

SPEAKERS



Lucas McIntosh

Lucas McIntosh is a senior project manager and utility consultant at Burns & McDonnell, providing technical and economic evaluations, program management and data analytics for utility projects and programs. He brings nearly 20 years of professional experience and training to clients. His team works closely with utility clients to modernize their electric distribution systems. He specializes in field inspections, condition assessments, technology evaluations, distribution planning and reliability studies. He holds a Bachelor of Science in mechanical engineering from Washington University in St. Louis, along with a Master of Science in mechanical engineering-biomaterials and an MBA from the University of Illinois at Urbana-Champaign.



Madhu Bhargava

Madhu Bhargava is a section manager and lead engineer at Burns & McDonnell, where she works with electric utilities to help achieve their resilience and reliability goals. She has more than six years of experience working with various utilities on transmission and distribution design projects. Her project work includes overhead and underground infrastructure upgrade projects, distribution automation implementations and voltage optimization initiatives. She has been involved with all aspects of projects, including staffing and resource management, planning, scoping, engineering, scheduling, estimating, rights-of-way acquisition and real estate coordination, environmental compliance and permitting, stakeholder management, development of requests for proposals, evaluation of bid proposals and quality assurance. Madhu holds a Bachelor of Engineering in electrical engineering from Visvesvaraya Technological University, India, and a Master of Science in power systems from Colorado School of Mines in Golden, Colorado.



Joey Nichols

Joey Nichols is a section manager at Burns & McDonnell with more than 13 years of experience. Joey has vast utility operations and engineering experience, including project development, project management, transmission and distribution system planning and studies, capital budgeting, data analytics, resource planning and electrical distribution engineering. Throughout his career, he has worked for large IOUs, for COOPs and as a consultant. He specializes in grid modernization, grid hardening and renewables integration planning projects. Joey earned his Bachelor of Science in mechanical engineering from Florida International University and an MBA from the Warrington College of Business at the University of Florida in Gainesville, Florida.



Ryan Lane

Ryan Lane is a grid modernization and change management consultant at Burns & McDonnell, assisting utilities with both the technical side and the people side of utility transformation. He has spent five years performing advanced distribution planning studies, including long-term distribution planning, reliability impact analyses, photovoltaic interconnection studies and business case development. The full value of these projects is unlocked with the addition of a robust, holistic strategy for assisting individuals through any changes to their job functions. Ryan has worked with major utilities across the U.S. and is dedicated to helping them forge a path forward to become a utility of the future. He holds a Bachelor of Science in electrical and computer engineering and a Bachelor of Arts in philosophy from the University of Missouri – Kansas City.



Jason De Stigter

Jason De Stigter leads the Capital Asset Planning Solutions (CAPS) group at Burns & McDonnell. He has 12 years of experience performing business case evaluation on a variety of project types, helping utility clients with difficult investment decisions. Jason has a deep financial and economic analysis background and specializes in risk assessment and management for utility clients. His risk modeling experience includes developing complex and innovative risk analysis models using industry leading risk analysis software tools employing Monte Carlo simulation, decision trees and genetic algorithms. He has performed risk and economic analysis for several multibillion-dollar capital projects. Jason earned a Bachelor of Science in engineering and a Bachelor of Arts from Dordt College.

PRESENTATIONS

Strong, Smart, Sustainable: Burns & McDonnell's Approach to the Grid of the Future

15 minutes

Lucas McIntosh

While grid modernization programs will vary among utilities and regulatory environments, there are fundamental components that should be considered for every project. Planning that focuses on making the grid strong, smart and sustainable will help achieve a modern grid that is reliable, resilient and easier to operate and maintain.

Build it Strong: Distribution Standards Updates

45 minutes with 10 minutes for Q&A

Madhu Bhargava

When designing the grid of the future, utilities should move beyond concerns of overbuilding and critically explore approaches and options that will result in a grid built to last. Utilities should focus on strengthening physical assets and sizing the grid to meet unforeseen future demand. This presentation will include several specific standards considerations, such as covered conductors in areas prone to wildfires and the survivability of concrete versus wood poles in recent hurricanes.

Build it Smart: Automatic Load Transfer

45 minutes with 10 minutes for Q&A

Joey Nichols and Ryan Lane

Once a utility has strengthened its infrastructure, it can focus on adding intelligence to its operations. In this session, we'll talk about how to add intelligence to the grid through one form of distribution automation: automatic load transfer (ALT). This presentation will cover some of the recent industry recloser improvements and how these can enhance the grid of the future. Next, we will talk about ALT schemes and an early recloser deployment approach being deployed at one utility to maximize benefit to system improvements.

Build it Sustainable: Capital Asset Planning

45 minutes with 10 minutes for Q&A

Jason De Stigter

Modern grid sustainability encompasses balancing performance, cost and risk. Understanding where specifically to invest and why that investment helps achieves your goals is a significant challenge. This presentation will talk about how to identify high risk assets in a transmission and distribution system, compare those assets and the cost to buy down the risk, evaluate various budget levels and prioritize asset replacements that provide the most benefit. The session will share recent case studies and geospatial visualization results.