

# FLASH

The Electrical Board of Missouri and Illinois

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Vol. 108 No. 10

OCTOBER 17, 2017

## PROTECTION OF ELECTRICAL SYSTEMS

8 PDH'S / 4 PEU'S – Code approved

(Need 3 more so sign up soon!)

Date: **THURSDAY, NOVEMBER 9, 2017**

**(8:00 a.m.-5:00 p.m.)**

Location: **EBMI Office**

900 S. Highway Dr. – Fenton, MO 63026

Presented by:

**Michael Smith – Schaeffer Electric**

**Conductors:** The installation of cables in wood and metal framing, shallow grooves, behind panels that allow access and surface mounted; Installation of cables or conductors in the earth; Explain the effects of chemicals, water, direct sunlight and other conditions; Explain overcurrent protection and short circuit protection; Importance of clearances for feeders and service conductors; Explain why fill ratio is important and affects ampacity of conductors.

**Equipment:** Sizing equipment for available fault current; how to determine fault current and why it is important; selecting the correct overcurrent devices; importance of signage NFPA 70E commercial not dwellings; the separation of arcing parts from combustible material; explain working clearances; minimizing shock hazards for personnel .

**COST:** Advanced registrations must be received by **October 31, 2017.**

### Advanced / Late fee

**Employees of non-member firms - \$ 170 / \$220**

**Employees of EBMI member firms- \$ 110 / \$160**

Includes study guide, certificate of completion and registration fee of \$30 which is non-refundable.

**(Please check appropriate box for payment.)**

Will send check       Mastercard, AMEX or Visa (Call the office)

NAME \_\_\_\_\_ COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY/STATE/ZIP \_\_\_\_\_

PHONE \_\_\_\_\_ e-mail \_\_\_\_\_



**Bill Regan**

# LET'S TALK...

## about 12 for Life!!!

The Board of Directors at their September meeting approved the motion that the EBMI hire one of the Ritenour students in the 12 for Life program for the spring semester. The student will start on January 4<sup>th</sup> and be in the office from 1 to 5 pm - Monday through Friday. He or she will help us with registrations for education classes and events. They will learn how we organize and budget for events, as well as who we contact at hotels, event centers, catering firms, speakers, vendors that are necessary to put on various events. We has a number of projects that they will be assisting us with during the semester.

Our new team member will learn the workings of a not for profit association and how we interact with our members. We can also provide the information on the many segments of the electrical industry through contacts with our members companies.

One of the goals of this program to show students the vast career opportunities that are available to them within the construction industry.

I encourage EBMI members to stop by and meet our student. Maybe you can plan to take a few minutes to discuss what your company does, your role within the company and provide some information about your products and/or services.

Ritenour emphasizes the 3 E's with their students upon graduation, Enroll in a trade school or college, Enlist in the military or Employ through on the job training or an apprenticeship program.

Completing high school is the important first step but then providing connections to help them with that next step. We hope to be part of the next step for the students participating in this program.

Annie and I look forward to working with our newest team member.

Our 12 for Life employer Kick-off meeting is set for Thursday, October 26<sup>th</sup> at 11:30 am in the EBMI Office.

### IN MEMORIAM

The Electrical Board officers and staff express our sincere condolences to the family of **Jerry Gibson**, retired from Union Electric (Ameren) who passed away on September 29th.

### CALENDAR OF EVENTS

See calendar on [www.electricalboard.org](http://www.electricalboard.org)

<b>Oct. 20<sup>th</sup></b>	<b>ELECTRICAL SAFETY at Ameren headquarters 7:30 am to 12:00 noon</b>
<b>Oct. 26<sup>th</sup></b>	<b>12 for Life Employer Kick Off meeting 11:30 am At the EBMI Office</b>
<b>Oct. 27<sup>th</sup></b>	<b>Consulting Engineers Forum 7:30 am</b>
<b>Nov. 2<sup>nd</sup></b>	<b>Emerging Illinois Energy Topics In Mt. Vernon 7:30 am to 12 noon</b>
<b>Nov. 3<sup>rd</sup></b>	<b>Electric Shock and Arc Flash Protection 8:00 am to 12:00 noon EBMI Office</b>
<b>Nov. 9<sup>th</sup></b>	<b>Protection of Electrical Systems 8:00 am to 5:00 pm EBMI Office (need 3 more to sign up to be held)</b>
<b>Nov. 9<sup>th</sup></b>	<b>EBMI Night at the Blues game All-Inclusive tickets @ \$135 per person and regular tickets @ \$55 per person. Call Bill at 636-305-6434 for tickets</b>
<b>Nov. 15<sup>th</sup></b>	<b>Lighting Controls for Nonresidential Buildings 8:00 am to 12:00 noon EBMI Office</b>
<b>Dec. 1<sup>st</sup></b>	<b>Arc Flash Calculations 8:00 to 11:00 am EBMI Office</b>
<b>Dec. 6<sup>th</sup> <u>Wednesday</u></b>	<b>CHRISTMAS MIXER at Chase Hotel</b>
<b>April 10<sup>th</sup></b>	<b>SPRING LEADERSHIP LUNCHEON At Doubletree Hotel near Westport</b>

