, and gas furnace controls for long durations, but not high house loads like HVAC, electric water heater, electric stove, clothes dryer, multiple room electric heaters, etc."

When paired with a modest-sized solar array, two Powerwall backup units "could easily support these critical loads indefinitely during an extended outage," the paper states. The NRECA study uses the example of a photovoltaic system that generates 15 to 25 kWh per day, depending on the season. Having "20 kWh of storage would allow it to easily ride through the night. The solar PV and two Powerwall systems would provide 4 kW continuous, and a 6.6 kW surge, which would support most normal household loads well," the paper says.

Although solar power varies depending on weather conditions, intelligent energy management could "make sure critical loads keep power even during cloudy periods," the paper concludes.

While it seems unlikely to completely replace backup generators for commercial operations that need to continue to operate during outages, Cotter says he could imagine Telsa's Powerpack serving as an additional source of power, making sure there were no interruptions in supply and providing shorter-term backup.

For residential use, the Powerwall is designed to be more consumer friendly, both in appearance and installation, than many previous battery systems. Just under 3 ft. wide, slightly more than 4 ft. tall, and 7.1 in. deep, it is designed to be wall mounted and to comfortably fit in a closet or other small space. The batteries are designed so multiple units can be easily linked to boost overall capacity.

By operating at a higher voltage, Powerwall also cuts the cost of installation. The NRECA study says a power inverter for the voltage levels provided by the Powerwall retails with SolarEdge for $1,240, while a traditional inverter used in existing, lower-voltage systems costs $2,800. The wiring and switchgear required also "would only be sized for one-eighth the amperage of the traditional 48-V system, so would be significantly less expensive," the paper states.

In the rapidly evolving state of today's power grid, Powerwall and Powerpack both bring new options to the table. "That's why it's really important for co-ops to have the tools to make the evaluation of different products for both co-op purposes," Spiers says, "and to provide that information to the consumer-members." RE

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ACTIONABLE INSIGHTS

HARNESSING DATA HELPS CO-OPS IMPROVE OPERATIONS, REDUCE COSTS, AND ENHANCE CUSTOMER SERVICE

BY JOHN VANVIG

Maquoketa Valley Electric Cooperative's long, concerted campaign to collect, analyze, and act upon the flood of data pouring in from its distribution grid started modestly, as a summer assignment for an engineering intern back in 2002.

"I was evaluating projects options," recalls Jeremy Richert, vice president of engineering at the Anamosa, Iowa-based co-op. "We decided to analyze outage records and see what we found that would be of benefit to improve service to our membership."

It proved to be a tedious, "rather laborious study," Richert says.

"It started by transferring data from green bar paper to Excel spreadsheets and finished with coloring areas in by hand on system maps in order to see things visually," he says. "It was data analytics in 2002, and it was beneficial in the long run. We were able to zero in on a few specific things to improve our reliability programs and start us down the path of realizing the value of data."

Thirteen years of dramatic technological advances and changing member expectations later, Maquoketa Valley Electric has marched a long way down that path. And they're getting a lot of value from the masses of data their system collects.

"Data analytics in 2015 is a whole different world," he says. "Our information technology staff estimates that we collect around 130 million data points per year, and that number is increasing every year. The benefits we are seeing today from data analytics runs across our entire organization, including system reliability, system operations, finance and billing, and member service activities. Sixty-one percent of our 62 employees use and benefit on a regular basis from data that is being collected, analyzed, and put to work."

And that, says Brian Crow, is exactly how data analytics is supposed to evolve. An engineer with nearly two decades of utility experience, Crow is executive vice president of data analytics at Sensus **(sensus.com)**, one of Maquoketa Valley Electric's technology contractors.

"The actionable insights that can be seen through the analytic process are helping utilities improve operations, reduce costs and inefficiencies, and enhance customer service, which is common across all utilities no matter their unique challenges," Crow says. "There is power in the data, and these utilities are unleashing it in new ways."

The "actionable insights" co-ops can expect from data analytics range from correctly sized transformers to better placement of lightning arrestors and from more accurate revenue forecasts to "consumer portals" that allow members to monitor and control their energy use.

With about 16,000 meters on 3,200 miles of line through four counties on Iowa's eastern borders with Wisconsin and Illinois, Maquoketa Valley Electric has seen those insights in action, Richert says.

"Technology and data analytics have played a part in reducing outage time by 53 percent over the last 15 years," he says. "And the data that is being gathered can also help to engage members to take ownership of their energy use through the member portal."

Not that it has been cheap, quick, or easy, he adds. Four years before that engineering intern started coloring the co-op's system maps, Maquoketa Valley Electric had launched a SCADA system.

Then in 2004, the co-op rolled out a customer informa-

tion system, an outage management system, an automated staking program, and a geographic information system. "It is still known as the 'Year of Conversion' among employees and a permanent reminder that change is good," Richert says. "All of the systems installed in 2004 have played a major role in the data analytics that we use today."

The co-op upgraded its SCADA system in 2007. AMI came along the year after that. And consumers were invited to analyze their own energy data with the rollout of the member portal two years ago.

Eight software providers play a role in Maquoketa Valley Electric's data analytics platform. A team of eight employees works to ensure the data is being collected as needed and to integrate and analyze the data. Four of those employees work inside, and the other four spend their time in the field, focusing on keeping the communication system and hardware up and running.

"It has been a 17-year journey with a significant amount of dollars and effort to get to where we are today," Richert says. "It starts with implementing something simple, seeing a benefit, and then growing from there."

'BILLIONS OF DATA POINTS'

Kevin Whyte has seen a similar progression. Talquin Electric Cooperative in Quincy, Fla., was just getting started on data analytics when he started there five years ago, beginning with its shift from member meter reads to an automated AMI system from Sensus.

Now, as the engineering supervisor for the 53,000-meter co-op that serves four counties northwest of Tallahassee, Whyte is sold on the benefits of digging deep into the mounds of information his co-op collects.

He insists that Talquin Electric is only "starting to scratch the surface of data analytics." But a quick roundup of the data coming into his control center suggests otherwise.

Residential meters send hourly reads back to headquarters, offering current and historical data. The read interval for commercial accounts is just 15 minutes and adds kVAR and power factor data to the mix. For both consumer classes, the meters also report alarms for high or low voltage, tampering, outages, and blinks.

"The sheer amount of data that is being collected every day is truly

unfathomable for someone not accustomed to it," Whyte says. For residential meters alone, "we are storing over 400 million data points per year. Now, take into account all of the data points that are being collected and stored, and we're easily looking at billions of data points collected and stored during a year."

The co-op has had to invest in storage and computing power at the server level to make it all happen, Whyte says. "Staff has to be trained to access and interrogate the data properly, which costs time and money. We have increased IT staff as well to grow with our data needs and to be prepared to move even more into the analytics sphere in the coming years."

But the time, money, and effort has been worth it, he says.

"It makes solving problems, and a lot of the daily tasks, easier. Many of the things we weren't looking at four to five years ago, we take for granted today because of the way we utilize and analyze the information," Whyte says. "Things like budgeting, energy sales, capital projects, special projects, increased reliability, all become somewhat easier to manage and forecast because of the utilization of data."

The co-op receives temperature readings to track energy use against weather patterns, and it gathers meter data from its 26 substations. By comparing that to its home and commercial meter reports, Whyte says, "this helps us better understand how much of our purchased energy is being lost through either theft or line losses. This information can help the cooperative improve the distribution system and create a more efficient energy-delivery system."

And some of the greatest benefits can be found in the co-op's member services area, he says.

"It's now easier to show members simple charts that better explain member questions or concerns," Whyte says. "Before, it was like searching for a needle in a haystack to solve a problem. Today, we can go to an internal website, gather the needed information, and present it in a package that tells the member exactly what they need to know."

Getting everyone at the co-op on board can take some doing, he concedes.

