

# ENERGYLINES

## IT CRAWLS, IT SENSES, IT IS A GECKO!

A device from Gecko Robotics is in the boiler at the Merom Generating Station – identifying tubes that are in need of repair.

**STORY ON PAGE 4**



## NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

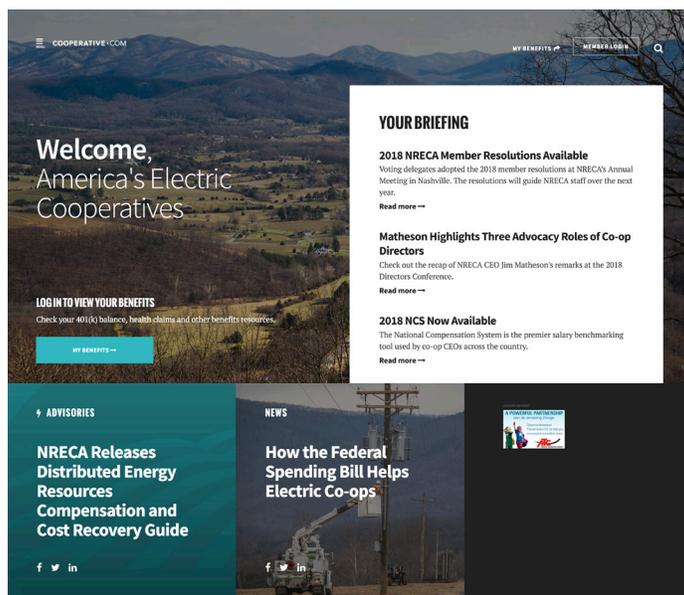
# Website refresh adds more resources for co-ops

With the goal of providing information, stories and ideas, Cooperative.com is giving co-ops across the nation a way to connect to the value of the National Rural Electric Cooperative Association (NRECA).

A recent redesign of the website provides additional resources without having to log-in. The site also includes a mobile-friendly design, a customizable homepage and streamlined navigation.

## Improvements have focused on the following:

- The ability to personalize the home page according to your interests
- Easy and fast access to industry news without having to log-in
- A modern, mobile-friendly interface
- Ability to quickly jump to different sections of the site from the home page



HE photo

**A CO-OP RESOURCE:** Through the years, the staff at Cooperative.com has listened to what members would like to see changed or added and this redesign reflects that feedback.



HE photo

**RENEWABLE ENERGY:** Hoosier Energy Vice President of Power Supply, Dave Sandefur spoke at the Wayne County Rural Urban Banquet about the impact wind and solar generation have on the electric utility industry.

## Wayne County banquet energy talk

Sandefur speaks about integration of renewable resources

The Wayne County Area Chamber of Commerce held its annual Wayne County Rural Urban Banquet where Hoosier Energy Vice President of Power Supply Dave Sandefur was a guest speaker.

Sandefur spoke about the impact wind and solar generation have on the electric utility industry. He highlighted how improvements in battery manufacturing may benefit the integration of intermittent renewable generation into the electric grid. This opens both challenges and opportunities for beneficial electrification loads including electric vehicles.

“This was a good opportunity to profile the local electric cooperative interaction with the community, especially regarding the new community solar initiative at many of the electric cooperatives,” said Sandefur.

Whitewater Valley REMC was a Blue-Ribbon sponsor. This event is an opportunity for farming and rural communities to work together with urban communities of Wayne County.

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

## ON THE COVER

Maintenance work on Unit two at the Merom Generating Station includes use of a Gecko that can scale walls.

**Image:** Gecko Robotics



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# Dubois REC announces new Chief Executive

## Henson to lead Jasper-based electric cooperative

In March, Dubois REC welcomed a new leader at the helm. Joe Henson was named Chief Executive Officer by the co-op's Board of Directors. Henson replaced Don Book, who served as CEO for over 27 years.

Henson most recently served as the Manager of Safety and Training at Hoosier Energy. Henson has strong experience in project management, strategic planning and executive leadership. Henson received project management training through Kelly School of Business and has a Master of Business Administration degree.

