

ENERGYLINES



TRAINING THAT TRANSFORMS

AT THE MEROM GENERATING STATION | PAGE 3

**JACKSON COUNTY
REMC SIMPLIFIES
WATER HEATER
REBATE PROCESS**

STORY ON PAGE 8

MEMBER-CONSUMERS
GET WATER HEATERS
FASTER...

CONSERVATION OF
ENERGY TAKES PLACE
FASTER...

COST-SAVINGS ARE
REALIZED FASTER.



HE photo

Research institute says EMP threat was overstated

The Electric Power Research Institute, EPRI, has released a report detailing how high-altitude Electromagnetic Pulses, EMP, are not as significant a threat as identified by a United States commission tasked with researching the vulnerability of the electric grid to an EMP attack.

Speaking to Utility Dive, Randy Horton, Senior Program Manager at EPRI said, “Digital protective relays, meant to find faults with the electric system, were mostly resilient to initial EMPs.”

“Transmission substations have been transitioning to digital protective relays from electromechanical relays since the early ‘90s, and the integration is expected to increase in the future,” said Horton.

The research conducted by EPRI took three years to complete.

ONLINEEXTRA

>> To read the full report visit EPRI.com

Broadband breakthrough for co-ops nationwide

A Rural Electric magazine article highlights what co-ops across the country are facing as they implement fiber internet services for their members.

Federal programs, in conjunction with state legislation, are helping co-ops move forward with broadband internet plans.

Commenting on the value broadband brings to rural communities, Scott Bowers of Indiana Electric Cooperatives said, “Strong communities must have good job and education opportunities. Broadband is an essential piece of that now.”



ONLINEEXTRA

>> To read the article visit Cooperative.com and search for “Broadband Breakthrough.”

CO-OP MEMBERSHIP

Initiative to engage youth with co-ops launches

Young member-consumers represent the future of co-ops. Those 25-45 year-olds will form the core of cooperative membership and leadership in the next decades. The National Rural Electric Cooperative Association, NRECA, has developed a resource hub for Young Adult Member Engagement, YAME.

This hub is designed to provide co-ops tools to enhance engagement and awareness of products and services in ways that resonate with this demographic.

Resources available include: research tools to create a multi-channeled strategy; member survey tips to gather quantitative data; and communications plan guidelines.

ONLINEEXTRA

>> To learn about the Young Adult Member Engagement hub visit Cooperative.com

EMERGING TECHNOLOGY

Battery storage case studies show challenges, successes

Battery energy storage research by the National Rural Electric Cooperative Association in conjunction with Cooperative Finance Corporation, CoBank and National Rural Telecommunications Cooperative, analyzes battery technology and use through co-op case studies. The technology under review are lithium-ion and flow batteries.

The report provides insight as it shows how these systems improve efficiency, reduce costs, increase reliability and resilience, and provide members with new services.

The report at Cooperative.com includes 11 case studies about battery use ranging from aggregated residential energy storage to reducing peak energy demand.



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Strategic *Priorities*

**EMERGING
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**RISK
MANAGEMENT**

GOVERNANCE

**COMPETITIVE
RATES**

**COST MANAGEMENT
AND PERFORMANCE**

**SUPPLY
PORTFOLIO**

Training that transforms

**OPERATIONAL
EXCELLENCE**

This month's cover story connects to Hoosier Energy's commitment to be "Safe by Choice." The continuous

improvements made to safety processes is a vital component of operations.

This is why employees at the Merom Generating Station have identified the need for advanced training with specific electrical equipment. New equipment will help employees gain experience while working in a safe environment.

Operations Training Programs Specialist Matt Figg is excited to be able to put the new equipment to use.

"This may be one of the times where Hoosier Energy is ahead of the (safety training) curve," said Figg.

This is training that transforms employees as they increase skill and improve safety.

Story on page 3.