"A lot of times you have to address it by simply showing people what you have available and how powerful it is at helping solve problems. Now, that may be an easy sell to some and a tough sell to others. But once you can get them past the scary part of data, the sheer amount of information available, you have a much easier buy-in. The usefulness and excitement about it permeates through the organization."

Whyte believes pitching those benefits to his co-workers will pay off in the end. After all, he says, there's no other alternative.

"At the end of the day, data is becoming a bigger, more important part of the utility," he says. "And it is something we all have to be ready for." RE

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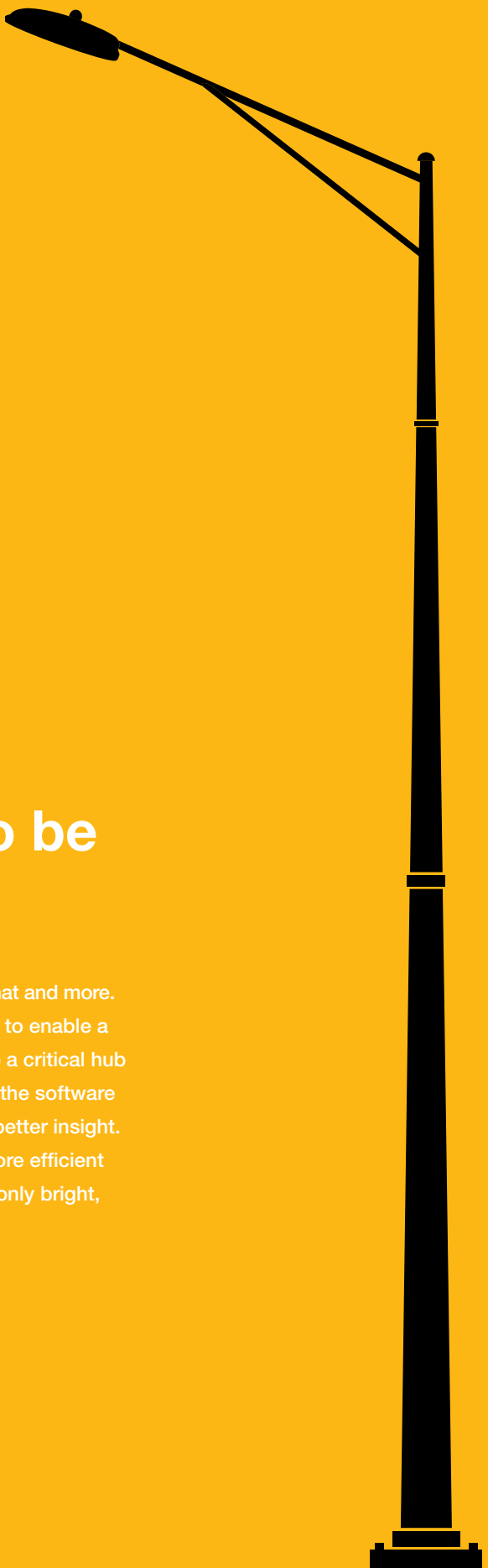

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Photo courtesy Travis Garner

A LINEMAN'S JOURNEY

FROM THE DEPTHS OF ADDICTION, WARREN RECC'S TRAVIS GARNER CREDITS FAITH AND CO-OP WORK FOR TURNING HIS LIFE AROUND

BY MICHAEL W. KAHN

Meeting Travis Garner, it's easy to believe he's a lineman. Tall and rugged, he looks the part, and you can envision him climbing a pole.

But when you hear his life story, it's hard to believe he isn't six feet the other way.

Today, Garner is lead lineman at Warren RECC in Bowling Green, Ky. But it wasn't long ago that he was in a very different world—a world of drugs, including crystal meth, that threatened to end it all before line work and faith saved his life, as Garner puts it. It's a story he's only too happy to tell today, be it to a reporter, to a conference hall, or to a prisoner.

CHILDHOOD ON THE ROAD

Garner was born in Campbellsville, Ky., in 1979. "My dad was a United Methodist pastor," he recalls. "I was taught about Jesus; I was taught about the Bible. At the age of 7, the Lord saved my soul."

He also learned how to pack boxes.

"Every two or three years, we had to move to a different town in the state of Kentucky," as his father's work required. "That had an influence on me. Every time I grew close to somebody and started to care for them, I had to go somewhere else and lose my friends."

Living mostly in small towns, he met people who influenced him—though not always for the best.

"I started stealing stuff when I was 8 years old. They told me the preachers' kids were the worst, and I was going to live up to it," Garner says.

Sports—football in particular—turned out to be the preacher's son's salvation.

The football field "was the only place I could go where I could hit somebody and not get in trouble for it," he

says. "All the anger that I had built up through moving and losing my friends, I took it out on the football field."

For a time, things got better.

FOOTBALL DREAM FUMBLED

During his sophomore year of high school in McLean County, Ky., Garner met a coach who was a life changer.

"Man, this was as roughneck as it gets—getting up in your face, grabbing your helmet, head butting you, hitting you with no pads on and in your face telling you how to be a better football player while cussing you out, spit flying everywhere," Garner says. "Best coach I ever had."

It could have been the road to college, or even the NFL. But the beloved coach transferred to another school, and his replacement wasn't fit to carry the clipboard.

"He didn't care about us so much. He didn't have that drive," Garner recalls. "I started losing my motivation. Half the team quit."

Garner stuck with it for two years, hoping for college glory. But when he didn't hear from any schools his senior year, he got concerned.

"I broke into the coach's office, opened his drawers, and there were the letters. He wouldn't give them to us," Garner says. "Talk about disheartening."

He quit football. After graduating in 1997, he began working in construction, his college dreams and his motivation gone "because of one person."

Soon enough, things would go from bad to worse—also because of one person.

'HERE, TAKE THIS'

"I can remember it like it was yesterday," Garner says.

"It was there on a country road in a small town with nothing to do. A friend laid out a line of meth. I was tired. I'd been working all day long. We were drinking. He said, 'Here, take this.'"

Garner obliged.

"That was in 1997 when I started my journey to becoming a meth addict with that one line."

Before he knew it, he was not only using meth, he was selling it. That got him fired from his construction gig and banned from the job site for six months.

"I thought, 'I've got to get out of here. I've got to get out of this place, or I'm going to wind up in jail or dead.'"

Photo courtesy Travis Garner

Travis Garner thrived during his first two years in the Marine Corps, but a transfer dramatically changed things.

Stuck in Owensboro, Ky., in March 1998, he wound up at a Marine Corps recruitment office where he told his story. The recruiter said it would take three days to get the drugs out of his system before he could take the required drug test.

"Two weeks later, I was gone," Travis says. "That was my rehab: boot camp."

IN YOUR FACE

To Garner, boot camp was like that beloved football coach—instructors were getting up in his face, making demands, keeping him in line. He thrived.

"I enjoyed that time. I went from being a meth addict to a Marine."

He was sent to an urban warfare unit in California that was tasked with testing new equipment, trying to break it, finding its vulnerabilities.

"That was perfect for me," he says.

But two years in, the Marines transferred him to a unit full people who were "biding time to get out," Garner recalls. And they began to have an influence.

"I just didn't care anymore. I started partying. I started drinking again. I got back out into the world and got back into drugs."

And the California drugs weren't like the Kentucky kind.

"It wasn't some home-grown methamphetamine. This was crystal meth. It was the real stuff. I got hooked on it again."

Then he got busted.

After flunking a drug test, Garner was brought before a colonel who "saw something in me," he says. The

Photo courtesy Travis Garner

Travis Garner is now lead lineman at Kentucky's Warren RECC, but his path there was a turbulent one that included meth addiction.

colonel sentenced Garner to 30 days in the brig but didn't kick him out of the Corps.

But even after that, nothing changed. Garner didn't get off drugs, and soon after, he was given an *other-than-honorable* discharge.

'THE PASSION FOR CLIMBING'

Alone in California with no family, Garner returned to Kentucky, unsure of what he would do next.

"I started working with telephone contractors and started climbing poles. It wasn't true line work, but it was getting there, getting my foot in the door."