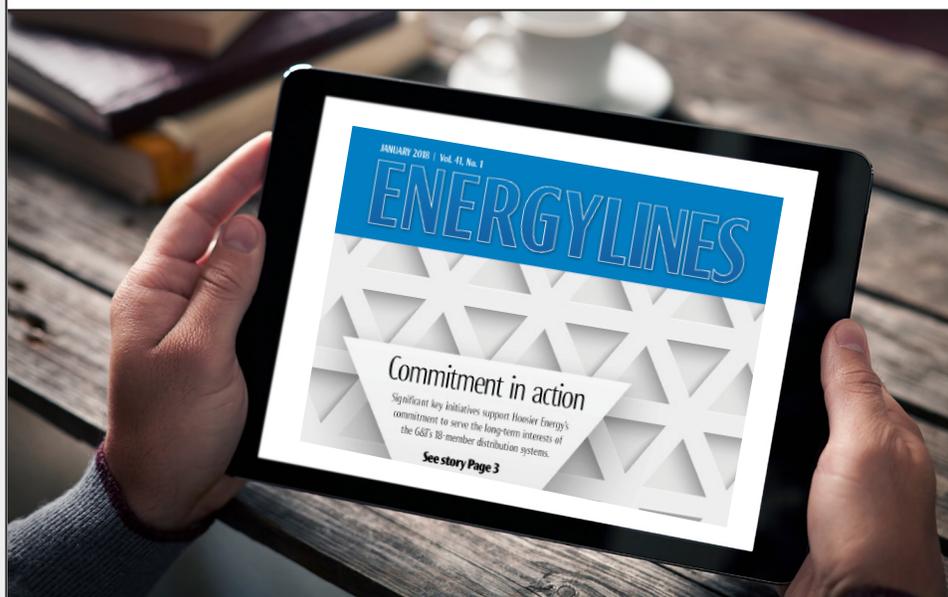
Henson has been married to his wife Debbie for almost 30 years. They have three children and two



**Henson**

granddaughters.

"Don has always ensured our member's needs were being met and their voices were heard and we feel that Joe Henson is the right person to step up and make sure the dedication and care is seamlessly continued," said Board President Brad Knies.



## EnergyLines. Electronically.

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## NRECA COMMUNICATIONS

# Communicators learn about roots of rural electrification

Program connects co-op values, encourages interaction with members



HE photo

**A NEW DEAL:** The Rural Electrification Act of 1936 provided federal loans for the installation of electrical distribution systems to serve isolated rural areas of the United States. These member-owned cooperatives purchased power on a wholesale basis and distributed it using their own network of transmission and distribution lines. The Rural Electrification Act was also an attempt made by FDR's New Deal to counter high unemployment.

## WASHINGTON, D.C.

The National Rural Electric Cooperative Association (NRECA) held its semi-annual

New Co-Op Communicators Orientation (NCCO) in early March. This event welcomed new communicators from electric cooperatives and generation and transmission cooperatives from across the nation to discuss the importance of communication.

“An important element of this program is co-op communicators learning from each other as they make connections that last throughout a career,” said

Anne Prince, NCCO Program Manager.

Speakers at the NCCO highlighted the importance of being fierce advocates for their co-ops but remaining open to new ideas and technology. Social media will continue to play a big part in communications as Facebook and Twitter allow for an “always on” business model.

One of the first places a cooperative member will look for updated co-op information is social media. Relevant information could include power outage and recovery efforts, community events, or ways to increase the efficiency of their home.

“An important element of this program is co-op communicators learning from each other as they make connections that last throughout a career.”

## Anne Prince, NRECA

More and more consumers are turning to social media for their information and member communication response time expectations have increased.

Conference speakers stated the importance for communicators to encourage interaction with co-op members.

Speakers recommended finding ways to show that you are about more than electricity by doing things within your community such as:

- Member appreciation days
- Highlight employees and members, putting a face to the co-op
- Help members relate to the co-op and encourage further interaction
- Share lighthearted stories to leave a feeling of joy and hope

NRECA is helping communicators by providing content suggestions via their newsletter, Straight Talk. The stories and photos in this publication can be repurposed for each co-ops individual needs.

