APRIL 2017 | Vol. 40, No. 4

ENERGYLINES

Merom Generating Station

MAINTAINING RELIABILITY

SEE STORY, PAGE 4

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Co-op finds new way to transform transformers

The humble transformer has just undergone its biggest transformation in perhaps a century. And it's all thanks to a device created with electric cooperative input.

That device is the Grid Energy Router, which simultaneously manages voltage and power factor, right at a transformer. North Carolina-based GridBridge reached out to NRECA's Business and Technology Strategies (BTS) unit, which brought a group of co-ops into the development process.

Now, the Grid Energy Router is part of a transformer called the Total Integrated Grid Energy Router Pad, or TIGER Pad. It has its own co-op connection: TIGER Pad is being manufactured by ERMCO, a wholly owned subsidiary of Arkansas Electric Cooperatives.

"Brunswick EMC put us together. They said, 'Your vision is aligned. You should look at potentially working together,' " said Chad Eckhardt, GridBridge CEO. "And here we are with an integrated product."

Craig Tennant, ERMCO vice president of sales and marketing, said it "seemed kind of a natural fit" given that GridBridge and ERMCO focus on the co-op market.

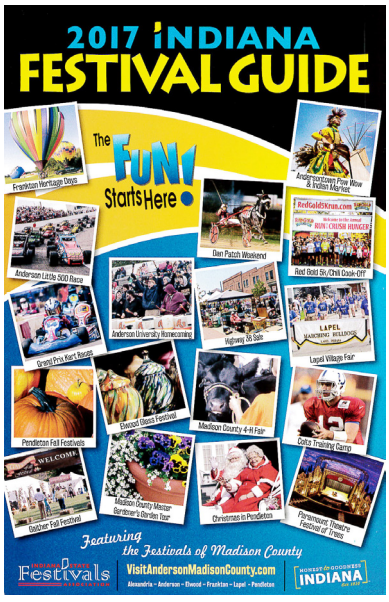
"It's branching out for us into new technology. Instead of staying in our 100-year-old technology, we see the wave of the future for the distribution grid changing and we want to be on the leading edge," said Tennant.

TIGER Pad transformers have several advantages. For one thing, co-ops can enact localized and transparent load control to save money. They also provide voltage and power quality management that can enable integration of renewables and distributed resources.

Source: NRECA

Festival Guide

If you attended the 2017 Hoosier Energy annual meeting and received a 2016 Festival Guide, please contact Communication Specialist Eric Neely at eneely@hepn.com to get a 2017 copy sent to you.



ENERGYLINES

EnergyLines is published monthly by Hoosier Energy's Communication Department for members, employees and retirees of Hoosier Energy.

ON THE COVER

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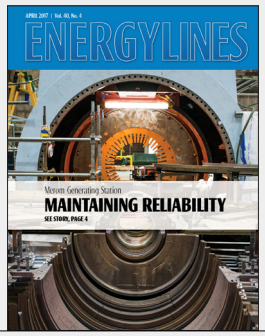

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HE photo

MASTERMIND: Joe Robb, long-time instructor for the regulator school and national authority on voltage regulators, quizzes students. Robb invented a testing device that detects malfunctions inside the regulator box, improving worker safety if the device needs to be taken out of service.

Apprentices complete voltage regulator training

Member cooperative employees gain skills through program

Several apprentices from Hoosier Energy's member cooperatives attended voltage regulator training last month at the Hoosier Energy Operations Center in Owen County.

The training is required for co-op employees enrolled in the Hoosier Energy Apprenticeship and Training (HEATS) program and is conducted jointly with Indiana Electric Cooperatives. During the hands-on class participants learned about the internal parts and working of regulators, installing and taking regulators out of service and safety working with or on regulators. Instructors at Hoosier Energy have taught the class for more than 20 years.

Voltage regulators at distribution substations monitor the "level" of voltage on power lines. Voltage is the potential for energy to move. Think of it as equivalent to water pressure. Voltage regulators record variations in the electricity "pressure" on the power line. Any variances from desired levels indicate something might be wrong. Too little, and not enough energy is moving through the lines. Too much, and the line could be "gushing" - in danger of being overloaded. EL

SCHILLING'S LEGACY

A lifetime of service

HE photo

COMMUNITY LEADER: Don Schilling with his family after receiving the Don Horan Community Service Award in 2015. From left: Daughter Jaclyn Franco, son Chris, Don and his wife Teri.