More importantly, Garner knew he'd found his calling.

"I got that passion for climbing," he says. "It got in my blood." He likens line work to the military: "The band of brothers that you make in this line of work isn't like any other."

He went on to an apprenticeship program at Tri-County Electric in Lafayette, Tenn.

He also met a woman who would become his first wife, though not without some bumps in the road.

"I stood her up because I was high and forgot about the date. But she gave me a second chance, and we ended up getting married," Garner says.

Then something truly life changing happened.

"She took me to a church," Garner recalls. "And the Lord just said it was time."

In 2002, Garner gave up drugs cold turkey. People have a hard enough time quitting cigarettes that way, much less hard drugs, but Garner says there was a higher power involved.

"The Lord really just took it away from me. I didn't go to rehab. Working hard at Tri-County Electric at the time, the Lord got me through it," he says.

But just when things were looking up, fate once again intervened.

THIS CLOSE TO TRAGEDY

It was Aug. 21, 2003, but Garner remembers it like it was an hour ago.

He was part of a Tri-County Electric crew cutting down a pole at a construction site between a house and some trees.

"I thought the guide wire was long enough. I started to walk back as the pole fell. There was a pile of rocks behind me, and I fell and pulled the pole on top of my leg. It crushed everything."

Then again, it could've been worse.

"The pole brushed my hardhat. That's how close I came to not being here."

Garner overcame his extensive injuries and was back to climbing that December. His perseverance and determination won out. It wasn't the first time, nor would it be the last.

"I've always been the type that if I wanted something, I'll just go find it," Garner says.

PAYING IT FORWARD

In 2004, Garner was ready to make a move.

"I just walked into a co-op and asked if they were hiring." That co-op was Warren RECC, and the answer at the time was "no." A couple of weeks later, though, there was an opening, and Garner was asked to come in. The next day he was hired.

Eleven years later, Garner has worked his way up to lead lineman. He remarried in 2008. And the only time he ever looks back on the bad old days is when he's trying to inspire others.

"I go preach at the jail now and try to help other people in that same situation," he says.

"I talk to the people who have the same addictions that I had years ago. I can influence their lives. I say, 'You don't have to keep down the same path as before.'"

To keep himself on the straight and narrow, Garner focuses on his faith, his family, and his desire to make right what he sees as letting his country down.

"Line work got me out of that life. What's important to me now is doing the Lord's work," he says. And let there be no mistake—Garner will look you in the eye and make one thing clear: "I take responsibility for everything I ever did." **RE**

Travis Garner is available to speak about his life story. E-mail him at travissg777@yahoo.com.

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BY TODD H. CUNNINGHAM

OK SOLAR! TCEC OFFERS PV SHARES

Tri-County Electric Cooperative (TCEC) will build a 1-MW community solar project near its Hooker, Okla., headquarters, offering members the opportunity to purchase its output. TCEC will be the first electric utility in the state to offer members community solar.

A recent TCEC survey indicated that about 70 percent of respondents have an interest in renewable energy, Chief Operations Officer Zac Perkins says. By working to understand and meet their needs, "we are satisfying our cooperative's mission to improve the quality of life of those we serve," he adds.

Under TCEC's community solar program, co-op members can purchase one or more solar panels—the array has about 4,000—and receive a bill credit for the energy produced.

System construction will be handled by Today's Power, Inc., a subsidiary of Arkansas Electric Cooperatives **(aecc.com/todays-power-inc)**.

Contact: Tri-County Electric, Zac Perkins, 580-652-2418, ext. 855; Today's Power, Inc., Rob Roedel, 501-570-2296.

CHUGACH LAUNCHES HYBRID ENERGY STORAGE

Chugach Electric Association, based in Anchorage, Alaska, is joining a Massachusetts manufacturer to launch an innovative hybrid energy-storage project in the co-op's service territory. The 320-kW system, to be installed at a Chugach substation, will go into operation later this year.

The project will combine high-power flywheel energy storage technology from Beacon Power **(beaconpower.com)** with an existing lower-duty-cycle conventional electrochemical battery. The system melds the benefits of the fast-responding flywheels with the longer-duration batteries to help manage and stabilize variable output from renewable energy sources.

Photo courtesy Beacon Power

Flywheel energy storage technology installation at Chugach Electric Association

Paul Risse, Chugach Electric's senior vice president for power supply, termed the project an opportunity to bring Alaska "proven next-generation technologies that have strong track records elsewhere ... and combine them in an innovative way." Capturing the best aspects of each "is what's most important," he added.

Beacon Power says its flywheel system provides rapid first-stage response to grid instabilities, while the battery system delivers a second-stage response if more energy is needed over a longer duration. The new system will be tested to determine if it can be scaled up to enable increasing amounts of renewables to interconnect with remote system utilities along Alaska's Railbelt.

Contact: Chugach Electric, Paul Risse, 907-762-4532; Beacon Power, Barry Brits, 978-661-2024.

COMMUNITY SOLAR SHINES IN IOWA

Heartland Power Cooperative, based in St. Ansgar and Thompson, Iowa, has commenced operation of its 852-kW community solar array. Consisting of more than 2,700 315-watt solar panels, the array is expected to generate 1.2 million kWh annually, making it Iowa's largest community solar project to date.

This annual output represents enough electricity to power approximately 125 homes. The community array "increases access to solar energy for our members by providing optimal siting [and] managing costs through economies of scale of a large project," says Jon Leerar, Heartland Power's general manager and CEO.

The community array, designed by Minnesota-based Dragonfly Solar **(dragonfly-solar.com)**, provides co-op members "a hassle-free option without the individual research, management, and ongoing maintenance of a stand-alone system," Leerar adds.

Heartland Power members can purchase subscriptions for the production rights of one or more panels and

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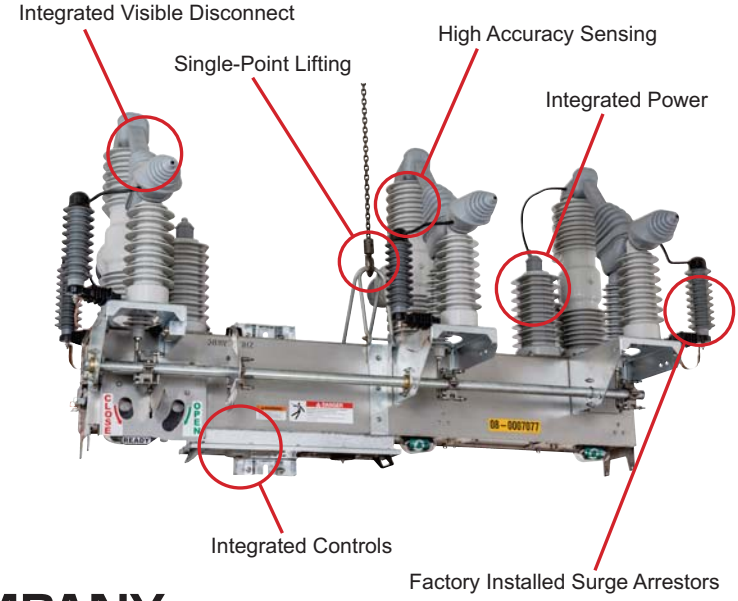

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Photo courtesy Heartland Power Cooperative

Heartland Power Cooperative community solar array

will receive monthly bill credits based on the facility's energy output for that month. Annual production per panel is expected to average 425 kWh over the 20-year life of the project. The cost was initially set at $700 per panel.

Contact: Heartland Power, Jon Leerar, 641-584-2251; Dragonfly Solar, Steve Peters, 855-326-1786.

ALASKA CO-OP USES GAS TO SELF-GENERATE

Matanuska Electric Association (MEA), Palmer, Alaska, has made what it describes as a "seamless and uneventful" switch from an all-requirements purchaser of electricity to a self-generating utility.

