



The Electrical Association of Philadelphia

presents

High Voltage Systems: Equipment & Safety

Friday, September 28, 2018

The High Voltage Training (2.4 kV – 34.5 kV) is a course designed for individuals who are involved with high voltage substation, distribution, and utilization equipment in industry. Relevant **NEC** provisions will be highlighted.

- Introduction: Standards and Regulations
- AC Systems review: Inductive and capacitive reactance, impedance, power triangle, working with phasors.
- Print Reading: One Line, Three Line, & Connection Diagrams; Standard device designation numbers
- Characteristics of Three-Phase Power Systems: Types of System Grounding
- Power Transformers: Transformer Nameplate information
- Power Circuit Breakers: Circuit Breaker Nameplate Data, interrupting methods: air, oil, vacuum, SF6. Circuit switchers. Operating mechanisms, control schemes, tripping methods.
- Introduction to Medium Voltage System Protection: System requirements, protection terminology; impedance, available fault current, sensitivity, selectivity.
- Medium Voltage Fuses: Types, curve interpretation, fuse ratings. Fusing of motors, transformers, capacitor banks, and distribution lines.
- Instrument Transformers: PT's, CT's, types, connections, burdens, accuracy, safety.
- Protective Relaying: Applications, types, operating characteristics.
- Minimum Approach Distances.
- Temporary Grounding Equipment: Describe methods and components of temporary protective grounds.
- Live Line Tools - Safety Equipment Inspection
- De-Energizing Lines and Equipment for Employee Protection - Insulate and Isolate Procedures
- Grounding for the Protection of Employees
- Working on or near Exposed Energized Parts – Job Briefings

Date: Friday, September 28, 2018
CEUs: 8 for Philadelphia, New Jersey, and Delaware Contractors
8 for PA Electrical Inspectors
PDHs: 8 for PA PEs approved by IEEE
Schedule: 7:15 a.m.: Registration – 7:30 a.m. - 4:00 p.m.: Class
Cost: EAP Member Rate: \$250 / Non-Member Rate: \$295
Location: The EAP Office, Plymouth Meeting, PA
Instructor: Joseph Deane, P.E.

Required Text Bring your own copy of the **2014** NEC Book
For those who want NJ CEUs – you must bring your photo ID & NJ License

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- Questions? Contact us by phone at (610) 825-1600 or by email at electric@eap.org.
 - To pay by credit card, please register online at www.eap.org or call us at (610) 825-1600. Please note that we **cannot** accept credit card information sent by email or fax.
 - To pay by check, please complete this form and send it in with your check. Make checks payable to: The EAP
 - Payment is required at the time of registration to reserve your seat.
 - **No refunds...see our refund policy at www.eap.org.**
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