



# 2025 IEEE Green Technologies Conference

March 26 - 28, 2025 | Wichita, Kansas

## ALL WORKSHOPS

March 27, 2025 (Thursday)

Workshop attendees are eligible to earn professional development hours (PDH)

To view complete information about the workshops and registration visit [ieeegreentech.org/workshop](http://ieeegreentech.org/workshop)

### Workshop 1 MV Switchgear and Transformers

9:00 am - 12:30 pm

Registration: \$125

This workshop is divided into two parts

**MV Liquid Insulated Transformer Specification Do's and Don'ts** When we specify transformers for new projects, we often copy specification language from previous projects. In this discussion, we'll review common errors found in older specifications, how this impacts transformer design and drives costs. We also review transformer options for overcurrent and overvoltage protection as well as updated designs to minimize arc-flash hazard. Finally, we'll review specification items which can improve transformer life, reduce transformer costs and avoid costly errors.

**MV Padmounted Switchgear "Bootcamp"** There are many different styles of medium voltage switchgear. This discussion will focus on padmounted switchgear and will cover different insulation options, overcurrent protection, construction and connection to MV cables. We will compare the different types of padmounted switchgear available and how some switchgear styles can be advantageous to our projects. Finally, we will review new developments within padmounted switchgear designs and trends within the industry.



**Charles Chacon** is a field application engineer at Eaton. He has previously worked at Cooper Power Systems at various capabilities including as a protection engineer; and at S&C Electric Company as director of renewable energy, leading their sales team focused on solar and wind projects.

## Workshop 2

### Battery Basics and Large-Scale Applications

1:30 pm - 5:00 pm  
Registration: \$125

This workshop covers both the basics of battery storage and its applications, especially electric grid and electrical vehicles. The key topics included are:

**Lithium-ion batteries and beyond:** Lithium-ion batteries (LIB) are used in transportation, microelectronics, and electric power grid due to their high conversion efficiency, high energy density and fast response. This presentation will address the challenges and opportunities in the research on LIB and beyond LIB technologies, such as sodium-ion batteries.

**Battery applications in electric vehicles and grids:** Advancements in battery technology and the continuous decline in their prices have made them considerable for power grid applications. To be reliable and financially viable, it is critical to plan and operate them considering the state of charge, state of health, aging and grid impacts. This presentation will focus on the recent developments in battery storage systems planning and operation with the aforementioned considerations.



**Dr. Davi Soares** is an assistant professor at Wichita State University. He has previously worked for the department at Wichita State University. Freudenberg Battery Power Systems he researches assessment tools to a cell modeling engineer. support integration of EVs and batteries.



**Vernon Chang** is a principal engineer at Kyle Tidball is an engineer specialist at Textron Aviation. He has been involved in Textron Aviation. He has experience in the development of fuel cell power designing power converters, writing systems, advanced powerplants, starter- writing the regulations applicable to generators, and advanced batteries. high-voltage systems on aircraft.



## Workshop 3

### Alternative Energy Solutions and Essential Code Requirements as per the NEC

9:00am - 5:00pm  
Registration \$250

This workshop will delve into current practices and future developments in the field, with a special focus on NEC 2023 requirements as well as a view to anticipating future requirements of 2026 NEC and beyond. The key topics included are:

**Introduction to Alternative Energy Solutions:** Understanding the landscape of renewable energy sources and their integration into electrical systems

**NEC Essentials:** Deep dives into crucial sections such as Article 230 (Services), Article 705 (Interconnected Systems), and Article 690 (Photovoltaic Systems), ensuring compliance and safety in design and installation

**Looking Ahead to the 2026 NEC:** Previewing upcoming changes and challenges in codes and standards, particularly in relation to new technologies and solutions

**Practical Application:** Exploring case studies and real-world examples to illustrate effective implementation strategies and deliver value to customers.



**Thomas Domitrovich** is the director for codes and standards at Eaton Corporation's electrical group. He sits on NFPA Code Making Panels 2 and 10 for the continued development of the National Electrical Code (NFPA 70). He is also on other NFPA committees including NFPA 73, 78, 1078, 110, and 111 and chairs various committees for other electrical industry organizations.