Call EBMI at 636-305-6434 for more information or to register for any of these events or visit our website at [www.electricalboard.org](http://www.electricalboard.org) .

EBMI and the Illuminating Engineering Society (IES) - St. Louis Section are co-sponsoring the following half day seminar.

**LIGHTING CONTROLS FOR NONRESIDENTIAL BUILDINGS**

4 pdh's / 2 peus-elective awarded

Wednesday, November 15th  
8:00 am to 12:00 noon  
EBMI Office

Instructor: Jeff Stoyanov, Vector Electrical Sales

\$150 for employees of EBMI /IES member firms  
\$200 non-members  
Add \$50 if registering after November 7th

**Warning:** To receive the student materials in time for seminar, reservations must be made by November 7th.

The purpose of the seminar is to educate end-users, clients, and maintenance personnel interested in lighting controls for nonresidential buildings. The instructor will focus on benefits, energy code requirements, commissioning, design fundamentals and provide options for popular and emerging control strategies and technologies.

- Make check payable to "IES STL."
- Send checks (via U.S. mail) to: Dave Meglio, 1595 John Hoff Court, O'Fallon, MO 63366. Credit card payments will be invoiced though PayPal.
- Send registration forms (via mail – 900 s. Highway Dr. – Fenton, MO 63026 or email to [annie@electricalboard.org](mailto:annie@electricalboard.org) on/before November 7, 2017.
- There are no refunds after books are ordered.

1<sup>st</sup> Name \_\_\_\_\_  
email address \_\_\_\_\_

2<sup>nd</sup> Name \_\_\_\_\_  
email address \_\_\_\_\_

Company \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Phone: \_\_\_\_\_

For more information, call the EBMI office at 636-305-6434 or email [annie@electricalboard.org](mailto:annie@electricalboard.org) .

**Quote**

Education is not the filling of a pail,  
but the lighting of a fire.

- William Butler Yeats

**ELECTRIC SHOCK AND ARC FLASH PROTECTION**

(4 PDH's / 2 PEU's - Elective)

**Only 10 spots left in seminar - sign up today!**

Last seminar filled quickly and had waiting list.

**\$110 per person for member firms before Oct. 24th**  
**\$170 per person for member firms after Oct. 24th**  
(\$160 per person for non-member firms before Oct. 24th;  
\$220 for non-member firms after Oct. 24th)

**Date: Friday, November 3, 2017**

**Location: EBMI Office (636/305-6434)**  
**900 S. Highway Dr. – Fenton, MO 63026**

**Time: 8:00 a.m. - 12:00 noon**

**Presented by : Edwin Scherry**  
**Scherry Engineering**

Ed will discuss Shock Hazard and Arc Flash Analysis (NFPA 70E and IEEE 1584)

What is arc flash?  
Discuss arc flash terminology  
Overview of various codes and standards  
Discuss how an arc flash affects daily work activities  
Compare arc flash evaluation methods  
NFPA Tables & IEEE Calculations  
Hazard Risk Categories  
Mitigation techniques – Deenergize; Energized work permit;  
How to reduce arc energy; Warning signage;  
PPE for flash protection;  
Shock Hazard Analysis: Safe Work Practices; Exposure voltage; Boundaries; PPE for shock protection; Energized work permit

**Enrollment Form**

(Scan/email to [annie@electricalboard.org](mailto:annie@electricalboard.org) before Oct. 26<sup>th</sup>)

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/ State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

**(Please check appropriate box for payment.)**

- Invoice     Will send check.
- Mastercard , Visa or Amex-call EBMI with info.

