

# 2019 ENGINEERING AND OPERATIONS WEBINAR SERIES

*This prepaid webinar series includes six webinars intended for engineering and operations staff. Each webinar is a 90-minute presentation, including a brief question-and-answer period. Each webinar will also be recorded.*

## **Impact of New Communication Equipment on Joint Use Clearances** **February 12**

The use of fiber optic lines in the supply space, and the desire of telecommunication to install 5G antennas in the supply space presents challenges to electric utilities. This webinar addresses the National Electrical Safety Code requirements as they relate to safe clearances for communication workers and supply utility workers. In addition, the webinar addresses methods to use for sharing space on the pole with telecommunication companies.

## **Changes in Arc Flash Calculations** **March 5**

IEEE Standard 1584 was updated in late 2018. Significant changes were made that could change the PPE used by electric utilities. These changes include elimination of the two-second rule, elimination of the exception for transformers below 125 kVA, and elimination of the 85-percent rule. Further, the calculation now includes more shape factors for arcs that are considered to be enclosed in switchgear or similar enclosures. The new calculations are more accurate, but present challenges for electric utilities. This webinar addresses the changes and the new calculation methods.

## **Underground Distribution Design** **April 16**

Designing underground distribution differs from designing overhead distribution in terms of resiliency of the system. This webinar addresses common underground design criteria such as methods for design in underground subdivisions and commercial developments, routing of cable systems, use of conduit, burial depth, and common errors in design. Single contingency outage and overcurrent protection scheme will be addressed, along with limiting factors of system components.

## **Specifying and Placing Lightning Arresters** **May 14**

Lightning can cause 20 percent of the outages on overhead

power lines. The webinar discusses the type of arresters currently on the market for distribution lines. Additionally, the presentation discusses the common basic impulse insulation level (BIL) with emphasis on a new method to prevent flashovers referred to as critical impulse flashover voltage (CFO). The CFO technique for overvoltage protection will be discussed with explanations for adequately protecting overhead lines based on ground flash density, shielding and earth resistivity.

## **Resource Planning for Distributed Energy Resources** **June 18**

Distributed energy resources (DER) are changing the landscape for distribution engineers in terms of planning and designing of their systems. This webinar addresses the positive and negative impacts to the grid from DER. In addition, how to plan for future system growth and resiliency with DER added to the system will be discussed.

## **Battery Energy Storage Systems** **September 10**

Utility-scale batteries are beginning to make an impact on distribution systems. As a result, some utilities are providing assistance to consumers who install batteries behind the meter. This webinar provides a fundamental understanding of battery energy storage systems. Further, the webinar discusses the application of battery storage both on the utility system as well as on the consumer side of the metering.

## **FOR MORE INFORMATION, CONTACT:**

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