In addition, Hoosier Energy sends out a monthly Communication Toolbox, providing content and helpful tips for co-op communicators. [EL](#)

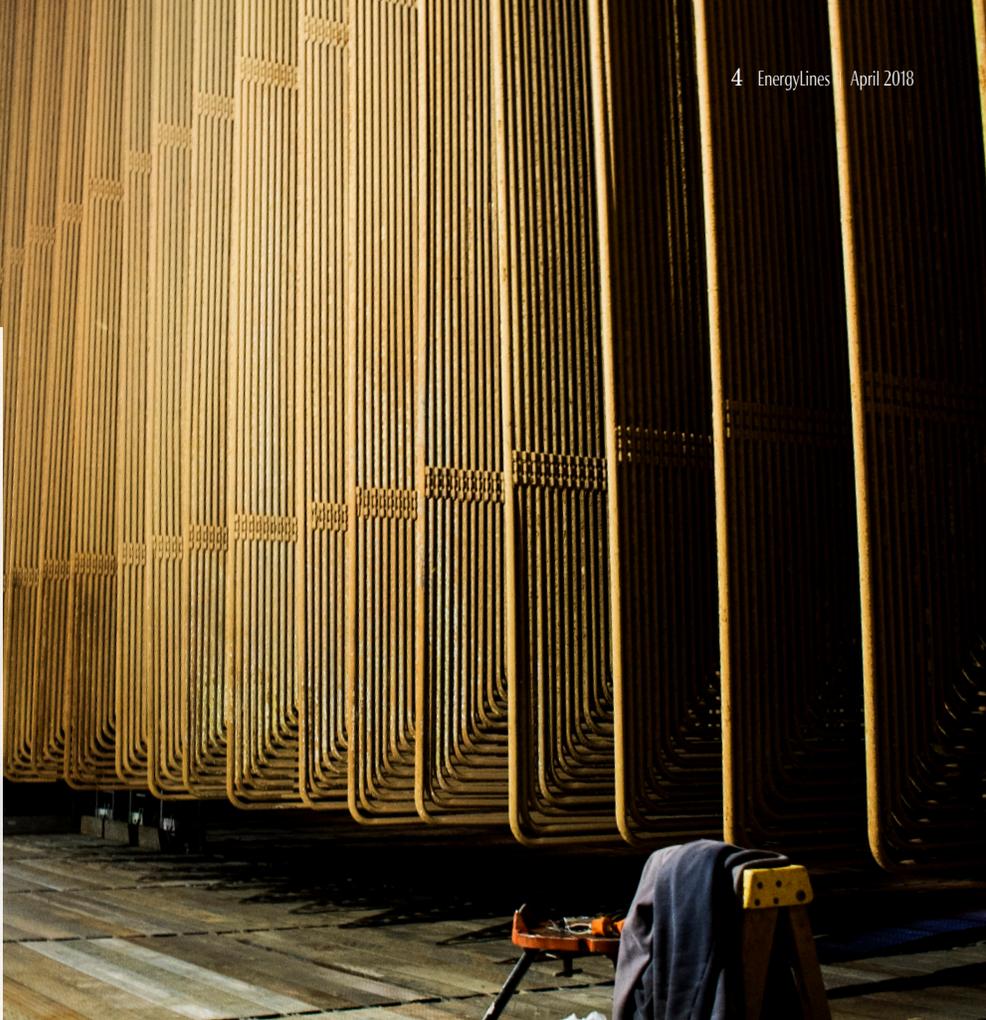
## ADDING VALUE

If you have specific communication needs, please contact Manager of Communications Claire Gregory at [cgregory@hepn.com](mailto:cgregory@hepn.com).

## COVER STORY

# TUBE REVIEW

Maintenance work on Unit 2 at the Merom Generating Station includes use of a 'Gecko' that can scale walls.