The Alaska co-op made the transition when the 171-MW Eklutna Generating Station became fully available. The facility has 10 natural-gas-fired engines of 17.1 MW, from Finland's Wärtsilä **(wartsila.com)**, that enable MEA to produce all the power required to meet full member demand and required reserves, with help from local and statewide power projects.

"This is an important day for our cooperative and the entire Railbelt," says Matanuska Electric General Manager Joe Griffith. He noted that the plant was brought on-line "within a few months of our timeline and 10 percent of our project budget."

MEA reported that the plant's 10 engines allow it to more efficiently follow its service area's primarily residential load and bring a unique, efficient load-following capability to the Railbelt, a 500-mile region from the Kenai Peninsula to Fairbanks. The Eklutna plant will provide electricity 30 percent more efficiently than the machines that previously served the co-op, providing a significant reduction in fuel consumption and related costs, MEA reports.

Contact: Matanuska Electric, Wes Lindsey, 907-761-9448; Wärtsilä Corp., Kenneth Hagg, +358-40-84-9848.

IN N.D., CO-OPS SPUR SOLAR RESEARCH

North Dakota's Northern Plains Electric Cooperative, Cando, and Dakota Valley Electric Cooperative, Edgeley, have built a small solar array as a research resource for members curious about installing such an asset. The North Dakota-based sister co-ops described the 6.56-kW system as "similar in size to what an average farm or small business would install if it so chose."

The co-ops will assess how much the system from tenKsolar **(tenKsolar.com)** will cost to maintain, its reliability, and members' return on investment. A press release said the co-ops "want to serve as an unbiased source of information" to members considering the addition of a solar power system.

Information on project performance is available in real time on the co-ops' websites and will be disseminated through newsletters and social media, as will responses to members' inquiries, says Katie Ryan-Anderson, the co-ops' manager of member communications.

The $14,000 16-panel array is located outside Northern Plains Electric's office in Carrington.

Contact: Northern Plains Electric, Dakota Valley Electric, Darin Sand, 701-427-6058; tenKsolar, Trevor Downs, 952-303-7600. RE

Photo courtesy Northern Plains Electric Cooperative

North Dakota solar research project

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PROTECTIVE RELAYS

ABB, Inc., has released three additions to the ABB Relion 605 series distribution protective relays. The *REF601* for feeders, *REJ601* for overcurrent, and *REM601* for motors provide digital protection for low to mid-range distribution applications. The 605 series serves applications needing three-phase overcurrent protection and includes options like breaker control, auto-reclosing, communications, and Rogowski current sensors.

Contact: ABB, Inc., Raleigh, N.C., 919-807-5743; bill.rose@us.abb.com; abb.com.

GRID-ENABLED WATER HEATER

VAUGHN THERMAL

Vaughn Thermal Corporation's *V-Grid electric thermal storage water heaters* for residential demand-response applications is available in 80-, 100-, and 119-gallon sizes. The units meet current requirements for utility load management and demand response programs.

Contact: Vaughn Thermal Corporation, Salisbury, Mass., 978-462-6683; fax 978-462-6497; skoep@vaughncorp.com; vaughncorp.com.

CAPITAL SAFETY

RESCUE DEVICE

The *DBI SALA Rollgliss R550* from **Capital Safety** provides controlled-descent rescue, evacuation, or assisted rescue with lifting capabilities. The automatic descent device applies to rescue and evacuation from heights up to 1,640 ft. for one user at 310 lbs. or 575 ft. for two users totaling 620 lbs. It is configured with connecting hardware at each end of the lifeline to operate in both directions.

Contact: Capital Safety, Red Wing, Minn., 800-328-6146; capitalsafety.com.

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HIPOT TEST UNIT

HAEFELY HIPOTRONICS has released it digital *880PL-DC Hipot*. The portable device can be programmed in automatic mode or manual mode to control the test voltage. Operator information is displayed on a 7-in. color touchscreen. The 880PL-DC has data acquisition software for exporting test results via universal serial bus. Safety features include external interlocks, built-in safety checks, visible and audible warning indicators, and an emergency stop button.

Contact: HAEFLY HIPOTRONICS, 845-230-9245, 845-230-9267; dkulis@hipotronics.com; hipotronics.com.

ONLINE TRAINING COURSES

Global Training Solutions, Inc., now offers fully interactive, role-based *NERC CIP V5 Online Training Courses.* CIP V5 courses include basic cyber security, information handling, electronic access controls, physical access controls, and cyber security incidents, response, and recovery. Programs can be customized to specific policies, processes, and procedures.

Contact: Global Training Solutions, Inc., Mississauga, Ontario, Canada, 416-806-5777; info@globaltrainingsolutions.ca; globaltrainingsolutions.ca.

SOLAR PLATFORM

The **Clean Energy Collective** (CEC) has released its *Community Solar Platform,* a suite of software tools and services for utilities and solar developers to deploy and manage community solar programs. RemoteMeter, CEC's proprietary Software-as-a-Service (SaaS) platform, drives production tracking and integration, on-bill crediting, customer contracts, and overall program management to help utilities launch, operate, and monitor shared solar program system performance and production.

Contact: Clean Energy Collective, LLC, Carbondale, Colo., 844-CEC-SALE, 970-618-0080; fax 970-692-2592; info@morecleanenergy.com; easycleanenergy.com.

DESKTOP METER TEST STATION

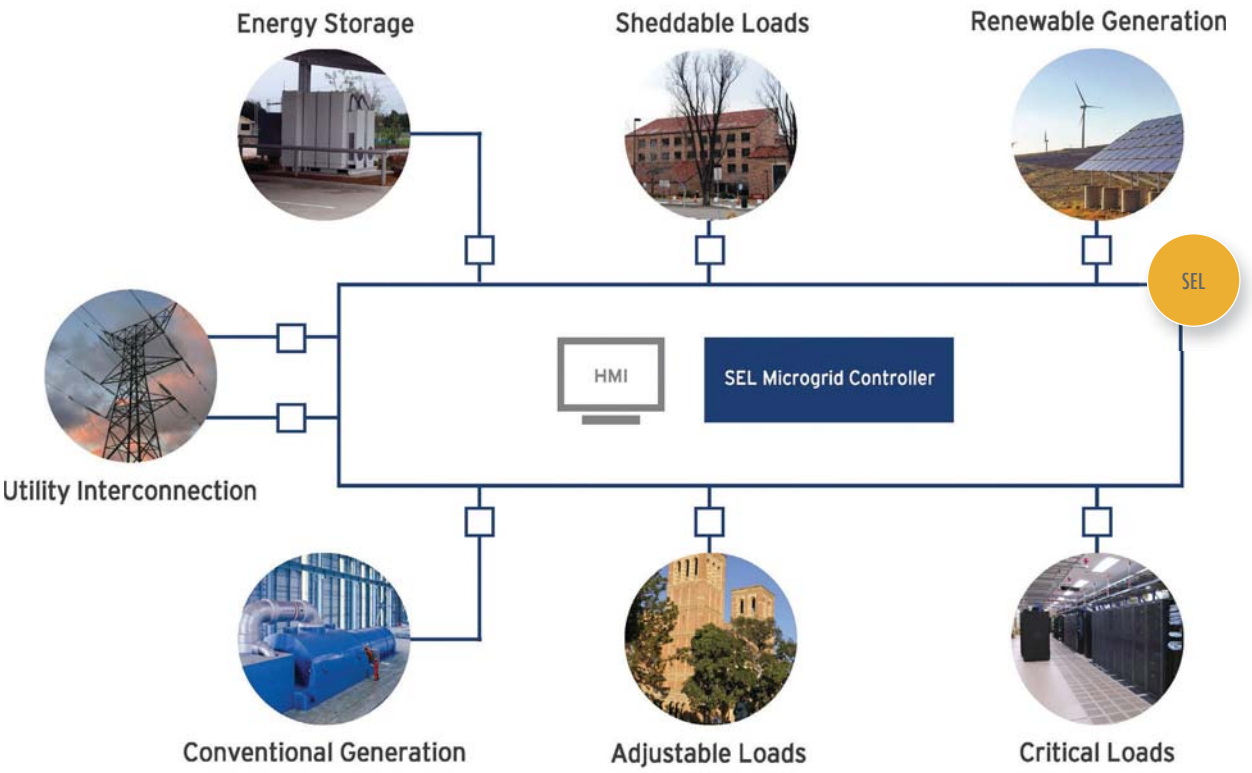
TESCO has introduced its *desktop meter station* redesigned to communicate with and test Two-Way Automated Communication System (TWACS) advanced metering infrastructure meters. This optional feature has one set of panel-mounted banana plug connections and an adapter cable to facilitate communications to the meter from the users of TWACS PRTU modules. This connection lets users communicate with TWACS modules and to test other types of electric meters from your desktop.