ON THE COVER

Matt Figg shows new training equipment at the Merom Generating Station that will help employees train in a safe environment.



EQUIPMENT INSTALLED BY 'FAULT'

There is risk when working around electrical equipment. As employees at the Merom Generating Station face these risks, they do so as safely as they can. Having a workforce that is 'Safe by Choice' is why Hoosier Energy provides extensive training. This is why new equipment has been installed at the station to help employees gain experience with a variety of electric circuits.

When a fault occurs in a circuit, the possibility of an arc flash increases. Arc flashes can occur without warning. The energy they release can create temperatures up to 35,000 degrees Fahrenheit – more than three times hotter than the surface of the sun.

Damage to nearby equipment can occur as the heat from the arc can melt metal and cause fires. Humans in the area of an arc flash can experience severe burns, collapsed lungs from the intense pressure, or ruptured

IDEA IN BRIEF

THE CONCEPT

Arc flashes can occur around energized electric equipment. Training stations have been installed at the Merom Generating Station to provide a safe learning environment.

THE PROCESS

A common process at the station called 'racking the breaker' is used to deenergize equipment. Training is important as this process can take place multiple times a day.

THE RESULT

Reducing the risk of arc flashes through workforce training is part of Hoosier Energy's commitment to be Safe by Choice. Employee recognition of this training need is a proactive approach toward safety efforts.

eardrums from the sound pressure of the blast.

The Occupational Safety and Health Administration requires electrical equipment to be deenergized before work begins. This process significantly reduces the likelihood of arc flash injuries.

One example of when an arc flash might occur at the Merom Generating Station is during a procedure called racking a breaker. This process is used to deenergize equipment. This is similar

equipment so that needed repairs can be made safely.

The Merom Generating Station has become an industry leader in developing switchgear simulators for training. A driving force behind installing training equipment like this is the workforce being 'Safe by Choice.' Matt Figg, Operations Training Programs Specialist, is proud to be safety conscious.

"This may be one of the times where Hoosier Energy is ahead of the (safety

Skills improvement center at the Merom Generating Station provides **safe environment** for **workforce training**

to flipping a breaker at a residential electric box. At a power plant, racking a breaker similarly disconnects a high voltage circuit from the source of electricity.

The process of racking a breaker can take place multiple times a day at a generating station. For example, if a piece of equipment requires maintenance, racking must occur to disconnect the power to the

training) curve," said Figg.

While the training equipment is new, the Merom Generating Station has had zero injuries due to an arc flash. Figg says the goal is to continue to provide training and practice in a safe environment.

The training equipment includes a variety of voltages based on common types of switchgear used at the station.

TRAINING, continues on Page 5

ARC FLASH SAFETY

The American Society for Testing and Materials develops standards for clothing that electric utility workers wear if there is a possibility of an arc flash. Flame resistant clothing is measured in calories per square centimeter (cal/cm²). Safety and Training Specialist Drew Myers, demonstrates the proper protective equipment required at the Merom Generating Station when racking a breaker.

HARD HAT

EAR PLUGS

40 CAL/CM² COAT

RUBBER GLOVES

LEATHER GLOVES

STEEL TOED SHOES

ARC FLASHES



OCCURRENCES

Up to 10 arc flashes occur in the U.S. every day.



INJURIES

More than 2,000 people are treated annually due to arc flash injuries.



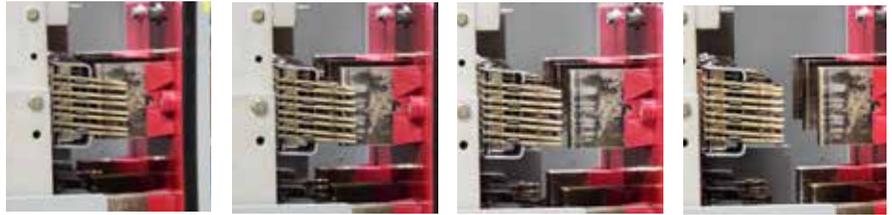
EXTREME HEAT

Electrical arcs can produce temperatures up to 35,000 degrees Fahrenheit. That is three times hotter than the surface of the sun.

