

Agenda

Presented by Ron Shapiro

Overview of Major Changes in the New York State Electrical Code

- Article 425: Fixed Industrial Process Heating
- Article 691: Large-Scale PV Electric Power Production
- Article 706: Energy Storage Systems
- Article 710: Stand-Alone Systems
- Article 712: Direct-Current Microgrids
- New York amendments

Chapter 1: National Electrical Code

- Requirements for electrical installations, including clearances and free space requirements about equipment
- New** reconditioned equipment, identification and traceability
- New** limited access working space requirement
- New** short-circuit current documentation

Chapter 2: Wiring and Protection

- Grounded conductors
- Branch circuit, feeder and services calculations
- GFCI receptacle outlet requirements
- Transformer protection
- Voltage drop calculations
- Service requirements
- New** GFCI protection for non-dwelling units

Grounding and Bonding

- Grounding of service entrances
- Grounding of separately-derived systems
- Grounding electrodes
- Sizing of grounding electrode and grounding conductor
- Bonding of services

Chapter 3: Wiring Methods and Materials

- Wiring methods—underground installation requirements
- Conductors for general wiring
- Conductor ampacity correction and adjustments
- Number of conductors in a raceway
- Pull and junction box fill calculation
- New** single-phase dwelling services and feeders

Chapter 4: Equipment for General Use

- Flexible cords and cables
- Switchboards and panel boards
- Luminaires, appliances, transformers and motors
- Receptacle requirements
- Short circuit rating

Chapter 5: Special Occupancies

- Hazardous locations
- Health care facility requirements
- Commercial garages
- Recreational vehicle parks

Chapter 6: Special Equipment

- Signs, outline lighting, elevators
- Data center requirements
- Solar photovoltaic systems
- Hybrid vehicle plug in requirements
- Pools and spas
- Small wind turbine systems

Chapter 7: Special Conditions

- Emergency systems
- Fire alarm circuits
- Class 1, 2, and 3 power-limited circuits

Chapter 8: Communications Circuits

- Premises-powered broadband communication systems
- Network-powered broadband communication systems

Chapter 9: Tables

New York State Electrical Code

Live, Interactive Webinar - Monday, August 30, 2021

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Learning Objectives

You'll be able to:

Learn about the major changes in the New York State Electrical Code.

Comply with requirements for electrical installations.

Meet requirements for wiring protection, methods and materials.

Explore provisions on grounding and bonding.

Review requirements for general and special equipment, special occupancies, special conditions, and communication circuits.



HalfMoon Education Online Learning

New York State Electrical Code

Live, Interactive Webinar - Monday, August 30, 2021



Understand the major changes in the New York State Electrical Code

Examine requirements for electrical installations

Discuss wiring protection, methods and materials

Comply with grounding and bonding provisions

Understand requirements for general and special equipment, special occupancies, special conditions and communication circuits

Continuing Education Credits

Professional Engineers
7.0 PDHs

Architects
7.0 HSW CE Hours

AIA
7.0 LU|HSW

International Code Council
.7 CEUs (Electrical)



Faculty

Ron Shapiro *DLB Associates*
Mr. Shapiro is a professional engineer licensed in New York State and has been practicing in the field of construction related electrical engineering for almost 30 years. Mr. Shapiro has a diverse background in the design and development of reliable electrical distribution, emergency power, lighting, and fire protection systems for commercial, educational, industrial and health care data center facilities. He has been responsible for conceptual and actual critical electrical system design, coordination of internal and external trades, client communication and construction administration. He has also worked on power distribution design (switchgear, switchboards, transformer, standby power generation, UPS, and associated protection schemes), fire alarm (air aspiration and addressable types) systems, raised floor grounding, security access control and CCTV, lighting design and associated manual or automatic controls, short circuit, coordination and arc flash studies, voltage drop, lightning protection, and miscellaneous power systems. His experience also includes providing analysis/evaluation of existing and new electrical distribution systems and ancillary electrical infrastructure. Mr. Shapiro plays a critical role as technical code/theory adviser and internal educator for DLB Associates. He has coauthored “NEC 645 might not be for You” and “A Comparison Of Arc-Flash Incident Energy Reduction Techniques Using Low-Voltage Power Circuit Breakers.” Mr. Shapiro has lectured regarding varied data center related electrical topics such as: “Fire Alarm Monitoring and Control Systems” for the Society of Fire Protection Engineers and the *Data Center Journal* “Are We Ready for DC in the Data Center”, “Arc Flash in the Data Center Environment” and “Industry Trends in Electrical Systems.”

Webinar Information

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Morning Session 8:30 am - 12:30 pm EDT	Afternoon Session 1:30 - 5:00 pm EDT

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- Wed, July 21, 2021 | 11:00 am - 2:45 pm CDT
- Thurs, July 22, 2021 | 11:00 am - 2:45 pm CDT

Technical Writing Workshop for Design Professionals
- Fri, July 23, 2021 | 8:30 am - 5:00 pm CDT

Site Design
- Mon, July 26, 2021 | 8:30 am - 5:00 pm CDT

Structural Forensic Engineering
- Tues, July 27, 2021 | 11:00 am - 2:30 pm CDT
- Wed, July 28, 2021 | 11:00 am - 2:30 pm CDT

Architectural Application for Means of Egress in 2018 IBC
- Wed, July 28, 2021 | 9:00 am - 4:30 pm CDT

Project Management for Engineers
- Wed, July 28, 2021 | 8:30 am - 4:30 pm CDT

2018 IBC Mixed Occupancies, Allowable Area, and Type of Construction
- Thurs, July 29, 2021 | 8:30 am - 5:00 pm CDT

Deep Energy Retrofits
- Fri, Aug 6, 2021 | 8:30 am - 3:30 pm CDT

Shallow Foundation Design, Construction, and Repair
- Tues, Aug 10, 2021 | 8:30 am - 5:00 pm CDT

Small Wind Energy Systems
- Wed, Aug 11, 2021 | 8:30 am - 4:30 pm CDT

Participating in the WELL Building Certification Process
- Wed, Aug 18, 2021 | 12:00 - 4:00 pm CDT
- Thurs, Aug 19, 2021 | 12:00 - 4:00 pm CDT

2021 International Wildland-Urban Interface Code
- Thurs, Aug 19, 2021 | 8:30 am - 4:30 pm CDT

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HalfMoon Education is deemed a New York-approved continuing education provider for engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)).

The American Institute of Architects Continuing Education System has approved this course for 7.0 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Electrical (Preferred Provider No. 1232).

This event offers a non-credit continuing education opportunity to construction contractors. It has not been approved by any state with a continuing education requirement for contractors.

Attendance will be monitored, a quiz will follow the instruction, and completion certificates will be available after the webinar for individuals who completed the entire event and passed the quiz (multiple attempts allowed).

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