SHOW HOURS

Wednesday, March 11  
1:00 p.m. – 7:00 p.m.

Thursday, March 12  
9:00 a.m. – 5:00 p.m.

Free Admission to Expo
Free Parking
Educational Seminars  
(Fee required to attend seminars.)

Expo is ONLY held every 3 years – don’t miss this opportunity to…

• View over 200+ booths of electrical products/services
• See new products
• PDH/LUs offered for all seminars
• Jefferson County (JC) and City of St. Louis only accept the code-related seminars and are marked clearly with JC’s or City by those accepted.
• IAEI – Eastern Missouri Code Conference — fulfills CITY of St. Louis Licensing Requirements for 2020. Need 8 hours for license renewals EACH year.
• Visit with manufacturers’ representatives — over 3,000 attend this all-industry, two-day event
THE DO’S AND DON’TS OF SPECIFYING LIGHTNING PROTECTION SYSTEMS

Speakers: Mark Harger – Harger Lighting and Grounding, and Ray Stripling – nVent

The presentation will start with a brief description of lightning and lightning protection systems. Risk assessment methods, along with outlining the main parts of a lightning protection system will be discussed. Proper inspection and maintenance of lightning protection systems will be covered, and recommendations will be given regarding specifying lightning protection systems.

Participants will learn:
- Which Lightning Protection Standard(s) should be used for determining the basis for design.
- How to conduct a Lightning Risk Assessment for a structure.
- Differences between a master certification and a limited scope inspection certificate.
- Importance of periodic inspection of maintenance for lightning protection systems.
- Best methods for specifying lightning protection systems.

Target Audience: Electrical and specifying engineers, electrical contractors, building owners, architects, general contractors

CRITICAL POWER SYSTEMS

Speaker: Dan Neeser – Eaton’s Bussmann Division

This course will discuss the key requirements for critical systems, such as emergency, legally required standby and critical operation power systems per the 2020 NEC. Topics and associated requirements covered will include: definitions and objectives, testing and maintenance, capacity, transfer equipment, circuit wiring and equipment, sources of power and overcurrent protection considerations.

Participants will learn:
- Comparison of requirements for Critical Power Systems per Article 700, 701 and 708
- Testing and Maintenance Requirements
- Sources of Power and System Separation
- ATS SCCR Marking Requirements and Compliance
- Selective Coordination Requirements and Compliance

Target Audience: Consulting engineers (electrical), design-build contractors, engineers, project managers for electrical contractors, electrical inspectors

THE FUTURE OF BUILDING AUTOMATION SYSTEMS

Speakers: Kyle Knudten – McClure Engineering / Clay Diedner – Ross & Baruzzini

Upcoming trends in building automated systems will include proliferation of IP-connected devices that interact with building users and other building platforms to improve user experiences and decrease energy consumption. Building electrical appliances are poised to take a prominent role in this evolution.

Participants will learn:
- What building systems are now or will be connected in the near future.
- How connectivity between building systems occurs.
- Smart building technologies to enhance occupant experience.
- Smart building technologies to optimize building performance.
- Cybersecurity considerations in this dynamic landscape.

Target Audience: Design engineers, facility engineering, maintenance, contractors, electricians

GENERAL ELECTRICAL REQUIREMENTS FOR ELEVATORS

Speaker: Dave Hardin – K.H. Lemp Elevator Consultant, Inc.

The presentation will discuss a variety of electrical issues and code requirements that are commonly missed in design or misunderstood by contractors. Issues such as mainline disconnect location requirements, other requirements for mainline and 120V car lighting disconnects, lighting and illumination requirements for elevator machine rooms, hoistways and pits, service and specialty receptacles required for machine rooms. Additionally, the presentation will touch on requirements that have been added with the introduction of machine room-less elevators, as well as emergency power requirements for elevators.

The participants will learn:
- Illumination/lighting requirements for elevator machine rooms, control rooms, pits and hoistways.
- Requirements for service receptacles in elevator machine rooms, control rooms, pits and hoistways, as well as requirements for receptacles used for sump pumps in elevator pits.
- Signaling requirements to elevator controls for emergency/standby power.
- Requirements for elevator mainline disconnect panels and for 120V car lighting disconnect panels.
- Changes in the elevator industry with a focus towards machine room-less elevators and how this has affected associated electrical work.