SOURCES: Electrical Engineering Portal, Electrical Contractor Magazine, American National Standards Institute, Industrial Safety & Hygiene News, Safetytoolbox.com, Facilityresults.com

RACKING THE BREAKER

This process is similar to flipping a breaker at a residential electrical box. Racking the breaker disconnects a high-voltage circuit from the source of electricity.



HE photos

TRAINING,

Continued from page 3

This allows employees to gain confidence as they work on non-energized equipment.

Through a window on the side of the training breaker, workers can see inside equipment and watch as the disconnect occurs during racking.

Employees will also hear what it sounds like to rack a breaker – a sound similar to an iron gate closing. It is important that employees become

accustomed to this sound so that when they are working with live equipment, they know what to expect.

Employees to be trained using this equipment include boiler house/ Flue Gas Desulfurization operators and material handlers. This training can expand to include electricians and control and instrumentation personnel as well as engineers.

Safety and training instructors at the station hope to begin switchgear training using the simulators later in the year. **EL**



Powell 4160 volt

Similar to the breakers used to power the electrostatic precipitators, in the Flue Gas Desulfurization area.

Westinghouse DS 480 Volt

This equipment is similar to the breakers used to power coal handling systems.

GE AKRU 480 volt

This equipment is similar to the breakers used to power boiler house equipment.

Siemens Allis 4160 volt

Similar to the breakers used to power the majority of large motors and load centers at the plant.



**STEAM-DRIVEN
BOILER FEED PUMP**

The boiler feed pump moves water to the boiler. With the close tolerances of this machine, it is important to check bearings, couplings and perform alignments on the machine during planned maintenance outages.

HE photos

MAINTAINING RELIABILITY

Maintenance work at the Merom Generating Station is a vital component of facility operations

Hoosier Energy employees plan, manage, and help implement maintenance and repairs on equipment at the Merom Generating Station to improve reliability.

This year's planned maintenance on Unit 1 is smaller in scale than in years past but the work completed is an important component of Hoosier Energy's commitment to improving reliability.

Maintenance Manager Tony Weitekamp is the project lead – keeping the company's mission at the forefront of work.

“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 safe, reliable and efficient,” said Weitekamp.

Maintenance work this year included approximately 400 contractors and lasted approximately 30 days. The maintenance included repairs to steam boiler tubes and hot reheat piping; cleaning the cooling tower basin; replacement of coal nozzles; replacing or repairing couplings and alignments on the steam-driven boiler feed pump; and replacing components and hammers on the crusher dryer.

“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 Weitekamp. [E](#)



COAL PIPING REPAIRS: Coal is channeled through the ‘pant legs’ before it is blown into the boiler. Coal that passes through this piping wears out internal components that are repaired.

MEMBER-FOCUSED

ANNUAL MEETINGS PART OF THE COOPERATIVE DIFFERENCE FOR ELECTRIC CONSUMERS

Clark County REMC annual meeting provided a variety of activities for members and their families

Clark County REMC's annual meeting took place April 6 at Silver Creek High School in Sellersburg, Ind.

Member attendance was good. The cooperative saw an increase in online voting.

Children's activities were provided for members including: Silly Safari, balloon animals, face painting and special prize drawings.

General Manager David Vince highlighted the My Solar program during his remarks.

The meeting concluded with door prize announcements and the grand prize of a \$1,000 bill credit.



ELECTION OF OFFICERS

Steve Dieterlen
Candy Meyer



EVENT DETAILS

A variety of activities were provided for families including a Silly Safari. Entertainment included a Beatles tribute band.