HE photos

This robotic 'gecko' is scanning the tubes within the boiler at the Merom Generating Station during scheduled maintenance taking place this spring.

The purpose of the maintenance is to prepare for summer demand. Projects like this connect to Hoosier Energy's mission to provide members with assured, reliable and competitively priced energy and services in a safe and environmentally acceptable manner.

Unique to this year's scheduled maintenance is the use of advanced technology in the boiler. A robot termed the 'Gecko' climbs the boiler tubes. The robot, developed by Gecko Robotics, attaches to the tubes by using high-strength rare Earth magnets.

It crawls up the side of the wall at a rate of about six inches per second. The Gecko is able to take ultrasonic thickness measurements every inch on eight boiler tubes at a time.

The robot can travel in all directions >>



**ABOVE:** Tubes in the boiler at the Merom Generating Station carry steam. These tubes undergo intense heat and water pressure. This is where steam is created to turn the turbines.

**AT LEFT:** This robotic 'Gecko' identifies areas within the boiler that need repairs. This device allows for safe access to hard-to-reach areas inside the boiler.

allowing for safe access to hard-to-reach areas inside the boiler. For each tube, approximately 36 data points are captured for every foot traveled.

The Merom Generating Station is using the technology to monitor corrosion. Data collected shows where tubes have thinned and where a tube leak might occur. This data is output as a map.

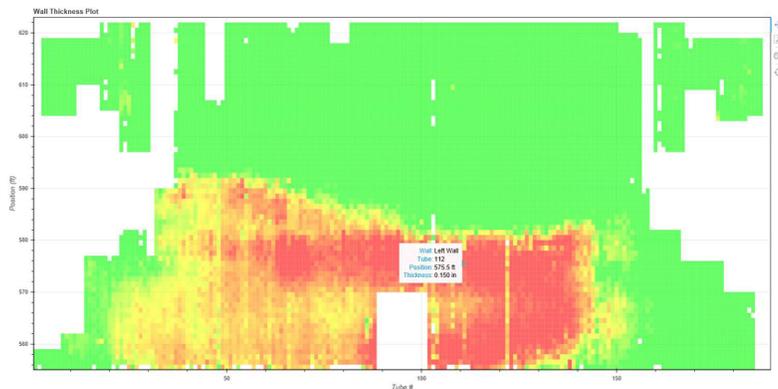
The red areas on the data map indicate a thin wall of the tube, which will be repaired. The green color indicates areas that are in acceptable condition. Information collected provides the tube number and elevation showing teams exactly where repairs are needed.

“In order to produce reliable and economic electricity for our members, it’s important that we stay on top of tube leaks and frequently monitor the condition of the water walls [tubes] to prevent tube leaks,” said Senior Power Production Engineer for Hoosier Energy Luke McKinney.

“The utilization of the technology that Gecko Robotics has developed helps us quickly identify and properly prioritize areas that require repairs or replacements. The new technology takes approximately 132 times more data than traditional inspection methods in the same four-day inspection period,” McKinney added.