Target Audience: Electrical contractors and electrical design engineers
**SEEMEETING**

<table>
<thead>
<tr>
<th>Session</th>
<th>Room</th>
<th>Time</th>
<th>PDH/LU Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Room ABC</td>
<td>3:00 p.m. – 4:30 p.m.</td>
<td>LU/PDH: 1.5</td>
</tr>
<tr>
<td>9</td>
<td>Room D</td>
<td>3:00 - 4:30 pm</td>
<td>LU/PDH: 1.5</td>
</tr>
</tbody>
</table>

**SMART METERS: THE BENEFITS, THE OPTIONS, THE TRANSFORMATION**

**Speakers:** Dave Kuhlmann – Ameren Illinois  
Jon Shockley – Ameren Missouri

Smart meters transformed the way Ameren Illinois conducts business. The information technology support systems integration for greater energy efficiency that benefit the energy company and their customers.

Advanced Metering Infrastructure (AMI) is a two-way communications system that use smart meters at residential, commercial and industry premises to communicate energy consumption data on low-level radio frequency (RF) transmission signals. Ameren Illinois has upgraded over 1.2 million electric meters and over 800,000 smart natural gas modules. Ameren Missouri has begun their five year deployment plan which includes upgrading 1.2 million electric meters and 130,000 smart natural gas modules. Together, both companies are making it easier for their customers to better manage and control energy costs.

This presentation is designed to provide a practical overview of smart meters. An in-depth introduction to smart meter technologies will be provided to give the necessary background to attendees. We will discuss business transformation and organizational change management as well as a few lessons learned and what’s in our future.

Participants will learn:
- Difference between AMR and AMI technology
- Functionality of smart meter technology
- Customer benefits associated with smart meters
- Operational benefits associated with smart meters
- Future Impacts of a smarter grid on energy efficiency

**Target Audience:** Building owners, facility managers, engineers and utility customers

---

**FIRE ALARM INDUSTRY UPDATE**

**Speaker:** Michael White – Siemens Smart Infrastructure

Fire alarm codes, technology, and design applications continue to undergo change which can present both challenges and opportunities for the design and construction team. Additionally, AHJs may be reluctant to adopt new technology and interoperability without a thorough understanding of the value and relevance within modern codes and standards. This presentation will cover some more common fire alarm and life-safety system challenges faced by the design and construction team in today’s market. Examples typically include areas of integration between fire alarm and other building systems such as elevator, sprinkler, HVAC, and fireman’s smoke control stations (FSCS). We will also provide updates and overviews regarding voice intelligibility, stairway pressurization strategies, and modern alarm communication technologies from protected premises to supervising central stations. Finally, emerging fire alarm and life-safety technologies within the converged infrastructure of a smart building will be presented.

**Target Audience:** Electrical contractors (operations, engineering, preconstruction, and senior management), electrical engineers, authorities having jurisdiction, facilities operators, facilities engineers, facilities life-safety personnel

---

**GOING WEST INTO ST. CHARLES**

- Take I-70 to Convention Center Blvd., Exit 229A. At stop light, make a left turn and go over I-70. After the next stoplight, head into the roundabout left lane and go half way around roundabout to the road alongside the St. Charles Convention Center. **Free** parking is in the back of the convention center.

**GOING EAST INTO ST. CHARLES**

- Take I-70 to Convention Center Blvd., exit, 229A. At stop light, make a right turn and head into the roundabout, using left lane, and go half way around roundabout to the road alongside the St. Charles Convention Center. **Free** parking in back of the convention center.

**Hotel Information**

Go to our website to see a list of hotels around the St. Charles Convention Center. Be sure to mention the Electrical Board and Electrical Expo when making reservations before February 7th.

---

**REGISTER ONLINE!**

**BEFORE FEBRUARY 21 AND ATTEND THE EXPO … MAKES YOU ELIGIBLE FOR DRAWING OF 44 - $50 GIFT CARDS.**

(Winners will be notified after the Expo.)

---

**CONTEST!**

Register online to select the distributor who helped you learn about the Expo. MUST be completed prior to February 21st.

**Distributor Partners**

- Butler Supply
- Cape Electrical Supply
- Centrex Electrical Supply Corp.
- Fletcher-Reinhardt Company
- French Gerleman
- Frost Supply
- Graybar Electric Company
- Holt Electrical Supplies
- Metro Electric Supply
- Rexel
- Springfield Electric Supply Co.
**NATIONAL ELECTRICAL CODE CONFERENCE**  
**ANALYSIS OF THE 2020 CODE CHANGES**

**Speaker:** Keith Lofland - IAEI

Q & A Panel to be invited: Rick Hill – St. Louis County Inspection, Jared Agee – St. Charles County Inspection, and Rick Heyman – St. Louis City Inspection

The International Association of Electrical Inspectors-Eastern Missouri Chapter Conference will include a narrated presentation of the 2020 National Electrical Code changes. This presentation will provide illustrations and explanations of changes in the National Electrical Code.