Contact: TESCO, Bristol, Pa., 800-762-8211, 215-785-2338; fax 215-781-0508; info@tescometermanager.com; tesco-advent.com.

TRANSFORMER PROTECTION

GE Digital Energy has released its *Multilin 845 transformer protection system* for the Multilin 8-Series platform of protective relay devices. The 845 gathers data from GE's Kelman dissolved gas analysis monitoring devices to collect, trend, and analyze a transformer's electrical characteristics and fault gases. Protection algorithms provide analytics for dashboards and reports and enable the proactive maintenance.

Contact: GEDigital Energy, 678-844-3174; patric.rayburn@ge.com; gedigitalenergy.com.



MICROGRID CONTROL

Schweitzer Engineering Laboratories, Inc. (SEL), has release a new line of *microgrid control systems for distributed energy resources.* The controller responds to external data, such as real-time pricing signals and system dynamics, to optimize configuration based on user priorities and real-time data.

Contact: Schweitzer Engineering Laboratories, Inc., Pullman, Wash., 509-332-1890, fax 509-334-8745; krista_mckibben@selinc.com; selinc.com.

SMART METER

The new *Stratus residential meter* from **Sensus** is available in form 2S remote disconnect and supports multiple applications, including outage management, opt in, opt out, and conservation voltage reduction (CVR). Combined with the Sensus FlexNet network, utilities can configure, upgrade, and customize the meter's electricity management platform. Meter safety features include a redesigned power supply for increased over-voltage protection and transient performance.

Contact: Sensus, Raleigh, N.C., 800-638-3748; fax 800-888-2403; sensus.com.

LED MOUNTING PLATES

New universal light-emitting diode (LED) *mounting plates* from **Global Tech LED** enable retrofits of existing pole- and surface-mount outdoor roadway, high bay, and area lights. The units accommodate multiple shoe box, post-top, and high-bay mounting-plate styles. Individual models provide choices of single, dual, or even triple LED modules with integral circuit boards. Each mounting-plate style has a soft start, zero-to-10-V control port, and is dimming compatible.

Contact: Global Tech LED, Bonita Springs, Fla., 877-748-5533; info@globaltechled.com; globaltechled.com.

THIS MONTH'S ADVERTISERS

Advertisers are solely responsible for the content of their advertisements. Publication of an ad does not imply endorsement by NRECA or *RE Magazine*.

ENCLOSURE FOR BATTERY SYSTEMS

EnerSys, through its subsidiary **Purcell Systems**, has introduced a new line of modular, thermally managed *VaultFlex enclosures for backup battery systems* used in telecommunications, cable, and utility applications. Enclosures are offered in a range of sizes and configurations with several options for heating and cooling. Constructed of corrosion-resistant aluminum with steel racks and rails, the enclosures support a wide range of battery chemistries.

Contact: EnerSys-Americas, Reading, Pa., 800-538-3627, 610-208-1991; fax 610-372-8457; enersys.com.

BUSHING

The *Buddy Bushing* from **LineWise** eliminates the sawing action that can cause insulator attachment holes on crossarms to fail. The stainless steel device can be installed on a partially worn attachment hole or placed in new construction and mitigates wear issues and erosion of the attachment hole in the crossarm.

Contact: Diversified Product Development, Waco, Texas, 254-757-1177; fax 254-757-1188; rfritel@diversifiedproduct.com; diversifiedproduct.com.

ANTENNA

Aclara has introduced a *through-the-lid antenna* that reaches all meters in pits and vaults and returns high read rates. The antenna lets utilities continue to use metal lids or choose alternatives. Modules using the new antenna provide communications services equivalent to modules mounted under composite-material lids. The antenna works with Aclara STAR network single or dual-port, standard, and extended-range meter units.

Contact: Aclara, St. Louis, Mo., 800-297-2728; jrichardson@aclara.com; aclara.com. **RE**

All items in "Utility Marketplace" are based on information provided by vendors. Mention of a company, product, or service by name does not imply endorsement by* RE Magazine *or NRECA.—Scot Hoffman, Editor

STAFFING EMPLOYMENT OPPORTUNITIES IN THE UTILITY INDUSTRY

GENERAL MANAGER

The Board of Directors seeks a successor to a retiring General Manager. Verendrye Electric Cooperative, Inc., is a strong, growing rural electric cooperative located in Velva, N.D. The Board seeks candidates with backgrounds that are broad enough in scope to include experience in utility operations, financial management, and member relations. The Board also seeks an individual who is an active, involved community and rural electric industry leader, has an appreciation for the cooperative business model, economic development, has excellent communication, and people skills. Verendrye is a

member-owned cooperative which provides electricity to homes, farms, and businesses in 7 counties in northwest North Dakota. Altogether there are more than 16,000 meters powered by the cooperative with 4,600 miles of line. Verendrye is headquartered in Velva, has a full service center in Minot, and outpost in Harvey. Verendrye is the owner of the electric distribution system at the Minot Air Force Base following privatization and is responsible for its operation and maintenance. The City of Velva is a quiet community located in McHenry County, N.D., with a population of about 1,200 people. Northwest North Dakota has a full range of recreational activities. Check out Verendrye's website at www.verendrye.com. The cooperative offers an excellent NRECA benefits package, including a competitive salary commensurate with qualifications. Qualified candidates should submit a resume, a minimum of three professional references, and salary expectations by November 1, 2015, to: Blaine Bruner, VEC Chairman, 4049 - 12th Avenue NE, Drake, N.D. 58736, e-mail bkbruner@gondtc.com.

CHIEF EXECUTIVE OFFICER

Northwest Requirements Utilities (NRU) is seeking candidates to fill the position of Chief Executive Officer. The CEO acts as the chief executive and operating officer of NRU and is responsible for: working with senior level executives in the utility industry to represent and advance the interests of NRU members; administration of the day to day activities and affairs of the corporation, including the supervision of other employees and oversight of agents and consultants retained by the corporation; supporting NRU employees in a team setting to meet the NRU mission; keeping the president, executive committee, and board current and fully informed on the activities and matters of importance to the corporation. For expanded job duties and requirements of the position, instruction for applying, and information about NRU, please visit www.nru-nw.com/career.htm.

For complete employment opportunity advertising information, please visit REmagazine.coop, click on Advertise, click on Employment Advertising.

Cooperative.com has a free service for members to post job announcements themselves. Details may be found in the HR Professionals section under Career Center.

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REGION 9
Alaska
California
Hawaii
Idaho
Montana
Nevada
Oregon
Utah
Washington

REGION 10
Arizona
New Mexico
Texas

NATIONAL
BRAND CHAMPS

Three co-op marketing and communications professionals have been recognized as Touchstone Energy® Brand Champions. The award was presented during the recent CONNECT conference to **Jimmy Baker**, vice president of marketing & public relations at Palmetto Electric Cooperative, Hardeeville, S.C.; **Nancy Nixon McDonald**, marketing administrator at the Association of Illinois Electric Cooperatives (statewide), Springfield; and **Joe Sikes**, communications specialist at Canoochee Electric Membership Corporation, Reidsville, Ga.