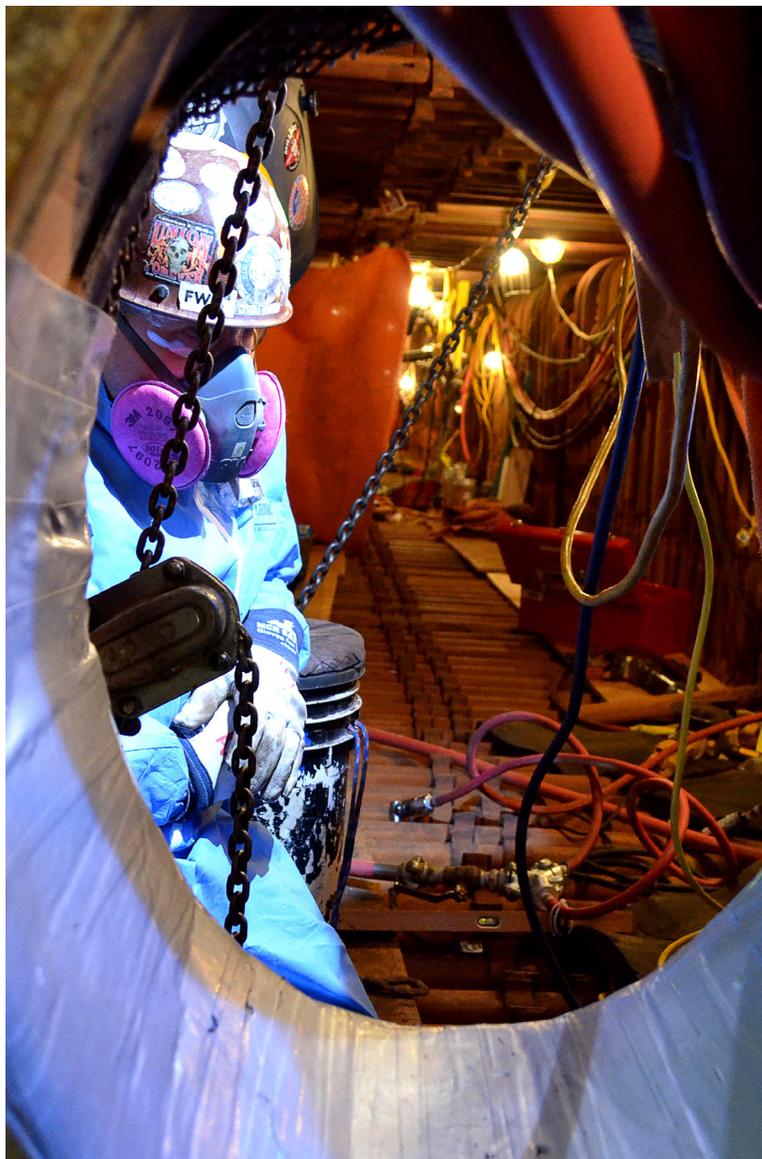
At the end of the inspection, the data is compiled and a map is developed, which records the lowest thickness readings for each foot of boiler tubing.

McKinney uses the thickness reading data to direct repairs, which can include boiler makers performing weld metal buildup on some areas, tube replacement on others, and in some cases, spraying a ceramic coating on the tubes to avoid future corrosion. [E](#)



HE photo

**MAP IT:** This map shows what the device from Gecko Robotics captured as it traveled along the tubes in the boiler. Red areas indicated areas that need repair. This map shows the specific tube number and elevation repairs are needed.



HE photo

**MAKING REPAIRS:** A boilermaker works inside the boiler.

## Fuels outlook states electricity use to increase this summer

Americans will use more electricity this summer than last according to federal energy officials.

In its annual Summer Fuels Outlook, issued April 10, the Energy Information Administration said the typical U.S. residential customer will use an average of 1,055 kilowatt-hours of electricity per month during the summer electricity generation period of June through August. That's up about 1 percent from the 2017 season "as a result of warmer forecast temperatures," EIA said.

"Compared with last summer, this summer's temperatures are forecast to be warmer throughout the eastern area of the country but milder in the western states. Summer-over-summer changes in average household electricity usage range from 6 percent less consumption in the Pacific states to 5 percent more consumption in New England," the report said.

Natural gas, which EIA said "fuels the largest share of generation by the electric power sector," will account for 36 percent of total U.S. generation this summer, up from 34 percent in summer 2017. EIA sees natural gas prices being "relatively similar this summer compared with last year."

Coal-based plants are forecast to supply 30 percent of this summer's generation, down from 32 percent, while nuclear remains level at 19 percent.

**Source:** Michael W. Kahn (NRECA)

## Demand Side Management program celebrates efficient year

Demand Side Management (DSM) results for 2017 have been released.

An important milestone was achieved in 2017 when all member cooperatives were matched with a local Habitat for Humanity ReStore as a service provider for the appliance recycling program.

The residential lighting program's e-commerce web store was another highlight for 2017.