This Code Conference will fulfill the 8 hour-code City of St. Louis’ license requirement for continuing education provided THE LICENSEE attends the full eight hours of the Conference. YOU MUST attend BOTH sessions AND make sure your badge is scanned each time!

The fee for the Code Conference is $240 with registrations made before 2-12-20 and $300 for registrations made after the 2-12-20 deadline. This fee includes LUNCH and the book “Analysis of Changes, 2020 NEC” which each registrant will receive and can be picked up the morning of the conference. This analysis book covers almost 400 changes made in the 2020 NEC. A PHOTO ID IS REQUIRED TO RECEIVE THE ANALYSIS BOOK AT INSPECTORS TABLE.

Here’s what the participants will learn:

- Help you develop a better understanding of changes in the National Electrical Code
- Broaden your knowledge of the N.E.C.
- Allow you to communicate with local authorities more effectively

Target Audience: Contractors, electricians and engineers

**MOTOR STARTING AND CONTROL TECHNOLOGY**

**Speaker:** Charles Hummer – French Gerlemann

Understanding the different options for motor starting and control are key to providing an effective solution for your company and/or customer. From basic non-reversing starters to highly configurable variable frequency drives, there is a proper application for each technology. Explanation of the technologies, comparison between the technologies and proper applications for each technology will be discussed in this presentation.

Participants will:

- Understand different motor starting technologies and how they affect/control the motor
- Learn the motor applications best suited for each motor starting technology
- Become familiar with the various methods of starting, stopping and speed control of motor starting starting,
- Become familiar with standard interactions with PLC/DCS/BAC systems and the motor starting units.
- Realize the cost savings for your company and/or your customer by applying the correct starting technology to motors

Target Audience: Contractors, plant maintenance, electricians, and design engineers

**LIGHTING CONTROLS – SYSTEMS – APPLICATIONS**

**Speaker:** Steve Dietiker – McClure Engineering

Lighting Systems continue to advance, and lighting controls are constantly evolving. Staying abreast of the advancements in lighting technology is one challenge but keeping up with lighting controls and energy codes is an effort unlike ever before. Unfortunately, the typical applications that you know best, simply don’t meet the current code requirements. We will review terminology, applications, and troubleshooting for systems most commonly applied today.

Participants will learn:

- Understanding of key terms and most popular control protocols
- Analog, Digital, and Wireless applications
- LED Drivers and coordination with controls
- Control relative to Emergency Lighting (UL924 vs UL1008 devices)
- Troubleshooting
- Startup vs Programming vs Commissioning

Target Audience: Design engineers, electrical designers, facilities engineering, maintenance, contractors, electricians
**BEST VALUE**

**REGISTRATIONS**
(Per Person Rates)

* If selecting one- or two-day passes, please ORDER mail registrations to: EBM • 900 S. Highway Dr. • Ste. 203, Fenton, MO 63026

Must have a completed registration form for EACH attendee. Payment MUST be received with registrations or call in with your credit card information. If sending registration form in with your check, made payable to EBM, please forward to address above. After February 21st, do NOT mail or email any correspondence to EBM as it will not be processed. You must register at the Expo after this date.

1. Attending Expo ONLY – You must complete sections A, B & D below. (Expo attendance is FREE and the badge allows admittance into Expo)
2. Attending Expo AND Seminars – You must complete sections A, B, C & D and check seminars attending. Then mail this form with your payment or call EBM, 636-305-6434 with credit card payment. (Badge allows attendance into Expo. A ticket will be required for access into any of the seminars.)

**PART A**

Please TYPE OR PRINT CLEARLY all information. Badge (for Expo) and/or seminar tickets will be mailed to address listed below (home or work as specified by you below). ONE-TWO weeks prior to Expo. NO COST to attend the Expo only.

Name ____________________________________________

Company________________________________________

Address _________________________________________

City______________________________ State__________ Zip__________

Phone (_______ ) ________________________________ e-mail __________

EBM can use e-mail to contact me regarding educational opportunities and future Expos. Email is needed for confirmation Expo info.

**PART B**

MUST CHECK ONE IN SECTIONS 1 AND 2 BELOW! THESE MUST BE INCLUDED TO RECEIVE A BADGE IN ADVANCE!

