PROFESSIONAL DEVELOPMENT SEMINAR SERIES

GPS-140 NATIONAL ELECTRICAL CODE® (NEC®) COURSE DESCRIPTION

Class Length: 2 Hours	**CEUs:** 0.2	**PDHs:** 2.0

Course Purpose

This seminar presents reasons for standby power generation from the *National Electrical Code (NEC)* perspective. The initial versions of the *NEC* were not written with generators in mind. Generators were added in various sections of the code over the years. This seminar attempts to examine those various sections and compile the generator relevant information. The information is presented in a question and answer format. Seventeen questions have been identified as being the most commonly asked by the engineering community. We then reference the *NEC* to answer those questions. Completion of this module entitles the participant to 2 Professional Development Hours (PDH) accredited by the Milwaukee School of Engineering. If the student attends 5 Generac Power Systems Professional Development Seminar Series modules and completes the final assessments, the student will earn 1 Continuing Education Unit (CEU) and/or 10 PDH.

Course Objectives

Upon completion of this seminar, participants will become familiar with the *National Electrical Code (NEC)* relative to the installation and operation of standby generators. Specifically they will be able to:

- Explain the relationship between stated *NEC* codes and the Authority Having Jurisdiction (AHJ)
- Describe the difference between feeder and service cabling as defined by the *NEC*
- List specific generator requirements including sizing, start-up times, load transients, alarms, instrumentation and signage
- Describe specific requirements for disconnects and breakers
- Explain accessibility requirements
- Describe cabling requirements including separation of circuits
- Identify the requirements for overcurrent coordination
- Illustrate grounding and bonding requirements
- Describe requirements for ground fault indication (GFI) and ground fault protection (GFP)
- Describe transfer switch requirements for emergency, legally required standby and healthcare installations
- Summarize generator requirements for fire pump applications including capacity, breaker sizing, overload protection and automatic transfer switches

Topical Outline

- Key Code References
- Generator Requirements
- Disconnect and Generator Breaker
- Cabling and Coordination
- Grounding and Ground Fault
- Transfer Switch Requirements
- Fire Pumps

Who Should Attend

Practicing Design, Sales and Consulting Engineers involved in supplying standby power to Commercial, Industrial, Municipal and Healthcare facilities.

Prerequisites

None, however module sequence is recommended.

Difficulty Level

Intermediate

Be sure to sign up for each of the Professional Development Seminars:

GPS-100 Generator Sizing
GPS-110 Generator Switching
GPS-120 Paralleling Concepts & Implementation
GPS-130 Understanding Generator Reliability
GPS-140 *National Electrical Code (NEC)*
GPS-150 Generator UL Listing & NFPA Standards
GPS-160 Generator Provisioning & Installation
GPS-170 Engines & Emissions
GPS-180 Alternators & Generator Controls
GPS-190 Specifications for Engine Generator Sets & Transfer Switches

For more information or to register for a seminar, contact your local Generac dealer below:

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