More than three decades of dedicated service at NRECA drew to a close with the recent retirement of **Jane Hoge** as the association's director of member meetings & conferences. Her primary responsibility for the past three years has been the NRECA Annual Meeting and the regional meetings that lead up to it, but she's also been the association's longtime primary contact for the co-ops' executive assistants (EA) community. "It has been a great honor, and lots of fun, to work for so many years

Make Remote Locations Less Remote

Finally, there's a radio that is specifically designed for remote distribution automation applications. The **SEL-3060 Ethernet Radio** is a rugged, low-cost solution for dependable wireless communications in harsh environments. With data transfer speeds up to 1 Mbps and power consumption less than 4 watts, the radio is optimized for distribution control, engineering access, SCADA, and data acquisition.

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with you," Hoge wrote on the EA community's listserv. "I could go all sappy here, but I will refrain. Let it suffice to say that I am a smarter professional and, more importantly, a better person for having met and known you executive assistants."

REGION 1

SMECO'S BIKE RIDE

A charity bike ride sponsored by Southern Maryland Electric Cooperative (SMECO), Hughesville, Md., lured nearly 500 cyclists whose long-distance pedaling will help provide emergency shelter for people in need in the co-op's service territory. "We had 470 cyclists who participated," **Natalie Cotton**, SMECO community & public affairs director, told *ECT. coop*, NRECA's online news service. Those participants appeared to appreciate the whole event, added co-op President & CEO **Joe Slater Jr**. They "complimented our volunteers, the organization, the food at the rest stops, and the lunch. Thanks to SMECO's volunteer employees, who make the event enjoyable, our annual bike ride has become very popular."

Casey Hollins, communications specialist at Rappahannock Electric Cooperative (REC), Fredericksburg, Va., has been elected to the Certified Cooperative Communicators board of directors. Hollins, who earned her CCC pin five years ago, is a six-year employee of the co-op. She has won numerous awards in the Council of Rural Electric Communicators' Spotlight on Excellence competitions and was a key member of the Rappahannock Electric team that earned the prestigious **Edgar F. Chesnutt** Award for its crisis communications program in 2013. "Casey brings her trademark enthusiasm to the board," said **Jean Barber**, who administers the CCC program at NRECA. "We are pleased to have her join us as we look for ways to strengthen cooperative communication skills nationally."

Casey Hollins

Ron Harris

Also at the co-op, **Ron Harris** has been promoted from manager of engineering & power supply to vice president of engineering & district operations. A graduate of NRECA's **Robert I. Kabat** Management Internship Program, Harris has worked at the co-op since 1987. "It is his strong knowledge of REC's engineering and operations and his dedication to the cooperative principles that led me to select Harris to lead this area of our organization,"

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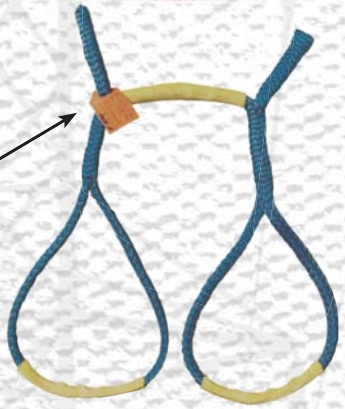

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said **Kent Farmer**, president & CEO.

Service awards were handed out recently at Mecklenburg Electric Cooperative, Chase City, Va., with 26 employees celebrating nearly five and a half centuries of dedicated work at the co-op. They are **Gary Burns** and **Warren Rutledge**, 40 years; **Gary Klein**, 35 years; **Clint Card**, **Guy Desantis**, **Gwendolyn Harris**, **Jeff Irby**, **David Lipscomb**, **Ronald Long**, **Brian Morris**, **David Rawlings**, **Wayne Sheffield**, **Mark Tucker**, and **Calvin Younger**, 25 years; **Blake Hutcherson**, 20 years; **David Holloway**, **Priscilla Lawson**, **Craig Phelps**, **Bobbie Rose**, and **Jamie Walden**, 15 years; **Andy Epperson**, **Al Lassiter**, **Phnon Ramsey**, **Chris Shearin**, and **Wayne Shrader**, 10 years; and **Brad Clark**, five years. **John Waller** was recognized for 15 years of service on the Mecklenburg Electric board. The co-op also said farewell to three recent retirees from its Gretna District.

Danny Rowles retired as a lineman serviceman after 37 years with the co-op; **David Bowler** was a service technician with 31 years on the staff; and **Helen Glass** retired as the district's services representative after seven years at Mecklenburg Electric. **Jonathon Guynes** was named service technician for the Gretna District.

REGION 2

TOP SERTOMAN

Sertoma International's North Georgia District has named **James "Jay" Gill**, communications manager at Carroll Electric Membership Corporation, Carrollton, as its Sertoman of the Year. Gill has been active in Sertoma, an abbreviation for "Service To Mankind," since he was in college in 1994. "It's rare to find someone involved in civic organizations at such a young age and still find them heavily involved 20 years later," said **Woodrow Hudson**, a director of the Carroll County Sertoma Club and past president of the international organization. "Jay has provided the same leadership to Sertoma and the community as he has to Carroll EMC. He is truly an asset to all of us."

Steve Blair has taken a seat on the board at Jackson Electric Membership Corporation, Jefferson, Ga., following the recent retirement of **Ray Jones** after nearly 40 years of board service. "Jackson EMC couldn't have had better representation from Hall County than Ray Jones," said **Otis Jones**, board chairman. "His business experience and deep ties to the farming community made him an asset to the cooperative." Blair, a long-time college-level accounting instructor, has served on the co-op's foundation board for four years. "Steve has all the attributes that will make him a very effective board member," Jones said. "He knows the cooperative's mission well."

The folks at Flint Energies, Reynolds, Ga., have welcomed **Amy Lowe** into the staff ranks as the co-op's new member services

representative. Lowe brings 11 years of customer service experience, the last seven as a bank teller, to her new post at the co-op.

Gulf Coast Electric Cooperative, Wewahitchka, Fla., announced a recent round of promotions that moved 12 staffers into new posts. The employees and their new titles are **Frank Bailey**, line technician trainee III; **Cole Barfield**, line technician trainee II; **Justin Barnes**, vice president of member services; **John Bartley**, CFO; **Chad Creamer**, line technician II; **Andy Dick**, manager of operations; **Kristin Evans**, vice president of marketing & communications; **Peyton Gleaton**, vice president of engineering; **Francis Hinson**, vice president of operations; **Baylen Price**, line technician trainee III; **Harold Ruth**, senior warehouse clerk; and **Jim Vickers**, vice president of military affairs.

REGION 3
CHRISTENSON HONORS

The agency that sells national advertising for many statewide electric co-op consumer magazines has created a major award in honor of the late **Lynne Christenson**, the longtime advertising manager for *Kentucky Living*. Christenson oversaw ad sales for the magazine, published by the Kentucky Association of Electric Cooperatives (statewide), Louisville, from 1998 until her death from cancer in February 2015. She also served for 15 years on the board, and eight years as board president, of National Country Market (NCM, service), Austin, Texas. NCM, which serves 26 statewide publications, recently instituted the Lynne Christenson Award of Excellence to honor that service. "The NCM board and Executive Director **Greg Wilson** unanimously and wholeheartedly agreed to create the new award that will be given out each year at the annual summer meeting to the most deserving person in the NCM family of magazines, along with a $500 honorarium," the group announced. The recognition is richly deserved, as reflected in

FLASHBACKS

FROM PAGE 9

Rural anthropologist Deborah Fink points to the inequality of family farm work. Women worked all the time, while men's work was often seasonal, giving them time to participate in other activities. Farm wives were also more isolated; they didn't go into town as often as their husbands.

Imagine how an electric range, a clothes washer, and a radio could shift that relationship.

Nebraska Senator George Norris, the legislative "father" of the Rural Electrification Act of 1936, grew up around these women and noted in his autobiography: "I could close my eyes and recall the innumerable scenes of the harvest and the unending punishing tasks performed by hundreds of thousands of women, growing old prematurely; dying before their time; conscious of the great gap between their lives and the lives of those whom the accident of birth or choice placed in the towns and cities.

