



Distribution Line Design Training

2019

3 Day Seminar

May 7-9, 2019

Menasha Utilities Office
321 Milwaukee Street
Menasha, WI 54952

Menasha, WI

Power System Engineering, Inc. (PSE) is offering a three-day seminar on Distribution Line Design for utility staff responsible for designing and constructing distribution overhead line, underground line, and new services. The course has a mix of lectured material, group exercises, and participant discussion that revolves around real life design situations.

Why Attend?

- Acquaints new staff or existing staff with changes in responsibility with distribution line and new service design principles.
- Provides a refresher course for staff who are currently responsible for distribution line and new service design.
- Instructed by engineers who currently design distribution facilities and are up-to-date on design technologies and challenges that designers face.
- Comprehensive yet compact program gives participants enough information to immediately apply at their utility.

– See next page for additional course information



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Introduction to the Power Industry

- The forms of energy and energy consumption in the US
- Types of utilities
- Basics of generation, transmission, and distribution
- The role of the line designer
- Introduction to the NESC
- Overview of property rights

Power System Concepts and Calculations

- Voltage, current, single-phase, and three-phase power
- Demand and energy
- Power factor, load factor, coincident factor, and loss factor

Electric Power Components

- Overhead and underground systems
- Major equipment and functions

Single & Three Phase Power Overhead Design

- Conductor types, characteristics, sag/tension, and selection
- Pole types, loading, setting depth, and selection
- Tangent/angle/deadend structure configurations, components, loading and selection

- Guying and anchoring configurations and selections
- Equipment loading on structures
- NESC overview for overhead design

Underground Design

- Cable types and selection
- Elbows, terminators, splices, junction modules, etc. (200A & 600A)
- Switchgear, fusing cabinets, fault interrupters, etc.
- Installation configurations (plow, trench, duct, conduit systems)
- Conduit sizing and pulling tensions
- NESC overview for underground design

New Service Design

- Customer classes, estimating loads, and economics
- Transformer types, configuration, and sizing
- Secondary conductor sizing and selection
- Metering types and selection

Course Instructors

Erik S. Sonju, P.E.

President

Erik is a registered professional engineer with over 20 years of experience working as both a system engineer for a Midwest utility and as an engineering consultant to electric utilities throughout the United States and Canada. In addition to power delivery planning and analysis, he has actively designed or led the design of over 700 miles of transmission and distribution line for a variety of electric utilities. Erik has also instructed line design courses for electric cooperatives and investor owned utilities throughout the Midwest.



Mike Mezera, P.E.

Manager of Line Design

Mike is a registered professional engineer with over 10 years of experience designing and overseeing the design of transmission and distribution lines throughout the United States. Mike's engineering activities related to line design include: selection of land corridors, layout of structures within corridors, selection and loading analysis of structures, conductor sag and tension analysis, and review of NESC and local standards.



Questions about the course? Please contact:

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