## POSITIONS WANTED

**10A17 – MARKETING SPECIALIST** - Highly motivated individual with a recent Communication degree and numerous marketing, sales, and event planning experiences. Writes engaging and effective web marketing content, while also maintaining exceptional interpersonal skills. Available to start immediately. Contact EBMI for resume.

## POSITIONS AVAILABLE

**8317- ELECTRICAL ENGINEER** - Ameren. Focused Energy. For Life. This is an exciting opportunity for an electrical engineer to join the Ameren team. Facilities management and construction experience is preferred. To apply please visit the website directly at [www.ameren.com/careers](http://www.ameren.com/careers). Look for Job Title: Electrical Engineer (Facilities Management & Construction), Job ID 15911.

## **8417 – SENIOR ELECTRICAL CONSTRUCTION PROJECT MANAGER (both travel and local)**

### ESSENTIAL FUNCTIONS

- Oversee total construction and design effort (if applicable) to ensure project is constructed in accordance with design, National Electric Code, budget, and schedule.
- Act as a liaison to coordinate communication between both internal and external members on the project including, but not limited to: General Contractors, Subcontractors, Superintendents, General Foremen and union officials.
- Authorize and/or approve all project staff transactions including choice of superintendent, general foremen, foremen, staff volume and wages.
- Provide direction to planning, scheduling and engineering functions.
- Collaborate with internal teams to estimate projects and write bid proposals.
- Review and approve purchase requisitions, payment approvals, sending invoices, and change order requests.
- Assists in the implementation/interpretation of safety programs and ensures that all OSHA requirements are met.
- Maintain and develop customer relationships; solicit feedback to ensure customer satisfaction
- Maintain a thorough understanding of labor agreements and standards specific to projects.
- BS in Electrical Engineering/ related field of study or equivalent in job experience.

Email your resume to [jaldag@sachsco.com](mailto:jaldag@sachsco.com).

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## **10117 - FIELD TECH / UNDERGROUND UTILITIES CREW MEMBER**

Responsibilities include, but are not limited to:

- Hand dig splice pits of 4x4x4 average size using hand tools, e.g. flat shovel, etc.
- Use mini excavator or trenching machine, as needed
- Work in residential and commercial areas
- Take photos of locate marks, open pit, restored area, etc.
- Backfill, seed and straw

- Properly perform lane closures with flaggers, etc.
- Be compliant with safety procedures
- Work at a variety of site locations in close clustered areas on a daily basis

### Basic Qualifications:

- Work outdoors in all climates
- Valid driver's license or ID card and CDL optional
- Ability to pass background check and drug screening
- Ability to perform physical movements such as bending, shoveling, pushing and pulling reels of wire
- Ability to do landscape restoration
- Ability to lift approximately 50 lbs.
- Ability to work up to 6 days a week
- Ability to repair sprinklers (not a requirement, but a positive skill)
- Ability to communicate to Wilkins dispatch frequently and end customer subscriber, as needed
- Ability to complete close out form to submit for work completion on each job
- Ability to receive and close out jobs on smart phone, when applicable

Interested applicants should email their resumes to The Wilkins Group, Inc. at [careers@wilkins.com](mailto:careers@wilkins.com).

## SPRING LEADERSHIP LUNCHEON

**TUESDAY – APRIL 10TH**

At Doubletree Hotel near Westport  
1973 Craigshire Dr. – 63146

Tables of 8, 9 or 10  
Cost: \$50 per person

“Value Driven Business – Authentic Leadership”  
Speaker: Jeff Koziatek  
Core Authenticity

*Make your plans to attend.*  
**More details to follow in future FLASH issues**

"The challenge of leadership is to be strong, but not rude; be kind, but not weak; be bold, but not bully; be thoughtful, but not lazy; be humble, but not timid; be proud, but not arrogant; have humor, but without folly." --Jim Rohn

# EBMI's CHRISTMAS MIXER

Over 600 people attend each year!!!

Table Assignment letters will be e-mailed in late October to previous Mixer  
TABLE participants only.