Wayne-White Counties Electric Cooperative's annual meeting had strong turnout, internet discussion

Wayne-White Counties Electric Cooperative's 82nd annual meeting took place at Wayne City High School in Wayne City, IL with more than 1,100 members present.

Each voting member received a \$25 bill credit for attending. Drawings were held after the business meeting for door prizes and included additional bill credits up to \$100, and other gifts.

President and CEO Daryl Donjon addressed the need for high-speed internet.

A fried fish meal was provided and local FFA students served desserts.



ELECTION OF OFFICERS

District 4: Ken Lamont
District 8: Steve Becker
District 9: Noel Edmison



EVENT DETAILS

Entertainment was provided by Southern Gospel group the Servant Voices.

MEMBER-CONSUMERS
GET WATER HEATERS
FASTER...

CONSERVATION OF
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FASTER...

COST-SAVINGS ARE
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PARTNERSHIP PROVES POSITIVE

Co-op, vendor collaboration simplifies water heater rebate process

Brownstown,
Ind.

Members for Jackson County REMC are taking advantage of a water heater rebate opportunity, based

on the Hoosier Energy rebate program. The program provides a win-win situation for consumers, the REMC and a local water heater provider.

Brian Reynolds, Energy Advisor at Jackson County REMC, reached out to multiple water heater companies in the surrounding areas asking if they would like to partner with the REMC in offering rebates to member-consumers. While several companies could offer a simple coupon for a rebate, Jackson County REMC wanted to structure the program in a different way, benefitting their members sooner.

“We contacted several companies in our area to see if they would like to work with us on this project,” said Reynolds. “The only company to accept our offer was Winsupply of Seymour.”

In order to help streamline the process for member-consumers, Jackson County REMC and Winsupply worked out a deal.

When a member comes in to purchase a water heater (bringing in a copy of their electric bill as proof of membership), Winsupply automatically applies the \$750 rebate to the purchase. A \$1,200 water heater becomes a \$450 purchase. Jackson County REMC then pays the rebate to Winsupply. This way, member-consumers are not out the money up front and required to wait for the rebate.

“By setting the program up in this way, members are able to get water heaters sooner, helping to conserve energy sooner, creating a cost-savings sooner,” said Reynolds.

With the implementation of this program, Jackson County REMC has become one of the top cooperatives in the rebate program for the state of Indiana. Winsupply of Seymour is one of the top sellers in the country for their national corporation. [E](#)

INDUSTRY NEWS

Duke Energy receives approval for solar, storage microgrid

A report at UtilityDive.com stated North Carolina regulators approved a solar and storage microgrid project by Duke Energy. The project is designed to help maintain reliable power in the rural town of Hot Springs.

Utility Dive reports that the project includes a 2 MW solar array and 4 MW lithium-ion

battery. This will be Duke Energy’s first utility-scale solar and storage project.

This microgrid project is part of Duke Energy’s broader plan to increase energy storage on its system. According to Utility Dive, the utility expects to spend \$500 million on battery storage in the next 15 years.



*Did you
know?*

AUTOMOTIVE SAFETY AROUND LIVE WIRES

A report by Good Morning America shows how to be safe when an automotive accident leads to downed live wires.

WHERE TO FIND IT:

<https://www.goodmorningamerica.com/news/video>



MIDWEST FLOODS IMPACT RURAL ECONOMIES

A monthly assessment of the U.S. rural economy found Midwest flooding was taking an economic toll on grain farmers and livestock operators. The survey also found that farmers are taking out loans at record levels.

WHERE TO FIND IT:

Cooperative.com



Submitted photo

EGG-CELLENT!: Josh Goldman, a lineman at Wayne-White Electric Cooperative, participates in the Egg Climb event at the Electric Distribution System Lineman Rodeo.

All the way to the top!

Line worker event provides training as well as the challenging egg climb

Safe by choice.

Wayne-White Electric Cooperative was a sponsor of the Lineman's Rodeo on April 27 at Frontier Community College in Fairfield, Illinois.