Don Schilling, former General Manager of Decatur County REMC, counts himself fortunate, very fortunate. He's grateful, he says, to live and work in the community he loves.

"I grew up on REMC lines and I still live on our lines," he said as he paused recently to reflect on his 38 years at the cooperative just before his retirement March 14.

Schilling's love for community and the cooperative way of life come from his rural upbringing and natural tendency to help others.

He grew up on a farm south of New Point, a tiny town with a population of 300 or so in the eastern part of the county. He graduated from North Decatur High School and then earned an electrical engineering degree from Purdue University. His first job was at Indiana Michigan Power, an investor-owned utility (IOU) in Fort Wayne, Indiana.

The southern Decatur County countryside tugged at him, though, and after six years he returned to be assistant to the general manager, electrical engineer, at Decatur County REMC. Seven years later, Schilling became president and general manager.

"After working for an IOU, I can tell you the cooperative is a much better place to work."

He's seen a lot of changes in the industry, led by the fast pace of technology. Throughout his three decades of leadership, the co-op embraced steady residential, commercial and industrial growth. Schilling credits others for the cooperative's success.

"It's amazing what technology has allowed us to do. We always asked ourselves, 'How can we use this to help our members?' " The REMC's employees never failed to answer the question, he points out. Their dedication shows. "When I first came here we had less than 5,000 members. Today, with 8,000 members and 60 percent more load – we're serving them with the exact same number of employees," Schilling adds with much pride in his voice.

"They are all here for the right reasons – to serve the member."

He knows every inch of the county he calls home. Growing up, he remembers when REMC crews navigated by road sign – there were no numbers on houses or farms.

He's watched the county change over the years and counts himself fortunate to have actively participated in its growth. Schilling was a founding member of the Decatur County Economic Development Corporation and served as president from 2005–07. He also has served on the Decatur County Redevelopment Commission since 2006.

His love for community, he says, will never change. In retirement he and his wife Teri may travel a bit – the Grand Canyon and Alaska beckon – or visit with their son in Columbus and daughter in Virginia. Mostly, though, he'd like to pick up woodworking again, and enjoy the Decatur County countryside.

Abplanalp named new chief executive at Decatur County REMC

Brett Abplanalp is the new Chief Executive Officer at Decatur County REMC.

Abplanalp holds Engineering degrees from Purdue and Ball State Universities and has built a successful career in the corporate world leading and managing multi-million-dollar margin improvement engineering projects for a Fortune 500 company.

A dedicated family man and native of Greensburg, Abplanalp brings an honest and optimistic approach to leadership and an appreciation for the cooperative principles.

"I am honored to have the opportunity to lead this organization in the community that helped shape my childhood and early career," said Abplanalp.

Abplanalp

Maintenance project

Merom Generating Station Unit 1

TO THE CORE: Outage and Construction Coordinator at the Merom Generating Station Ryan Dant holds one of the thin iron plates used in the stator – the stationary portion of the generator. The total weight of all the plates is 410,000 pounds.

RE-GENERATION

Refurbishing equipment helps improve reliability

Starting on March 11, a 75-day scheduled maintenance outage began on Unit 1 at the Merom Generating Station. During this outage, both rotor and stator – the stationary portion of the generator – are being refurbished. The turbine that drives the generator is also being overhauled including removal of the lower casting for seal maintenance and removal of the turbine blades for reconditioning.

This is the first time the generator has been worked on since the unit started producing electricity in 1982.