**WEDNESDAY, December 6, 2017**

Chase Park Plaza

**FUNMASTER: Randy Karraker**  
Host of The Fast Lane on 101 ESPN

**\$65 per person**

Tables of 8, 9 or 10 available  
Or individual tickets

**Ray Voigt** – Martin Electrical Sales – Chair  
**Melanie Davis** - Frost Supply – Assistant Chair

**11:00 a.m. to 12:15 pm - Extended Hospitality Period**

**12:15 to 1:15 pm - Lunch**

**1:15 to 2:00 pm - Program**

## Attendance Prize Distribution

We are not reading the list of donors, prizes and winners.  
The Attendance Prize distribution will be completed during  
lunch. Donors to the Attendance Prize Fund will be  
recognized with fliers at each table and in the FLASH.

**Attendance Prizes needed** - Each year, our member companies  
generously donate a gift or make a \$25 donation to our attendance  
prize fund with which we purchase attendance prizes. If you, or your  
company wishes to be a donor, please let the staff know by e-mailing  
[annie@electricalboard.org](mailto:annie@electricalboard.org) prior to November 28th.

We will donate a gift  
(Please check a box:)

- Deliver it to EBMI  
Office prior to 11/28
- Deliver it to the Mixer

We will donate \$\_\_\_\_  
(Please check a box:)

- Will send check
- Please send invoice.

However, all members can reserve tickets by scanning this form and e-mailing  
to [annie@electricalboard.org](mailto:annie@electricalboard.org) or mailing it, with your check, to EBMI, 900 S.  
Highway Drive - Ste. 306, Fenton, MO 63026. Reserving/paying early does  
not mean a closer table. They are pre-assigned. Call the EBMI office to pay  
by either **Visa, Mastercard or Amex.**

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Email: \_\_\_\_\_ Phone: \_\_\_\_\_

(Please indicate the # of tables/tickets needed.)

- \_\_\_ Table of 8 @ \$520
  - \_\_\_ Table of 9 @ \$585
  - \_\_\_ Table of 10 @ \$650
  - \_\_\_ # of Tickets @ \$65
- Please check one:  
 Invoice     Will send check  
 Mastercard/Visa /Amex  
 Check enclosed

**WE MUST GIVE CHASE HOTEL A FINAL GUARANTEED  
# OF MEALS ON NOV. 28th AT NOON**

# ARC FLASH CALCULATIONS SEMINAR

3 PDH's  
1.5 PEUs – Elective

Date: **FRIDAY, DECEMBER 1, 2017**  
**8:00 - 11:00 A.M**

Location: EBMI Office  
900 S. Highway Dr.  
Fenton, MO 63026

**Presented by : Edwin Scherry**  
**Scherry Engineering**

Provide an understanding for design professionals who perform arc  
flash hazard calculations of the evolution of the analysis for the  
hazardous condition. A distinction needs to be understood as to  
how a bus is protected in limiting the arcing incident. The arcing  
fault current is different than the bolted fault current. Arc flash  
energy is a result of the arcing current, the time that the arc exists  
and the distance from the arc, as well as maintenance of  
equipment. Arc flash hazard is not predictable and the calculations  
are educated approximations. Investigation of the available arc  
flash energy needs to be accomplished during design and not after  
the fact. More stringent design and specification of equipment is  
required. Will learn: What is involved in performing an Arc  
Flash Hazard Analysis? Discuss some limitations of arc flash  
evaluation techniques. Demonstrate how protective device  
adjustments and distance can assist in reducing the arc flash  
hazard. What engineering techniques can be used to provide  
mitigation of an arc flash?

**COST:** Advanced registrations must be received 2-weeks prior to  
seminar start.

	<b>Advanced / Late fee</b>
<b>Employees of non-member firms -</b>	<b>\$170 / \$220</b>
<b>Employees of EBMI member firms-</b>	<b>\$110 / \$160</b>

Includes study guide, certificate of completion and  
registration fee of \$30 which is non-refundable

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City, State/Zip \_\_\_\_\_

Phone \_\_\_\_\_

E-mail \_\_\_\_\_

**(Please check appropriate box for payment.)**

- Invoice     Will send check.
- Mastercard, Visa or Amex-call EBMI with info.





This group of industry associates enjoyed a fun night at ESCAPE from St. Louis. The 21<sup>st</sup> Century Committee sponsored this event on October 5<sup>th</sup>. Yes, we did escape but only after they opened the doors. Although both teams were close to solving the murder, time ran out on us.