"Among the achievements for the year is a redesigned lighting e-commerce store where cooperative members can purchase LED lamps and receive instant rebates," said Wes McFarland, manager of marketing and member services.

The site was redesigned and integrated into the Energy Efficiency Collaborative Platform (EECP), Hoosier Energy's online rebate portal. This inclusion enhanced data tracking and reporting, thus providing mem-

### DSM portfolio programs

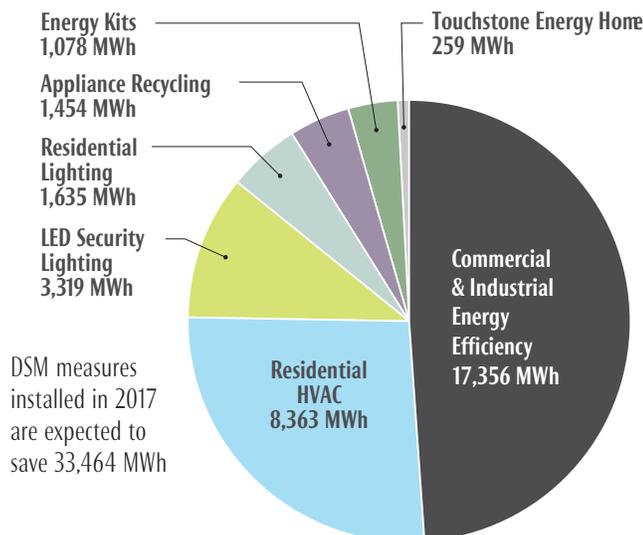
The DSM portfolio consists of: residential and LED security lighting programs; commercial and industrial energy efficiency program; residential HVAC program; energy management switch program; appliance recycling program; and Touchstone Energy Home program.

bers near real-time information on program participation and savings.

The DSM team utilized social media platforms during 2017, allowing them to significantly increase website traffic, program awareness and consumer participation. During a targeted social media push in July, the appliance recycling program saw a 40 percent increase in monthly sign-ups.

These achievements characterized the continued positive results from established programs with participation slightly lower than in previous years. [E](#)

### 2017 annual energy savings



## MEROM GENERATING STATION



## HOLLAND ENERGY



## LIVINGSTON LMG



# ENVIRONMENTAL POWER TEAM

STAFF OF EIGHT MAINTAINS COMPLIANCE WITH LOCAL, STATE, FEDERAL AGENCIES

The environmental services team works with Hoosier Energy staff to provide the framework to manage environmental aspects for the G&T.

The regulatory landscape is constantly evolving with the energy industry meeting or exceeding regulations for Coal Combustion Residuals Rule, Mercury and Air Toxic Standards, Cross-State Air Pollution Update Rule, Effluent Limitation Guidelines and the Clean Power Plan.

Monitoring and reporting of several programs are the responsibility of environmental services staff. These programs include Title V air permits; Resource Conservation and Recovery Act (RCRA) waste; landfill and solid waste; Spill Prevention Control and Countermeasure (SPCC) infrastructure; the National Pollutant Discharge Elimination System (NPDES) water permits; and U.S. Fish and Wildlife Service; and the U.S. Forest Service requirements.

Environmental services has the task of ensuring Hoosier Energy maintains compliance with the regulations and laws set forth by local, state and federal environmental agencies. The Indiana Department of Environmental Management (IDEM) and the Illinois Environmental Protection Agency (IEPA) primarily implement rules and regulations created by the U.S. Environmental Protection Agency (EPA) for the

states of Indiana and Illinois, respectively. Hoosier Energy reports to both agencies, as well as the Indiana Department of Natural Resources, U.S. Fish and Wildlife, U.S. Forest Service, and Army Corps of Engineers.

All of Hoosier Energy's generating stations, transmission facilities and operation centers are required to comply with environmental regulations.

Along with routine inspections, Hoosier Energy conducts training for programs such as Spill Prevention Control and Countermeasure, recycling, proper waste disposal and various air and water permit compliance. The staff also serves as technical resources to facility staff for interpreting requirements in order to ensure compliance.