1. **✓ only ONE in YOUR JOB CATEGORY**

| 01 | Architect |
| 02 | Cust. Serv./Adm. |
| 03 | Designer/CADD |
| 04 | Electrician |
| 05 | Engineer |
| 06 | Estimator |
| 07 | Inspector |
| 08 | Maint/Technician |
| 09 | Management |
| 10 | Project Manager |
| 11 | Purchasing |
| 12 | Sales |
| 13 | Student |
| 14 | Other:__________ |

2. **✓ only ONE describing your COMPANY SEGMENT**

| A | Architect |
| B | Commercial Buildings |
| C | Contractor |
| D | Consulting Engineer |
| E | Datacom |
| F | Distributor |
| G | Education |
| H | Government |
| I | Health Care |
| J | HVAC Contractor |
| K | Industrial/Manufacturing |
| L | Utility |
| M | Other:__________ |

**PART C**

REMINDER – PRE-REGISTRATION ENDS 2/21/20!!!

**SEMINAR**

<table>
<thead>
<tr>
<th>TIMES</th>
<th>BEFORE 2/12/20</th>
<th>AFTER 2/12/20</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNEC</td>
<td>IAEE Code Conference</td>
<td>7:30 a.m. – 11:30 a.m.</td>
<td>$240</td>
</tr>
<tr>
<td></td>
<td>Must attend both sessions – all 8 hours!</td>
<td>2:00 p.m. – 6:00 p.m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thursday, March 12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BEST VALUE** (Per Person Rates)

TWO-DAY PASS – 3/11 & 3/12 Sem. #1-13 only! $150

Code Conference IS NOT included!

Please ✓ the seminars below that you plan to attend.

ONE-DAY PASS – 3/11: Sem. #1-9 OR 3/12: Sem. #10-13 $100

MUST CHECK DATE BELOW!* Code IS NOT included!

Please ✓ the seminars below that you plan to attend.

**PLEASE CHECK CHOICE OF PAYMENT:**

- Check
- Credit Card

EBM office: 636-305-6434

**TOTAL DUE**

$ __________

* If selecting one- or two-day passes, please ✓ the seminars below that you plan to attend. This helps us in providing the correct number of handouts, if needed.

ENGINEERS/CONTRACTORS/ARCHITECTS: It’s your responsibility to pick up your PDH/LU/Code Hours from volunteers near exits AFTER each seminar!!

PDH/Code Hour letters will NOT be mailed. ONLY Code class certificates will be mailed 4-6 weeks after seminar.

**PART D**

DISTRIBUTOR PARTNERS

- Butler Supply
- Cape Electrical Supply
- Centrex Electrical Supply Corp.
- Fletcher-Reinhardt Company
- French Gerleman
- Frost Supply
- Graybar Electric Company
- Holt Electrical Supplies
- Metro Electric Supply
- Rexel
- Springfield Electric Supply Co.
- Other:__________

**FULL DESCRIPTION OF EACH SEMINAR AVAILABLE AT**

www.electricalboard.org

**Wednesday – March 11**

- S1 Sem. 1 The Do’s and Don’ts of Specifying Lighting Protection Systems 7:30 – 9:30 am
- S2 Sem. 2 The Future of Building Automation Systems 8:00 – 9:30 am
- S3 Sem. 3 Critical Power Systems 10:00 – 11:30 am
- S4 Sem. 4 Electric Utility Industry Trends 10:00 – 11:30 am
- S5 Sem. 5 Grounding of Electrical Systems 12:00 – 2:00 pm
- S6 Sem. 6 General Electrical Requirements for Elevators 12:00 – 1:00 pm
- S7 Sem. 7 Fire Alarm Industry Update 1:30 – 2:30 pm
- S8 Sem. 8 Smart Meters 3:00 – 4:30 pm
- S9 Sem. 9 Code Issues 3:00 – 4:30 pm

**Thursday – March 12**

- S10 Sem. 10 Medium Voltage System Design 8:00 – 10:00 am
- S11 Sem. 11 The Evolution of Access Control 8:00 – 9:30 am
- S12 Sem. 12 Motor Starting and Control Technology 11:30 am – 1:00 pm
- S13 Sem. 13 Lighting Controls – Systems – Applications 1:30 – 3:00 pm

Full description of each seminar available at www.electricalboard.org
ATTENTION: REGISTRATION OPTIONS BELOW

Advanced Rates – ALL seminar registrations MUST BE POSTMARKED BY February 21st!
ALL PRE-REGISTRATION ENDS ON FEBRUARY 21ST! After this date, you MUST register at Expo. EBMI will NOT accept pre-registrations after this date! (EBMI is at the Convention Center the week of the Expo and will not receive mail or email during this time.)