Afterwards, we met at the Post for some appetizers and drinks which allowed us to mingle with everyone. This is a terrific group to start the re-vitalization of the 21<sup>st</sup> Century Committee and we invite others to join us at future events. If you want your younger industry associates to have some fun while meeting other industry members, just send me an email with their contact info and we will send them our event notices. We have a Dart tournament scheduled for January at hotshots in Fenton and bowling on March 22<sup>nd</sup> at Brunswick Zone Lakeside Lanes at 1254 Dougherty Ferry Rd.- Valley Park, MO 63088. There will also be TV's showing the NCAA Basketball Tournament. More info will be provided later.

**Kim Johnston** of Butler Supply and **Charlie Bohannon** of Graybar are the Co-Chairs for the 21<sup>st</sup> Century Committee.

THE PURPOSE OF THE EBMI'S 21<sup>ST</sup> CENTURY COMMITTEE IS TO GET MORE YOUNG ASSOCIATES INVOLVED IN INDUSTRY ACTIVITIES AS WELL AS THE 21<sup>ST</sup> CENTURY COMMITTEE EVENTS, THEREBY ASSISTING IN THE GROWTH OF THE ELECTRICAL BOARD .

**REPRESENTING EBMI'S FUTURE,  
BUT WORKING TO SHAPE IT NOW**

## EBMI SCHOLARSHIP APPLICATIONS

Do you have a son or daughter who is a senior in high school this year or now in college? Why not have them apply for an EBMI Scholarship! Avoid the last minute rush to complete the application before our 1-15-18 deadline. Most of the application and essay can be completed during the summer. Then they will need to forward transcripts and update any fall activities.

Please e-mail [annie@electricalboard.org](mailto:annie@electricalboard.org) to request the application and criteria on the EBMI scholarships and she will e-mail information so you can forward to your son or daughter. Individuals must be an EBMI member for one year to apply for a scholarship for their sons or daughters.

**EBMI has awarded 156 scholarships totaling \$136,900.**



**Our bowling fundraiser on October 14<sup>th</sup> raised over \$1,000 for the Michael A. Postiglione Scholarship. It was a very enjoyable evening spent with the Postiglione family.**



**Thanks to all our wonderful volunteers who helped us provide a BBQ lunch for the patients at the VA Hospital in Jefferson Barracks on October 14<sup>th</sup>. The Patients are so appreciative of receiving a BBQ lunch. We even had a patient sing a song thanking the women on the food line. He could be on American Idol!!! The patients are so appr**





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## THE GENERAC POWER EXPERIENCE TOUR COMES TO ST. LOUIS

Holiday Inn St. Louis SW - Route 66  
10709 Watson Rd., St. Louis, MO 63127

**November 14, 2017**

10:00 am to 1:30 pm

To register, please contact  
**Jim Gastreich at 314-785-1528**  
or [jgastreich@cliffordpower.com](mailto:jgastreich@cliffordpower.com)

*Space is limited.*



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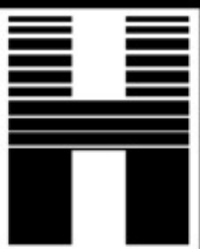


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 F: 314.714.1715

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 F: 844.783.4392

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4 pdhs

7:55 am – 12:30 pm

\$35 per person for EBMI members Firms

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**RSVP required by October 28<sup>th</sup>**

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# Ameren Missouri Plans Major Expansion of Wind, Solar Generation to Serve Customers

Company also Establishes Goal to Cut Carbon Emissions by 80 Percent

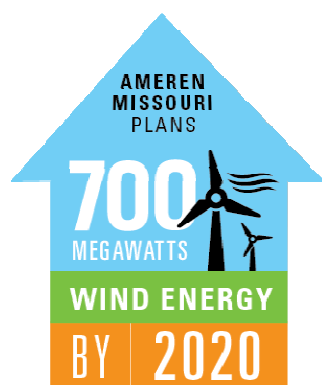
ST. LOUIS (Sept. 25, 2017) — Ameren Missouri announced today a forward-thinking plan to dramatically increase the amount of wind and solar generation to provide cost-effective and sustainable energy for its customers.

Ameren Missouri, a subsidiary of Ameren Corporation (NYSE: AEE), plans to add at least 700 megawatts of wind generation by 2020, representing an investment of approximately \$1 billion. The potential exists to add even more wind generation in the coming years as a result of improving technology and economics, as well as renewable energy initiatives with large customers.

The company also plans to add 100 megawatts of solar generation over the next 10 years, with 50 megawatts expected to come online by 2025.