The department strives to integrate management, operations and maintenance in an approach to exceed compliance with a team effort.

The environmental team monitors daily plant operations to stay in line with the regulations applicable to Hoosier Energy's generating stations. Some of these activities include compiling the data from continuous air emissions monitoring instrumentation, coordinating laboratory results from water and waste sampling, and reporting those results to the regulatory agencies. [E](#)

# MEET THE TEAM



**ANGIE LEE**  
Manager of Environmental Services

Lee began her career at Hoosier Energy in 2008 as an environmental specialist. She was promoted to manager in 2016, overseeing the seven-member environmental team. She brings more than 25 years of experience in the environmental field, having previously worked for IDEM and Indianapolis Power & Light's Harding Street Generating Station.



**DAVE APPEL**  
Environmental Specialist

Appel is the newest member of the team. He is responsible for the Hoosier Energy waste management program at all locations. Appel also manages Spill Prevention Control and Countermeasure (SPCC) plans, underground storage tank management and environmental response. Before joining Hoosier Energy, Appel worked for Quality Mill Supply Co. as a safety/environmental specialist. Prior to that, Appel worked for IDEM.



**CRAIG CHRISPELL**  
Environmental Team Leader

Chrispell started with Hoosier Energy in 2010 as an environmental specialist. He has worked in the environmental field for 31 years in both the public and private sectors. Chrispell specializes in air pollution matters.



**ASHLEY BOWLING**  
Power Production/Environmental Services Administration

Bowling was hired in 2010. Even though the majority of her time is spent with power production, Bowling helps the environmental group with many projects and reporting, making each day different from the last.



**DARRELL BAYLESS**  
Environmental Team Leader

Bayless has been at Hoosier Energy for nearly 34 years. He is involved in the day-to-day environmental compliance at the Merom Generating Station. This requires monitoring water, waste and air regulations. In addition, he is responsible for the monitoring, collecting, and reporting of air emissions from all of Hoosier Energy's generating stations to EPA and IDEM.



**ANGELA DABNEY**  
Environmental Education Coordinator

Dabney started at Hoosier Energy in 2011 as an environmental education specialist. Dabney's duties include working at co-op annual meetings and member appreciation days. She also visits schools offering information about renewable energy, recycling and energy conservation.



**LON PETTS**  
Environmental Team Leader

Petts has been with Hoosier Energy for 29 years. After graduating from Rose-Hulman with a Chemical Engineering degree, he spent 17 years as the flue gas desulfurization process engineer and lab supervisor at the Merom Generating Station before joining the environmental services department. He currently completes permitting and reporting requirements by IDEM in the areas of wastewater and solid waste.



