ike GPS + Marne and Associates, Inc.

1 Day Course

Applying the NESC®: Transmission Voltage Focus

(Presented In-House at your Utility/Association or Presented as a Live Web Seminar)

Highlights

- Provides an overview of the NESC® Rules with a focus on Transmission Line Voltage Levels
- Designed for:
  - Transmission Line Engineers
  - Substation Engineers
  - Transmission Lineworkers
  - Substation Lineworkers
  - Safety Personnel
  - Transmission Line and Substation Inspectors
- Rich in graphics and practical applications

Conforms to the 2023 National Electrical Safety Code® (NESC®)

About the Seminar

Applying the NESC: Transmission Voltage Focus is a 1-day class focusing on the transmission voltage rules in the National Electrical Safety Code (NESC). This class provides a general overview of each part of the NESC. The NESC rules related to transmission voltage levels will be stressed by focusing on practical NESC examples and applications. During this 1-day class you will learn:

- Scope and Purpose of the Code
- Transmission Voltage Levels in:
  - Substations
  - Overhead Lines
  - Underground Lines

Course Objectives

Upon successful completion of this course the learner will be able to:

1. Understand the organization, scope, purpose, and general application of the National Electrical Safety Code.
2. Apply the Code to transmission voltages found on overhead and underground lines and in substations.
3. Recognize how the Code is integrated into design and construction standards and operating practices.
4. Work example problems requiring transmission voltage adders to standard Code values.
5. Design and build facilities that comply with Code requirements.
6. Understand the actions needed to work safely.

Who Should Attend

- Transmission Line Engineers
- Substation Engineers
- Transmission Lineworkers
- Substation Lineworkers
- Safety Personnel
- Transmission Line and Substation Inspectors

(Prior working knowledge of the NESC is not required)

Continuing Education Units

This course provides 0.6 Continuing Education Units (CEUs) or 6 Professional Development Hours (PDHs). This class has not been registered with any State Licensing or Education Board.

Class Format/ Learning Methods

- Presented in person or via the web
- Lecture format
- Real time Q & A
- Presentation slides rich in graphics and practical applications
- Ample time for questions and class discussion

About the Instructor

David J. Marne, P.E., is a registered professional electrical engineer. Mr. Marne is the author of *McGraw-Hill's National Electrical Safety Code® (NESC®) 2023 Handbook* and is a nationally recognized speaker on the NESC.

He serves on NESC Subcommittee 4 Overhead Lines Clearances, Subcommittee 7 Underground Lines, and the Interpretations Subcommittee. He is company president and senior electrical engineer for Marne and Associates, Inc. in Bozeman, MT where he specializes in National Electrical Safety Code (NESC) training, OSHA training for power and communication workers, and expert witness services related to the NESC, the OSHA Standards for Power and Communication workers, and California's General Orders GO95, GO128, and GO165.

Mr. Marne has over 35 years of experience in the utility industry engineering and managing transmission and distribution line projects, substation projects, electrical system planning studies, joint use (power and communication) projects, and providing training and expert witness services.

David J. Marne, P.E.

Class Schedule

Day 1

8:00 a.m. Registration begins

8:30 a.m. Welcome

8:45 a.m. Transmission Voltage Focus: General Sessions

- Introduction - Section 01
- Definitions - Section 02
- References - Section 03
- Grounding - Section 09

10:15 a.m. Break

10:30 a.m. Transmission Voltage Focus: Part 1 - Electric Supply Stations

- Fencing, Signing, and General Substation Requirements
- Transmission Voltage Setback from Fence
- Transmission Voltage Clearance above Substation Grade

12 Noon Lunch

1:00 p.m. Transmission Voltage Focus: Part 2 - Overhead Lines

- Clearance of a Transmission Line above Ground (Rule 232)
- Clearance between a Transmission Line Crossing over a Distribution Line (Rule 233)
- Clearance from a Transmission Line to a Building (Rule 234)

Day 1 (Continued)

2:30 p.m. Break

2:45 p.m. Transmission Voltage Focus: Part 2 - Overhead Lines (cont.)

- Clearance of a Transmission Line to a Distribution Underbuild (Rule 235)
- Clearance of a Transmission Line to a Communications Circuit and a Communications Antenna (Rule 235)
- Strength and Overload Factors for Transmission Line Design (Sections 24-27)

Transmission Voltage Focus: Part 3 - Underground Lines

- Burial Depth of Transmission Cables

Transmission Voltage Focus: Part 4 - Work Rules

- Approach Distances to Transmission Conductors
- Arc Flash Calculations and Arc Rated Clothing

4:15 p.m. Adjourn

OPTION:

This class can be presented as four 90-minute live web seminars.

Benefits of ikeGPS Training

- Save on travel time and out-of office expenses.
- Entire departments can be trained together.
- The presentation can be designed to meet the needs of your organization.
- Training schedule can be modified to meet your needs.

Enrollment/Pricing/Cancellation

- Please contact us for a quote to have this class presented as a live webinar or presented in person at your utility or association.
- Our live Webinar is typically economical on a per person basis when there are approximately 10 or more individuals to train.
- Our In-House presentation is typically economical on a per person basis when there are 15 or more individuals to train. For in-house training, the utility or association provides the conference room and any desired meals and beverages for the attendees.
- Class cancellations can be made by contacting ikeGPS at any time prior to the presentation date. No payment is due until the class is completed.

Contact

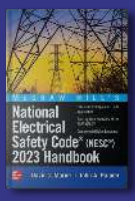
To schedule classes or for inquiries please reach out to us at:
training@ikegps.com

Class Materials

- Attendees will receive a pdf copy of the class presentation slides. The presentation materials are copyrighted by ikeGPS with permissions from McGraw Hill LLC. Class materials are reserved for class attendees only and may not be duplicated.
- Attendees are encouraged (but not required) to bring a copy of McGraw Hill's NESC Handbook.
- Attendees are required to have a copy of the 2023 NESC Codebook for class exercises.
- These books are available for purchase on Amazon.

2023 NESC Codebook

Purchase on Amazon



McGraw Hill's NESC 2023 Handbook

Purchase on Amazon

The PoleOS™ Company

We help our customers rise by providing a comprehensive suite of products that enable dramatic productivity benefits when working with utility poles.

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