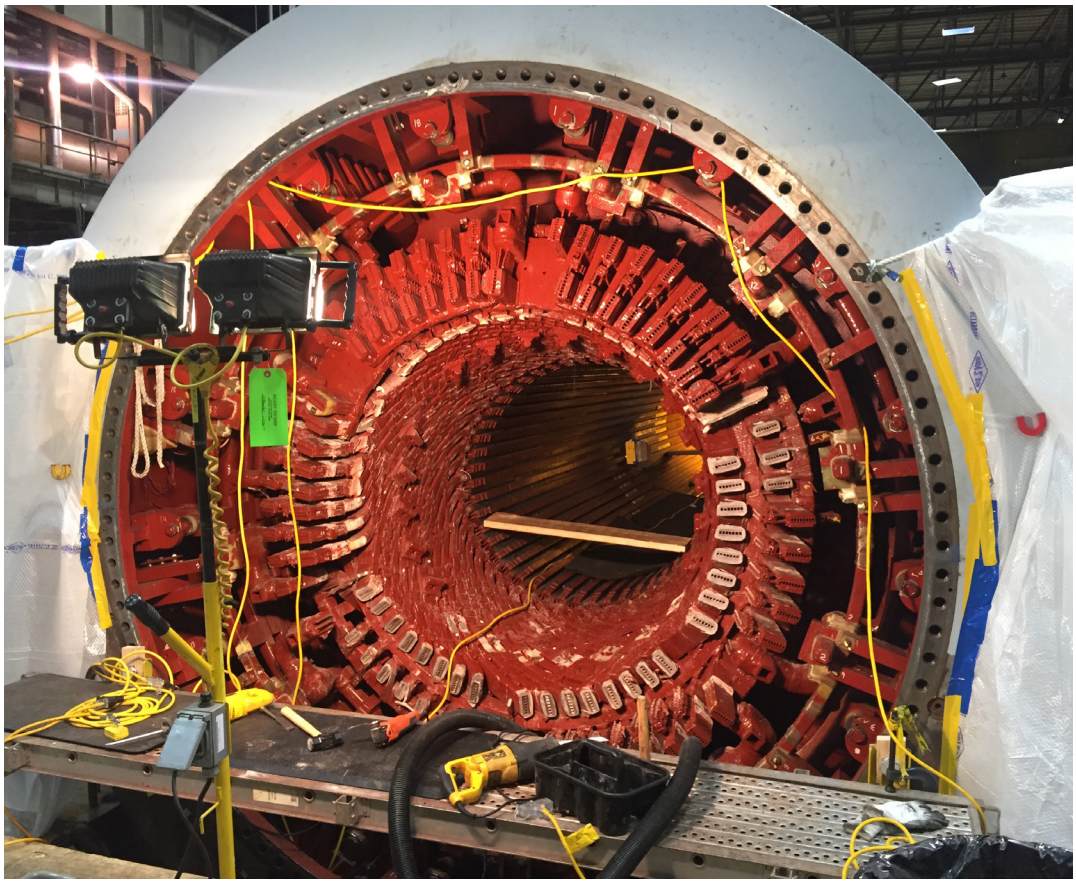
Mark Kramer, Outage and Construction Manager, was asked about the outage, and how it connects to the mission of Hoosier Energy.

"Hoosier Energy's mission is to produce power reliably, efficiently and competitively for our members. During maintenance outages, we perform repair and maintenance work on our units to make sure they remain reliable and efficient. The result of our outage effort is a plant that will be reliable, efficient, and therefore competitive, leading to increased value for our members," said Kramer. EL

How the generator works

Similar to an electric motor, the generator consists of a stationary coil, called the stator, and a rotating coil, called the rotor. The stator is made up of thousands of thin iron plates that are stacked into position to form a solid mass called the core. The total weight of all the plates is 410,000 pounds. Copper coil windings are then wedged into the core to conduct electricity.

The final part of the assembly is the rotor that spins inside the core. It, too, has copper windings that weigh about 20 tons. The turning of the rotor coil inside the stator coil produces a magnetic field, which causes electrons to flow – creating an electric current.



HE photo

COPPER COILS: With the cover to the generator removed, the stator can be seen. The copper coil windings, as seen in orange, help conduct electricity as the rotor rotates in the center of the unit. This is the first time the generator has been opened for maintenance since it was installed in 1982.

40

›› The number of semi-truckloads of scaffolding erected throughout the plant. There are four truckloads of scaffolding in the boiler alone.

450 +

›› The number of contractors on site. The major contractors include Siemens, Sterling Boiler and Mechanical, and Freitag-Weinhardt.

1,350

›› Tons of scrap metal removed during projects completed including: generator, ID fan outlet duct, air heater and coal elbows.

HE photos

ABOVE: Unit 1 at the Merom Generating Station in the process of being disassembled. The high and low pressure blades and rotor have been removed.