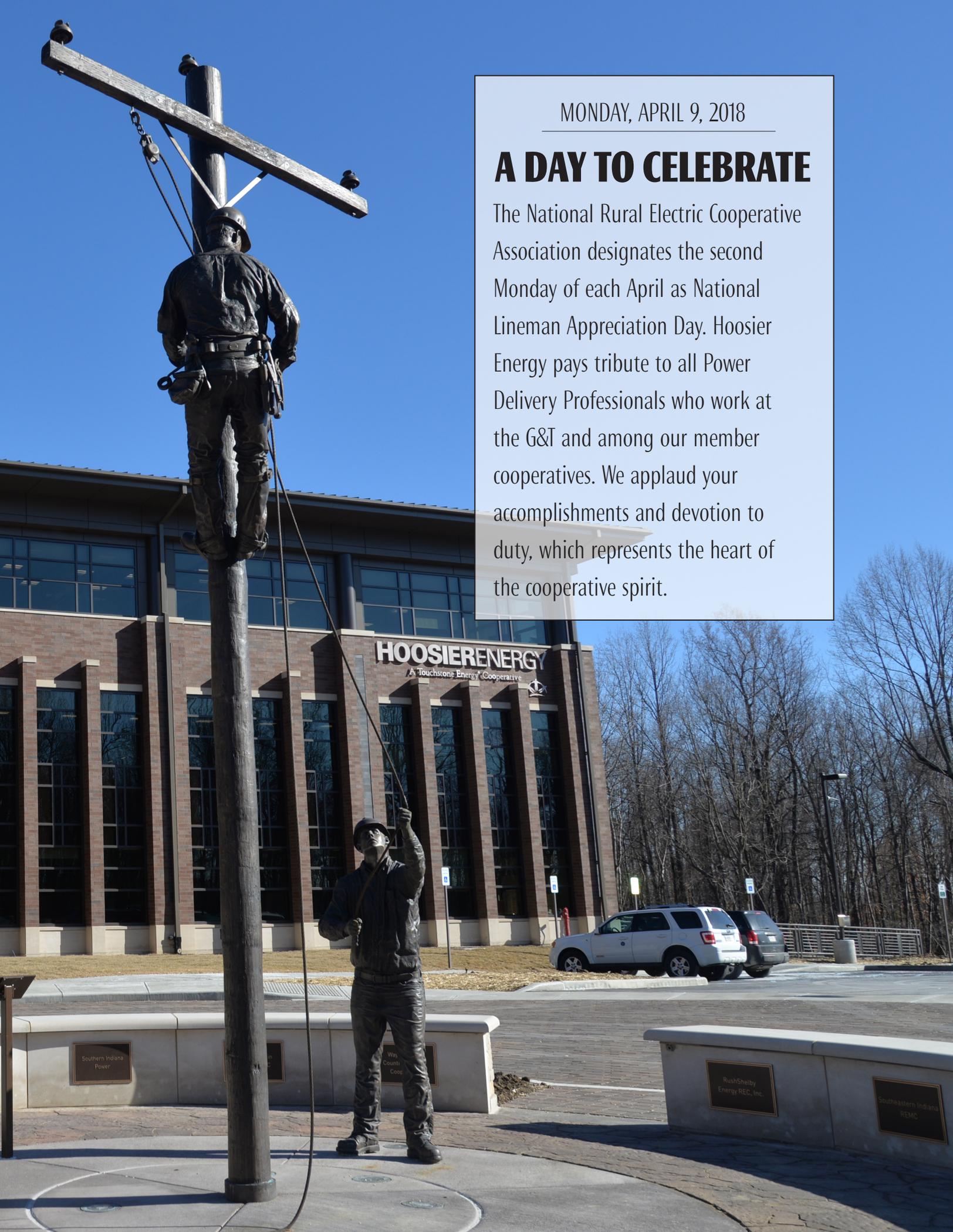
**LUCAS REYNOLDS**  
Environmental Specialist

Reynolds has been with Hoosier Energy since 2010, and recently joined the environmental services team in 2017. His job entails air permitting and compliance, including Title V permit renewals, monitoring of the state and federal regulatory landscape and annual compliance certifications for generation facilities. Reynolds is a candidate for a Master of Public Affairs degree at Indiana University's School of Public and Environmental Affairs.

MONDAY, APRIL 9, 2018

## A DAY TO CELEBRATE

The National Rural Electric Cooperative Association designates the second Monday of each April as National Lineman Appreciation Day. Hoosier Energy pays tribute to all Power Delivery Professionals who work at the G&T and among our member cooperatives. We applaud your accomplishments and devotion to duty, which represents the heart of the cooperative spirit.





## Solar facts

- It takes light about eight minutes and 20 seconds to travel 93 million miles from the Sun to Earth.
- Hoosier Energy and member cooperatives set the goal of 10 percent of energy produced to come from renewable energy sources by 2025.
- Solar arrays like this track the movement of the sun to maximize production – starting the day tilting toward the east and ending facing west.

# Bright students tour local solar array

Students from Silver Creek High School in Sellersburg toured the Henryville Solar site. The array serves Clark County REMC and Jackson County REMC. Students had the opportunity to get a close-up look at renewable energy technology and learn how solar energy is captured and converted to electricity. In the photo above, Hoosier Energy Project Developer, Renewable Energy Chad Jenkins speaks with the high school students.