1) **FASTEST: Pre-register ON-LINE (for Expo and/or seminars)**
   Go to: www.electricalboard.org. UNDER Electrical Expo 2020, click on Expo registration to register for Expo and seminars.
   NOTE: On-line seminar fees MUST BE PAID by Mastercard, American Express or Visa.

2) **Pre-register for EXPO ONLY by mail:**
   Complete Part A, B & D on registration form and mail to EBMI Office before February 21st.
   EBMI • 900 S. Highway Drive, Ste. 203 • Fenton, MO 63026
   **before February 12th to receive advanced rates.** Pre-registration ends February 21st.
   Make checks payable to EBMI or The Electrical Board of Missouri and Illinois.
   We also accept Mastercard, American Express or Visa by phone after seminar registration is sent to the EBMI office • 636-305-6434

3) **Pre-register for SEMINARS and EXPO BY MAIL:**
   Complete Parts A, B, C & D on registration form, along with checking off seminars you plan to attend.
   Mail with check to: EBMI • 900 S. Highway Drive, Ste. 203 • Fenton, MO 63026
   **before February 21st!**
   Make checks payable to EBMI or The Electrical Board of Missouri and Illinois.
   No registrations will be taken over the phone! You must go online or complete registration form and mail it to EBMI office (address shown above) prior to February 21st.

**Frequently Asked Questions to help you through pre-registration**

1) Can we complete registrations over the phone? **No registrations will be taken over the phone!** You must go online or complete registration form and mail it to EBMI office (address shown above) prior to February 21st.

2) Do I need a separate form for each individual? Yes, we must have the registration completed for each individual so all information for badges are correct for those attendees. However, feel free to make copies of this form when needed. Please make sure to complete all areas of the form as we need this for badges. Reminder: check job category & company segment as this is REQUIRED for badges. NOTE: Badges are used for entrance into show at no cost. For seminars, badges AND ticket are required and will be SCANNED to allow entrance into seminar. Seminar costs must be paid in advance of the seminars.

3) Can I make ONE check for multiple registrations? Yes, but please include each completed registration form with this one check. Please make checks payable to EBMI and mail to address in box 3 above.

4) Can I email registration form and then pay by credit card? Yes, we will accept seminar registration forms by email (annie@electricalboard.org), but we ask that you call us with your credit card information once it is emailed to our office and to confirm its receipt in office. **The deadline for registration by email is February 21st.**

5) Is this registration form the same as the “Expo ticket” I received from area distributor? Yes. If you ONLY plan to attend the Expo, you can complete a ticket OR Parts A, B & D of registration form — they are both the same.

6) If I am attending seminars, along with attending Expo, what is needed? Part A, B, C & D AND you need to check off the seminars you tentatively plan to attend at the bottom. This helps us in preparing handouts and ensuring enough seats for the seminar, as well as PDH, Jefferson County, and City of St. Louis license requirement letters.

7) When will we receive the badge and/or tickets? Badge and/or seminar ticket (showing one day, two-day pass, Code with your name on it) will be mailed to address YOU list on registration form ONE week prior to the Expo. Please list any necessary mail codes for companies or your home address if you prefer this to ensure delivery. For code conference attendees, certificates will be mailed to the address listed on this form, and mailed about six weeks after the conference.

8) If attending the Code Conference, what information is needed? Register early as we normally have over 450 attend this seminar. Code Conference is a separate fee and is **NOT** included in 1-day or 2-day pass fees. You must attend BOTH sessions and have your badge scanned EACH time there is a break. In addition, you may need to sign in at various times at the seminar to receive a certificate. NO certificates are given at the Seminar and will be mailed to address YOU list on registration form about six weeks after the Conference. If you don’t receive a certificate by end of April, please call EBMI office. BUT REMEMBER... you must attend ALL eight hours and we verify this with all of our scans!!

9) When are pdh (engineers)/lu (architects)/Jefferson County and City of St. Louis (contractors) letters given out at the Expo? We will have volunteers in back of room who will hand these out **AFTER** each seminar. You must stay for the entire seminar to receive this information. We can only issue them at each seminar (not later via phone), so it’s YOUR responsibility to make sure you receive these EACH seminar! They will not be mailed later.

10) Who do I call with any additional questions? EBMI Office: 636-305-6434! Or email annie@electricalboard.org or bill@electricalboard.org with questions. WE WILL NOT BE IN OFFICE WEEK OF MARCH 10TH, so you will not get a reply.