This is Ameren Missouri's largest-ever commitment to clean, renewable energy, said Michael Moehn, president of Ameren Missouri. We are committed to bringing our customers innovative solutions that are both cost-effective and environmentally responsible while maintaining the reliability our customers expect.

## Wind Generation



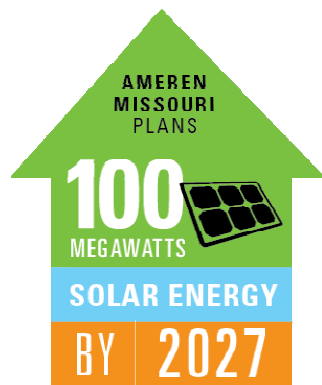
The new wind generation is expected to be located in Missouri and neighboring states using American-made turbines. The source, location and cost of the new wind generation is still under negotiation with several developers.

We expect this tremendous growth in wind generation to provide great value to our customers, who will save money on energy costs, Moehn said. Because of significant advancement in technology, harnessing wind is less expensive than other forms of new generation.

The planned generation is expected to be operational by 2020.

We believe it is in our customers' long-term best interest for Ameren Missouri to own this wind generation, said Ajay Arora, vice president of environmental services and generation resource planning at Ameren.

## Solar Generation



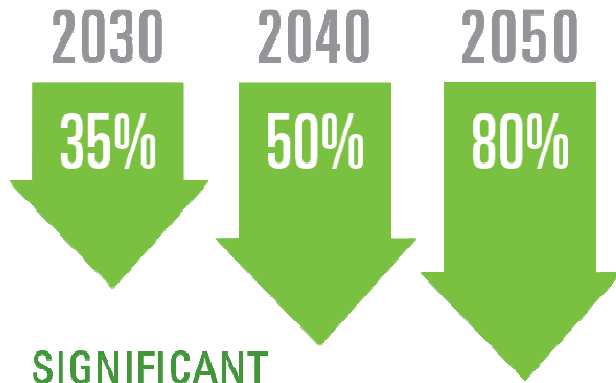
The addition of 100 megawatts of solar generation over the next 10 years is expected to be developed in multiple phases.

Planning is underway on two projects. Earlier this year, Ameren Missouri announced plans to build a solar generation facility at St. Louis Lambert International Airport. That facility is expected to be complete in 2018. A separate project creates partnerships with business customers to locate an Ameren Missouri-owned solar generation facility on their property.

These innovative solar programs have great promise, Arora said. Moving generation assets closer to where the energy is needed most is one of the ways we're making the grid smarter, stronger and more resilient.



## Carbon Reduction



**SIGNIFICANT CARBON REDUCTION** Further, the company is establishing a goal of reducing its carbon emissions 80 percent by 2050 from the 2005 level.

We are the first investor-owned utility in the state, and among the first in the country, to announce a carbon emissions goal of this magnitude, Moehn said.

To meet this goal, Ameren Missouri is targeting a 35 percent carbon emissions reduction by 2030 and a 50 percent reduction by 2040 from the 2005 level. Since 2005, Ameren Missouri has significantly reduced emissions, including a 26 percent reduction in carbon emissions in 2016.

### Specifics of Ameren Missouri's plan also include:

- Managing the largest, most comprehensive energy efficiency program in Missouri's history. The plan consists of a comprehensive portfolio of programs for business and residential customers. The energy savings goal for the current three-year plan is 570,000 megawatt-hours, equivalent to the energy used by nearly 45,000 homes, and representing a carbon-emissions reduction equivalent to taking 115,000 cars off the street. These programs give residents and businesses tools to save money and help make costs more predictable.
- Retiring over half of Ameren Missouri's coal-fired generating capacity. This includes retiring the Meramec Energy Center in south St. Louis County by the end of 2022.
- Addressing the need to transition to a smart energy grid that can support more renewable energy, universal and private solar and customers' desire for more timely information. In the next two decades, the energy grid will be the lifeline for cleaner energy connecting hundreds, if not thousands, of small and regional renewable energy generators to the grid in real time while maintaining the energy reliability demanded by customers.

Ameren Missouri's Integrated Resource Plan (IRP), a 20-year outlook that supports cleaner energy in Missouri, was filed today with the Missouri Public Service Commission, and is consistent with Missouri's Renewable Energy Standard. The IRP, which is filed every three years, examines electric customers' projected long-term energy needs and describes Ameren Missouri's preferred approach to meeting those needs in a cost-effective fashion that maintains system reliability.