FAR LEFT: The lower casing of the High Pressure, Intermediated Pressure inner case is lifted out of position for maintenance on the seals.

AT LEFT: Contractors work to remove bolts on a throttle valve that supplies high pressure steam input.

Super. Solar. Site. Solutions.

Members learn about solar site details to better help consumers

Harnessing the power of the sun in 2017 will get brighter with seven cooperative solar arrays producing energy for member systems. The renewable energy team at Hoosier Energy is on a mission to help member co-ops learn the details about their respective solar sites. Charged with this information, they can share this knowledge with their members.

After conducting renewable energy surveys with member co-ops, data shows that consumers are interested in this technology – especially solar. As solar arrays are installed in high visibility areas, the more questions consumers have. Hoosier Energy wants to make sure that our member co-ops can answer these questions.

Chad Jenkins, Project Developer for Renewable Energy at Hoosier Energy, talks about the value this level of training provides members. "We want member co-ops to be as knowledgeable about solar energy as they can be in order to answer solar site questions from members and the community," said Jenkins.

The renewable energy team at Hoosier Energy will build three new solar sites in 2017, which will fulfill the plan to have 10 one-megawatt solar sites on the grid. The new solar sites will offer more opportunities for co-op employees to attend a solar site tour.

HE photo

SOLAR SOLUTIONS: Chris Thompson, left, of Johnson County REMC, attends a solar site tour provided by Chad Jenkins, right, Project Developer for Renewable Energy at Hoosier Energy. The tours are offered to help co-op employees better understand aspects of solar.

What co-ops are learning

Member co-op solar site tours – Hoosier Energy's renewable energy team encourages all co-op employees to attend solar site tours. It is helpful for member co-ops to designate at least one person to attend multiple tours in order to become familiar enough with the site to be able to lead tours for their members. The Hoosier Energy renewable energy team will provide notes to aid member co-ops with the presentation. Solar site tours and tour notes are available upon request by contacting Chad Jenkins at cjenkins@hepn.com or Josh Cisney at jcisney@hepn.com.

Solar presentations to the community – Hoosier Energy's renewable energy team offers presentations on the solar industry, residential solar and Hoosier Energy solar projects and programs. The renewable energy team can also attend co-op annual meetings to offer information on the benefits of solar energy. Solar site tours and tour notes are available upon request by contacting Chad Jenkins at cjenkins@hepn.com or Josh Cisney at jcisney@hepn.com.

Renewable energy handouts – The renewable energy and communications teams at Hoosier Energy offer handouts with 10 installation considerations, avoided costs, questions to ask a potential solar panel installer and myths vs. facts for renewable energy. The handouts can be distributed at annual meetings, posted on websites or provided during a tour. These documents are available on the members only portal and can be customized with any member co-op logo.

Learning the roots of electric cooperatives

Communication Specialist Crystal Rogers traveled to Arlington, Virginia to learn about the industry and how to improve communications at the National Rural Electric Cooperative Association.

HE photos

MEMORIALIZED: NCCO attendees visit the Franklin Delano Roosevelt (FDR) Memorial in Washington, D.C. after learning about the importance of FDR's role in the development of electric cooperatives. Crystal Rogers, communications specialist at Hoosier Energy, left, takes a selfie at the memorial.

A few months ago, I began my career at my first cooperative, Hoosier Energy. While I knew very little about the industry, one thing is for certain, without electricity, our lives wouldn't be what they are today.

New electric cooperative communicators across the country have the opportunity to spend time at the National Rural Electric Cooperative Association (NRECA) headquarters in Arlington, Virginia. While at NRECA, communicators learn about the electric co-op industry, how to improve member communications, resources available as well as meeting other communicators in the industry.

While staying in the Beltway, communicators take a charter bus into the heart of Washington, D.C. to visit the Franklin Delano Roosevelt (FDR) Memorial. Roosevelt was the founding father of America's not-for-profit, consumer-owned rural electric co-operative industry.

Soon after he was elected president, FDR signed an executive order in 1935 creating the federal Rural Electrification Administration (REA). At the time, only 35 percent of Indiana's residents had electricity. FDR's implementation of the REA allowed millions of electric poles to be set across the United States, bringing electricity to America's farmers.

By May 1936, the first 60 miles of line were energized north and west of Lebanon, Ind. Within a year, Boone County REMC was serving more than 2,000 farm families.