The rodeo is a competition between active participants in the Electric Distribution System (EDS) program offered through the college. The EDS program is a one-year certificate that provides training in building, repairing, and maintaining overhead and underground systems. Students also learn safe practices for pole climbing, pole top rescue, and bucket truck operation.

The five judged events for the rodeo

were: Cross Arm Changeouts, Pole Top Rescue, the Obstacle Pole, the Egg Climb, and the Mystery Event – which was revealed to be a fuse change.

For the Egg Climb, students must put a raw egg in their mouth, climb to the top of a 40-foot pole, swap out the egg for a new one at the top (it rests in a basket on the cross arm), and climb back down without cracking an egg.

Wayne White linemen enjoy the camaraderie and volunteer their time to help make the rodeo a success.

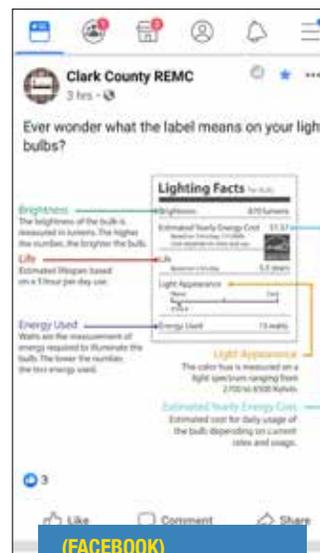
Wayne-White linemen helping with the event included: Ryan Barrett, Cody Richards, Travis Schilling, Clint Harl, and Gerry Kinney. **EL**

Social session

Co-ops continue to use social media to communicate the cooperative difference. JCREMC posted photos from a recent “Touch a Truck” event to help families meet local co-op employees. Clark County REMC helped consumers understand how to read the “lighting facts” label.



(FACEBOOK)
JCREMC



(FACEBOOK)
CLARK COUNTY REMC



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COMMITMENT TO COMMUNITY



HE photos

LEADING BY EXAMPLE: Susannah Smith, left, holds a truss in place before it was nailed into place during the Habitat for Humanity Women’s build in Bloomington, Ind. Hoosier Energy employees participating include: (inset photo from left) Crystal Rogers, Tammy Beedie, Christy Langley, Susannah Smith, Melissa Riggs and Megan Miller.

BUILDING LEADERSHIP

Employees volunteer to build homes for families in need

The piercing sound of a circular saw accompanied by the drum beat of hammers – this was the soundtrack to this year’s Monroe County Habitat for Humanity Women’s Build.

Showing their commitment to community, six Hoosier Energy women helped build homes for two families in need. Employees have volunteered in builds like this for the past 19 years.

At the construction site, sitting on top of an unfinished wall, was Demand Side Management Analyst Susannah Smith. She was helping guide trusses into place before they were nailed to the house.

Smith, on her 13th build, was the team leader.

“As soon as the trusses go up the project really starts to look like a house. It is very satisfying,” said Smith.

Susannah didn’t just help out for the day – she took personal time to help out for the

entire week.

Her impact didn’t stop there. Throughout the week she helped volunteers build confidence to accomplish projects. Helping others is a driving force behind her commitment.

“Some volunteers think this type of work is beyond their ability. I enjoy helping show them that it is not – that they can learn skills that can be applied to their home,” said Smith.

Her leadership doesn’t stop with these moments. She takes things even further based on her experience helping co-ops implement energy efficiency programs.

“I feel volunteering for projects like this is a natural extension of the work I do at Hoosier Energy. I love having the opportunity to talk to others about building in energy efficiency from the foundation up,” said Smith.

The six Hoosier Energy women helped build a future for families in their community. That is work that embodies the cooperative difference. 



Day breaks over rolling Indiana hills

On a crisp, spring morning, fog rolled through a valley providing a beautiful backdrop for Hoosier Energy transmission lines in Jackson County REMC territory.