The IRP is developed with the input of a wide variety of stakeholders and is consistent with Ameren's goal of transitioning its energy generation in a responsible fashion to ensure reliability while keeping customer rates affordable, Arora said.

In order to add these resources to its generation portfolio, Ameren Missouri is required to seek certificates of convenience and necessity from the Missouri Public Service Commission for projects located in Missouri and to obtain interconnection agreements so that it can use transmission services of the appropriate Regional Transmission Authority.

More information can be found at [AmerenMissouri.com/IRP](http://AmerenMissouri.com/IRP).

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## About Ameren Missouri

Ameren Missouri has been providing electric and gas service for more than 100 years, and the company's electric rates are among the lowest in the nation. Ameren Missouri's mission is to power the quality of life for its 1.2 million electric and 127,000 natural gas customers in central and eastern Missouri. The company's service area covers 64 counties and more than 500 communities, including the greater St. Louis area. For more information, visit [Ameren.com/Missouri](http://Ameren.com/Missouri) or follow us at [@AmerenMissouri](https://www.facebook.com/AmerenMissouri) or [Facebook.com/AmerenMissouri](https://www.facebook.com/AmerenMissouri).

### *Forward-looking Statements*

Statements in this release not based on historical facts are considered "forward-looking" and, accordingly, involve risks and uncertainties that could cause actual results to differ materially from those discussed. Although such forward-looking statements have been made in good faith and are based on reasonable assumptions, there is no assurance that the expected results will be achieved. These statements include (without limitation) statements as to future expectations, beliefs, plans, strategies, objectives, events, conditions, and financial performance. In connection with the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, we are providing this cautionary statement to identify important factors that could cause actual results to differ materially from those anticipated. The following factors, in addition to those discussed under Risk Factors in Ameren's Annual Report on Form 10-K for the year ended December 31, 2016, and elsewhere in this release and in our other filings with the Securities and Exchange Commission, could cause actual results to differ materially from management expectations suggested in such forward-looking statements:

- regulatory, judicial, or legislative actions, including any changes in regulatory policies and ratemaking determinations, and future regulatory, judicial, or legislative actions that change regulatory recovery mechanisms;
- the effects of changes in federal, state, or local laws and other governmental actions, including monetary, fiscal, and energy policies;
- the effects of changes in federal, state, or local tax laws, regulations, interpretations or rates and any challenges to the tax positions we have taken;
- the effects on demand for our services resulting from technological advances, including advances in customer energy efficiency and private generation sources, which generate electricity at the site of consumption and are becoming more cost-competitive;
- the effectiveness of Ameren Missouri's customer energy efficiency programs and the related revenues and performance incentives earned under its Missouri Energy Efficiency Investment Act plans;
- our ability to align overall spending, both operating and capital, with frameworks established by our regulators in our attempt to earn our allowed return on equity;
- the timing of increasing capital expenditure and operating expense requirements and our ability to recover these costs in a timely manner;
- the cost and availability of fuel, such as ultra-low-sulfur coal, natural gas, and enriched uranium used to produce electricity; the cost and availability of purchased power, zero-emission credits, renewable energy credits, and natural gas for distribution; and the level and volatility of future market prices for such commodities, including our ability to recover the costs for such commodities and our customers' tolerance for the related rate increases;
- disruptions in the delivery of fuel, failure of our fuel suppliers to provide adequate quantities or quality of fuel, or lack of adequate inventories of fuel, including nuclear fuel assemblies from Westinghouse Electric Company, LLC, the Callaway Energy Center's only Nuclear Regulatory Commission-licensed supplier of such assemblies, which is currently in bankruptcy proceedings;
- the effectiveness of our risk management strategies and our use of financial and derivative instruments;
- the ability to obtain sufficient insurance, including insurance for Ameren Missouri's Callaway Energy Center, or in the absence of insurance, the ability to recover uninsured losses from our customers;
- business and economic conditions, including their impact on interest rates, collection of our receivable balances, and demand for our products;
- disruptions of the capital markets, deterioration in our credit metrics, or other events that may have an adverse effect on the cost or availability of capital, including short-term credit and liquidity;
- the actions of credit rating agencies and the effects of such actions;
- the impact of adopting new accounting guidance and the application of appropriate accounting rules and guidance;
- the impact of weather conditions on Ameren Missouri and other natural phenomena on us and our customers, including the impact of system outages;
- the construction, installation, performance, and cost recovery of generation, transmission, and distribution assets;
- the effects of breakdowns or failures of equipment in the operation of natural gas transmission and distribution systems and storage facilities, such as leaks, explosions, and mechanical problems, and compliance with natural gas safety regulations;
- the effects of our increasing investment in electric transmission projects, our ability to obtain all of the necessary approvals to complete the projects, and the uncertainty as to whether we will achieve our expected returns in a timely manner;
- operation of Ameren Missouri's Callaway Energy Center, including planned and unplanned outages, and decommissioning costs;
- the effects of strategic initiatives, including mergers, acquisitions and divestitures;
- the impact of current environmental regulations and new, more stringent, or changing requirements, including those related to carbon dioxide, other emissions and discharges, cooling water intake structures, coal combustion residuals, and energy efficiency, that are enacted over time and that could limit or terminate the operation of certain of Ameren Missouri's energy centers, increase our costs or investment requirements, result in an impairment of our assets, cause us to sell our assets, reduce our customers' demand for electricity or natural gas, or otherwise have a negative financial effect;
- the impact of complying with renewable energy portfolio requirements in Missouri;
- labor disputes, work force reductions, future wage and employee benefits costs, including changes in discount rates, mortality tables, and returns on benefit plan assets;
- the inability of our counterparties to meet their obligations with respect to contracts, credit agreements, and financial instruments;
- the cost and availability of transmission capacity for the energy generated by Ameren Missouri's energy centers or required to satisfy Ameren Missouri's energy sales;
- legal and administrative proceedings;
- the impact of cyber attacks, which could result in the loss of operational control of energy centers and electric and natural gas transmission and distribution systems and/or the loss of data, such as customer data and account information; and
- acts of sabotage, war, terrorism, or other intentionally disruptive acts.