"Why shouldn't I have been interested in the emancipation of hundreds of thousands of farm women?"

NRECA and co-ops across the country have documented what this emancipation felt and looked like.

Congressman Clyde Ellis, later NRECA's first chief executive, went home to Garfield, Ark., on the day in 1940 when Ozarks Electric Cooperative turned the lights on. "I wanted to be at my parents' house when electricity came," he'd said. "When they finally came on, the lights just barely glowed. I remember my mother smiling. When they came on full, tears started to run down her cheeks."

Meanwhile, another story from the time tells of a small farmhouse in Missouri where a woman ignored the naked lightbulb hanging from the parlor ceiling and ran into the kitchen, where her new refrigerator had stood for a month waiting for electric current. When she opened the door and saw the little light inside come on, she burst into tears.

A refrigerator was one of the first household appliances purchased by co-op families. They also bought washing machines, vacuum cleaners, toasters, water pumps, ranges, sewing machines, irons, and radios. The last two were the most popular appliances early on, probably because irons were relatively cheap, and isolation from town life and the news and entertainment of the wider world was a major drawback of farm life before electrification.

For women unfamiliar with how electricity could make their lives easier, there was Louisan Mamer and the other home economists that the Rural Electrification Administration (REA) sent out on the road. Mamer was one of the best-known "performers" at the REA Farm Equipment Show, or what became known as the "REA Circus."

Begun as an experiment in October 1938, the circus made 12 two-day stops in Iowa and 10 in Nebraska before the tents and demonstration props and appliances were loaded onto the trucks for the drive back to Washington, D.C.

The show visited 26 other states over the next three years, reaching a million farm families. "It was successful beyond its most ardent supporters' dreams," Dick Pence and Pat Dahl wrote in NRECA's 1984 book *The Next Greatest Thing*.

There were plenty of things for men to see at the show: dairy equipment, motors for sawing and grinding, water pumps. But readers get the feeling from the old photos and the descriptions in the book that women were the most enthusiastic attendees.

Rural women were on the move in those years leading up to World War II. They, above all others, understood that electrification would be life-changing. RE

the *Kentucky Living* obituary written by the magazine's retired editor, **Paul Wesslund**: "Lynne brought a passion to all the parts of her job, especially making sure that advertisers delivered on any promises made to *Kentucky Living* readers. She was an innovative force, helping develop *Kentucky Living*'s website and social media. ... She took her expertise to the national level [and] even with those accomplishments, Lynne was known just as much for an irresistible sense of fun in her work and personal life."

Karen Moore has succeeded **Ernest "Bucky" Jakins** on the board of PowerSouth Energy Cooperative (G&T), Andalusia, Ala., little more than a month after succeeding him in the CEO's office at Baldwin County Electric Membership Corporation, Summerdale, Ala. Moore was the co-op's vice president of energy services & public relations until taking over from Jakins, who retired recently after 15 years as CEO. "I look forward to the opportunity to serve as a board member for PowerSouth," she said.

Wray Pulliam has been elected to the board at Gibson Electric Membership Corporation, Trenton, Tenn., to fill out the remaining year of **Mack Goode**'s unexpired term. Members in the co-op's District Five voted for Goode's successor and chose Pulliam in a close decision. "It was a good election with two very well-qualified candidates," said **Dan Rodamaker**, president & CEO. "We congratulate Wray, and we know he will serve the members of District Five very well." Serving on the board, Pulliam said, "is an absolute honor and privilege."

REGION 4

ALHOLM ELECTED

Karen Alholm was elected to the board of Alger-Delta Cooperative Electric Association, Gladstone, Mich., when the co-op's recent annual meeting drew 750 members—15 times the previous year's turnout. **Ron Oberg** was elected as the board's new president during an organizational meeting after the members gathered. **Mike Nason** was elected vice president, and **Sue Alexander** was elected secretary-treasurer.

The board of Great Lakes Energy Cooperative, Boyne City, Mich., has chosen **Bill Scott** to take over as president/CEO when **Steve Boeckman** retires from the top staff post next spring. Scott currently serves as the co-op's CFO/COO.

Members of Thumb Electric Cooperative, Ubly, Mich., have elected **Mike Briolat** to their board of directors. **Jonathan Findlay** and **Donald Wolschleger** were re-elected to the board at the co-op's recent annual meeting.

Two veterans with a combined total of nearly a century of service

retired recently at the Utilities District of Western Indiana Rural Electric Membership Corporation, Bloomfield, Ind. **Laura Johnson**, manager of office services, had been at the co-op for 50 years, while **Steve Jerrells** was a 40-year employee when he retired as line foreman. "We send gratitude and best wishes with these longtime employees as they begin their retirements," said **Brian Sparks**, CEO. "They will be greatly missed. Employees dedicated to serving our members will always be the greatest assets of our cooperative."


Laura Johnson


Steve Jerrells

REGION 5

FREESE TAKES OVER

Stephen Freese has been named as manager of the Wisconsin Electric Cooperative Association (WECA, statewide) and vice president of the state's Cooperative Network, both in Madison. He takes over from **Share Brandt**, who retired after seven years in the post. Freese, who previously served for 16 years in the Wisconsin Assembly and 10 years as its speaker pro tempore, comes to the rural electric statewide from the Wisconsin Farm Bureau Federation, where he was chief administrative officer. "Steve brings with him the cooperative management skills and extensive legislative experience required for his leadership position with WECA and Cooperative Network," said **Robert Gadwill**, statewide board chairman and a board member at Eau Claire Energy Cooperative, Fall Creek. Also at Cooperative Network, President & CEO **Bill Oemichen** has announced plans to retire later this year.


Stephen Freese


Share Brandt

The board of Chariton Valley Electric Cooperative, Albia, Iowa, has named **Bryon Stilley** as the co-op's new general manager. Formerly the co-op's operations manager, Stilley takes over from **Jon Miles**, who was recently chosen as the new CEO at Choctaw Electric Cooperative, Hugo, Okla.

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REGION 6
BANKE DEPARTS

Rick Banke's recent retirement from the top staff post at two Minnesota co-ops has opened those jobs for two other co-op veterans.


Rick Banke

Banke had worked at Runestone Electric Association, Alexandria, since 1975 and as its CEO since 1986. He added the general manager's post at Stearns Electric Association, Melrose, under a shared-service arrangement in 2000. "It's been a pleasure to serve both co-ops," Banke said. "I have been honored to lead a tremendous team, and I know I am leaving both organizations in good hands." Taking Banke's place at Stearns Electric is **Patrick Bleth**, a longtime co-op executive and graduate of NRECA's **Robert I. Kabat** Management Internship Program who most recently served as generation maintenance superintendent for an investor-owned utility in the state. "His utility knowledge, combined with a strong leadership, management, and engineering background make Patrick uniquely qualified to lead the cooperative," said **Randy Rothstein**, Stearns Electric's board president. At Runestone Electric, **Kristin Dolan** comes from Meeker Cooperative Light & Power Association, Litchfield, Minn., to take Banke's place in the CEO's office. Dolan, also a graduate of NRECA's Management Internship Program, has been manager of finance & membership services at the Litchfield co-op for nearly 12 years. She brings a family tradition of co-op service to her new post: Dolan's father and one of her grandfathers served on the board of Minnesota Valley Cooperative Light & Power Association, Montevideo, Minn.


Patrick Bleth


Kristin Dolan

Members of Whetstone Valley Electric Cooperative, Milbank, S.D., saluted two longtime employees when they gathered for their recent annual meeting. **Mark DeFea** was recognized for 30 years of service and **Mark Weber** for 25.

Employees at Clay-Union Electric Corporation, Vermillion,

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S.D., congratulated **John Anthofer** on his promotion from apprentice to journeyman lineman after he completed the Merchant Job Training & Safety program.