ONLINEEXTRA

>> New electric cooperative communicators can find out more information about the New Coperative Communicator Orientation.
cooperative.com/conferences-education

Hoosier Energy was formed in 1949 as a generation and transmission cooperative providing wholesale power and services to its member distribution cooperatives. Today, those member cooperatives operate and maintain more than 36,000 miles of distribution lines and provide electric service to nearly 300,000 consumers or about 686,000 people in 59 Indiana and Illinois counties.

My time spent at the New Cooperative Communicators Orientation provided me with an immense amount of history and information to help myself and, in turn, Hoosier Energy, communicate more effectively. Learning about the principles that the electric cooperative industry is founded on and telling our co-op story will continue to remind our communities why we do what we do as an electric cooperative. Gathering data about our members will allow us to communicate more effectively with the tools we have. EL

Cooperative Academy

Training, education and development online

Hoosier Energy is proud to offer its member systems access to the Cooperative Academy. This online learning tool will bring together cooperative leadership and development efforts to provide member systems with one portal for learning and development opportunities.

Training and education modules range from business fundamentals to advanced training to maintenance training. The Academy supports learning plans that can be customized for each member system and will keep records of training and development.

Hoosier Energy's training and development team will work with each member system to begin staging this rollout. Each group will consist of approximately four to five member systems. The first group will begin their rollout in April. EL

Hoosier Energy Board of Directors briefed on Duff-Coleman project

Paul Thessen, president of LS Power, provided Hoosier Energy's Board of Directors with a brief overview of the Duff-Coleman 345kV transmission line project that the independent transmission provider is building in southern Indiana and western Kentucky.

The line was authorized by MISO (the Midcontinent Independent System Operator) and is needed to increase wholesale market efficiencies by reducing congestion in the transmission of high-voltage power in this region.

Hoosier Energy is partnering with Republic Transmission, a subsidiary of LS Power, as both an equity partner to finance the project and to provide operations and maintenance services to Republic for the Indiana portion of the line once it has been energized. Hoosier Energy will also provide limited support for material staging during construction.

Thessen said MISO's selection of Republic Transmission for the project recognized Hoosier Energy's and member systems' demonstrated expertise in managing the bulk electric system safely, reliably and at least cost.

The high-voltage project will run about 33 miles from the Duff Station just west of Huntingburg in Dubois County across the Ohio River into Kentucky to the Coleman Station.

The new line is expected to enhance reliability for MISO members in the area, including Hoosier Energy and member systems. The project is also expected to provide a revenue source that will aid in offsetting other power delivery costs. The project crosses the member territories of Dubois REC and Southern Indiana Power. Big Rivers Electric Corporation, a G&T in Kentucky, will own the approximately three-mile segment in Kentucky and will maintain the Kentucky side of the line. EL

Co-op annual meeting highlights

HE photo

TOP: Members file into the auditorium at Greensburg Community High School as CEO Brett Abplanalp, right, welcomes a member.

MIDDLE: Cornfields and Crossroads, a contemporary and gospel bluegrass quartet, performed for members before the meeting.

BOTTOM: Steve Dieckmann, right, presents Don Schilling a plaque honoring his 38-years of service at the co-op.

'A mission of service'

Decatur County REMC annual meeting

Meeting details

The Decatur County REMC annual meeting took place at 6 p.m., March 14 at Greensburg Community High School. There were 726 co-op members in attendance. Each member received a $20 bill credit for attending.

Meeting highlights

Don Schilling was honored for 38 years of service at the co-op by Steve Dieckmann.

New CEO Brett Abplanalp provided members his vision and leadership philosophy. This included leveraging employees, board members and co-op members to determine the right solutions. Abplanalp seeks to promote a culture where the co-op determines what they want to be "good at" and then challenge the baseline in their decision making.

Election of officers

District 3 – Jeff Lawrence defeated sitting board member Tim Gauck
District 4 – Incumbent Steve AmRhein was re-elected
District 7 – Jason Barnhorst defeated sitting board member Steve Dieckmann
District 8 – Dan Schantz defeated Roger Meyer

Rural spring scenery

The grass covers the rolling hills of southern Indiana at a farm east of Cincinnati, Indiana in Greene County.