New factors emerge from time to time, and it is not possible for management to predict all of such factors, nor can it assess the impact of each such factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained or implied in any forward-looking statement. Given these uncertainties, undue reliance should not be placed on these forward-looking statements. Except to the extent required by the federal securities laws, we undertake no obligation to update or revise publicly any forward-looking statements to reflect new information or future events.

## If You Take Money out of the Equation, How do you Measure Success?

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**The Any Person Mindset Free E-Newsletter Series**

**Volume 16, Issue No. 6b**

**October 15, 2017**

**By Dan Coughlin**

I've often heard this statement: that person has a really good job. Or this one: that person has a great job.

Those statements are code for meaning that person either makes a really good salary or a really great salary. Whenever I hear that I always think to myself that there has to be more to a really good job or a really great job than just making money. There has to be more to being a great organization than just how big the organization is financially.

Money is important. It's important for individuals and it's important for businesses. However, it can become so important that it can overshadow everything else in terms of defining success. We have to be able to peel back the layers of important outcomes in order to understand factors other than money.

### Questions for Measuring Success with Money Not in the Equation

Here are three questions I want you to reflect on.

*First, if you take your financial compensation out of the equation, how do you define success for yourself at work?*

What would you use to determine your success if you don't know what you're being paid?

You might consider the quality of your work, the impact you had on other team members and on your customers and suppliers, and what you learned that day to improve the future of your organization. You might consider your professional relationships, and think about what you do to enhance a relationship or start up a new one. What would you use to evaluate your success without including money?

*Second, if you take your organization's revenues and profits out of the equation, how do you define success for your organization?*

If you don't know whether or not revenues and profits are going up or down, what would you use as indicators of success as an organization? Peel back the layers.

You might evaluate whether the products and services that are being sold are getting better or worse. You might measure success based on the results that your customers achieve when they use your products or services. You might measure whether your organization did what it said it would do for employees, customers, and suppliers. What would you look at?



*Third, if you take the things you can buy out of the equation, how do you define success in your personal and community life?*

Let's extend these questions beyond your job and your employer, and look at success at home or in your community.

What would have to happen today for you to consider this to be a successful day?

For me, it includes showing my family members and telling my family members that I love them. It includes spending some time in nature and some time in exercising. It includes learning something either through reading or watching a film. For you, how will you determine if a day was successful or not if you take out what you can buy?

You can put money back in later on as an indicator of success, but for now I would like you to answer those three questions. Success has many layers of evaluation. We need to dig deep to get past just using money as our sole indicator of success.