REGION 7
MALSAM MOVES UP

Stacey Malsam has been named assistant general manager & CFO at Western Cooperative Electric Association, WaKeeney, Kan. She joined the co-op eight years ago as manager of accounting & finance and "has been performing executive management duties for years," said **Darrin Lynch**, general manager. "She handles a wide array of complex issues and steps up with ease in my absence. She possesses all the qualities you hope for, and seldom find, in any one person."

Members of Doniphan Electric Cooperative Association, Troy, Kan., elected **Brett Neibling** to take over from **Tyler Keebler** on the co-op's board at its recent annual meeting. Keebler had served for three years. **Bill Becker** and **Craig Kostman** were re-elected to the Doniphan Electric board.

Carol Wehmeyer has taken a seat on the board at Radiant Electric Cooperative, Fredonia, Kan., following elections at the co-op's recent annual meeting. **David Engelman** was re-elected.

A dozen years of dedicated board service earned **Jeff Headrick** a round of applause as he retired from his seat during the recent annual meeting at CMS Electric Cooperative, Meade, Kan. **Rock Ormiston II** was elected to take his place, and **Clifford Friesen** and **Don Nighswonger** were re-elected.

Members of La Plata Electric Association, Durango, Colo., elected two new board members and re-elected two incumbents when they gathered for their recent annual meeting. **Karen Barger** took over from **Heather Erb**, and **Kohler McInnis** succeeded **Jerry McCaw**, while **Britt Bassett** and **Bob Formwalt** were returned to their seats. The co-op also recognized board members who had reached major service milestones: **Davin Montoya**, 25 years; Formwalt and McCaw, 15 years; and **Jeff Berman**, 10 years. Board officers were chosen a few days later, with **Michael Rendon** re-elected president; **Tom Compton** newly installed as vice president; Berman returning as secretary; and Barger elected treasurer.

His co-workers at Northwest Rural Public Power District, Hay Springs, Neb., congratulated **Tyler Potts** on his recent rise from apprentice to journeyman lineman after completing the Merchant Job Training & Safety program. Also at the utility, **Kelsey DeField** was promoted recently from secretary/cashier to material clerk.

REGION 8
DEMCO RETIREES

Two longtime employees at Dixie Electric Membership Corporation (DEMCO), Baton Rouge, La., have settled into retirement. **Angie Elsey** closed out a 33-year career in the co-op's finance department when she retired earlier this year, and **Mike Landry** was a 40-year DEMCO veteran when he retired as vice president of system operations.

His co-workers at Pointe Coupee Electric Membership Corporation, New Roads, La., congratulated **Philip Myer** on his recent completion of a couple of two-year lineman training courses. Both the Northwest Lineman College course and the Louisiana Lineman Training Program are administered through the Association of Louisiana Electric Cooperatives (statewide), Baton Rouge.

Their co-workers at Northwestern Electric Cooperative, Woodward, Okla., recently congratulated **Jacob Collier** and **Adam Parker** on their certification as journeyman linemen.

Max Meek recently marked four decades on the staff at Oklahoma Electric Cooperative, Norman, Okla., by crediting his co-workers for the co-op's success. Meek recalled that

he had worked in "stocks and large companies" before joining the co-op in 1975 and advancing to the CEO post in 1982. "The difference was clear," he said. "The cooperative really cares about its members and employees." And it's been those employees, he went on, who have propelled the co-op's progress. "Almost every idea that turned into success was a suggestion from an employee," he said. "If it were not for past and current employees, all the accomplishments that have been made since I became CEO would not have been possible."

REGION 9
OSCARSON RETURNS

Rebecca Oscarson is back at Valley Electric Association (VEA), Pahrump, Nev., returning to her key accounts coordinator post. Oscarson previously held the position from November 2006 until March 2014 and said she's glad to be back. "I am grateful for the opportunity to continue my work with VEA's key accounts, and I take pride in serving a wide range of businesses and other organizations that bring tremendous value to our communities," she said. **Chris Brooks**, executive vice president of energy services, said the co-op welcomed her return. "Rebecca has played a key role in VEA's success over the years, and we look forward to working alongside her to provide the highest quality of service to accounts across our cooperative's service territory."

Steve Eldrige will retire early next year as general manager/CEO at Umatilla Electric Cooperative, Hermiston, Ore. He announced his decision to members gathered for the co-op's recent annual meeting. Eldrige has worked at the co-op for 44 years, the last 24 as its CEO.

Directors at Columbia Rural Electric Association, Dayton, Wash., have appointed **Jay DeWitt** to the board seat vacated by the recent resignation of **William Stonecipher**. A former grain farmer, DeWitt has been the winemaker for Dumas Station Wines since he co-founded the company in 2003. He has served on the boards of the Walla Walla Chamber of Commerce and the Walla Walla Wine Alliance. "I believe I have a skill set that will prove useful to the Columbia REA board of directors," he said. "I am interested in being of service to my community and believe that well-run cooperatives can provide superior service to members."

Michael Hoy has taken over as general manager at McCone Electric Cooperative, Circle, Mont. He brings more than 40 years of utility experience to the post, the last 23 at Dakota Electric Association, Farmington, Minn., where he was energy & member services manager.

REGION 10
TRICO NEWCOMER

Trico Electric Cooperative, Marana, Ariz., has named

Roberta Lopez-Suter as its new director of marketing & communications. A longtime Tucson-area reporter and public information specialist, Lopez-Suter is also a board member for the Marana Chamber of Commerce.


Roberta Lopez-Suter

Lori Fonzi, public affairs & communications coordinator at Mohave Electric Cooperative, Bullhead City, Ariz., refused to take all the credit when the co-op's annual report earned a Gold Award in the Council of Rural Electric Communicators' Spotlight on Excellence competitions. "Production of the report was a team effort," she told *Current Activities*, the member newsletter of the Grand Canyon State Electric Cooperative Association (statewide), Tempe.

Mark Claridge has been appointed to the board at Graham County Electric Cooperative, Pima, Ariz. He takes the seat vacated by the recent retirement of **Jerry Kempton**, who served on the co-op's board for more than 22 years. Claridge, a lifelong farmer and 30-year member of the co-op, has served on the local and state Farm Bureau boards, the governor's county fair committee, and the Gila Valley Institute for Technology board.

Two newcomers are learning the ropes at Central Valley Electric Cooperative, Artesia, N.M. **Jessie Medrano** joined the staff recently as a groundman, and **Matthew Rivera** signed on as an engineering aide. Meanwhile, three line-crew members completed the Merchant Powerline Training & Safety program and moved up to journeyman lineman status. Co-workers congratulated **Adrian Carrasco**, **Jake Daley**, and **Brett Riggs** on their achievements.

Staffers at Otero County Electric Cooperative, Cloudcroft, N.M., said farewell recently to **Jeff Harlow**, who retired as CFO after seven years at the co-op. "The board of trustees and fellow employees want to thank Jeff for his service and dedication to the cooperative," the co-op said in its member newsletter.

Jimmy Roberts' recent retirement as a metering assistant at Roosevelt County Electric Cooperative, Portales, N.M., came just short of 40 years after he joined the staff as an apprentice lineman. He moved to reading meters in 1980 and was named metering assistant in 2001. "Watching the technology and advances made in the meters over the past 14 years was simply amazing, going from physically reading meters to letting the computer do it," he said. RE

BURIED TREASURE

Picturesque Lake Burton, a manmade lake named for the town submerged beneath its waters, is featured in “Experience Northeast Georgia,” a book and travel guide produced by Habersham EMC to commemorate the co-op’s 75th anniversary and showcase some of the state’s “must-see” sites.

Photo by Emory Jones

Time is Not on Your Side in a Disaster

"Superstorm Sandy knocked out a quarter of the cell towers in an area spreading across 10 states"
(Associated Press)

"In the minutes and hours after these disasters, it was difficult to make calls on cell phones because the mobile networks were so busy"
(Virginia Department of Emergency Management)

"U.S. cell networks 'assessing' Sandy outages: No fixes soon" (ZDNET.com)

"Every time there is some emergency, I can't use my cell phone"
(Neil Cavuto, Fox News)

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