TECHNICAL TRAINING COURSES

MAY 14 – 18, 2018
DENVER, COLORADO

Applied Electrical Distribution Theory

NEW!

Electrical Distribution Principles, Applications and Improvements

NEW!
COURSE HIGHLIGHTS

Earn PDHs
Earn 22 PDHs for the Electrical Distribution Principles, Applications and Improvements class and 6.5 PDHs for the Applied Electrical Distribution Theory class.

Save $100 when you register for both courses!

Experienced Instructors
Learn from instructors who have decades of experience in the electric utility industry and understand the specific needs of public power utilities.

Unique Teaching Environment
The instructors incorporate group discussion, check-up quizzes, practical design problems, videos, and Q&A sessions into the courses.

Real-Life Examples
All classes are tailored to public power utilities and incorporate real-life examples. Network with peers from across the country and share experiences.

Who Should Attend
These courses are presented at a practical level and are appropriate for distribution engineers, technicians/designers, construction/operations personnel, and other utility professionals who wish to increase their understanding of electric utility distribution. Some familiarity with electrical circuit theory and applications is helpful, but not necessary.

For more information, visit www.PublicPower.org/Academy and click on Spring Education Institute.
Monday, May 14
Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Course Schedule
8:30 a.m. – 4:30 p.m.

Course Overview
Learn the fundamentals of electric circuit theory and the application of theory to electric utility distribution systems. Review the relationships between voltage, current, resistance and reactance, real and reactive power in single-phase and three-phase alternating current (AC) circuits. Perform some commonly encountered AC circuit calculations that are used to determine conductor and equipment ampacity ratings, circuit voltage drop, power factor, energy losses, and customer load estimation.

Course Topics
- Direct and alternating current circuit elements (energy sources, conductors, loads, voltage, current, opposition to current flow)
- Alternating current principles in single and three-phase circuits (Kirchoff’s voltage and current laws, Ohm’s law, impedance, phase angle, voltage/current relationship, reactance and phase angle, real and reactive power)
- Circuit component ratings (voltage, current, power, thermal limits)
- Common circuit calculations (current flow, voltage drop, power, power factor, energy losses)
- Customer load estimation

Course Level
Basic: no prerequisites; no advance preparation.

Instructor
Mark Swan, P.E., Principal, MDS Engineering Consulting, LLC

What to Bring
Participants are required to bring their own scientific calculator.
Electrical Distribution Principles, Applications and Improvements

Tuesday, May 15 – Friday, May 18  
Recommended CEUs 2.2/PDHs 22/CPEs 26.4

Course Schedule
Tuesday – Thursday: 8:30 a.m. – 4:30 p.m.  
Friday: 8:30 a.m. – Noon

Course Overview
Receive a comprehensive and practical overview of electric utility distribution. Learn about electrical distribution system planning, design and operating criteria, as well as principles and practices related to customer loads and services, grounding, voltage regulation, insulation coordination, overvoltage protection, and overcurrent protection. Review overhead, underground, and network distribution characteristics, advantages and disadvantages, components, and equipment. Because the distribution system is the heart of a public power utility, you’ll also hear about business imperatives for distribution system performance and performance improvement.

Course Topics
- Overhead, underground, and network distribution systems
- Distribution system components and equipment
- Distribution system planning, design, and operating criteria
- Distribution standards and regulatory requirements
- Customer loads and services
- Grounding
- Voltage regulation
- Insulation coordination and overvoltage protection
- System faults, overloads, and overcurrent protection
- Business imperatives for distribution system performance
- Distribution performance measurement
- Distribution economics and system improvements

Course Level
Basic/Intermediate: no prerequisites; no advance preparation.

Instructor
M. Thomas Black, P.E., Management Consultant, Collaborative Learning, Inc.

What to Bring
Participants are required to bring a scientific calculator and are encouraged to bring copies of distribution planning criteria and design guides from their utility for class reference and discussion.
and no-shows who do not cancel by May 7 are responsible for the full registration fee and are not entitled to a refund.

Cancellations must be made in writing and emailed to: Registration@PublicPower.org.

Travel Arrangements
Travel arrangements and costs are the responsibility of the participants (including hotel parking, Wi-Fi, incidentals, etc.). The Association will not reimburse for changes in travel expenditures regardless of the cause.

Name Badges
Name badges can be picked up at the APPA registration desk at the hotel starting at 7:30 a.m. on the first day of each course.

Confirmations
Confirmations will be sent via e-mail.

Meals
Beverage breaks are included in the registration fee. All meals are on your own.

Questions?
Email EducationInfo@PublicPower.org or call 202/467-2919.

Continuing Education Units
The American Public Power Association is accredited by the International Association for Continuing Education and Training (IACET) and is authorized to issue the IACET CEU.
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