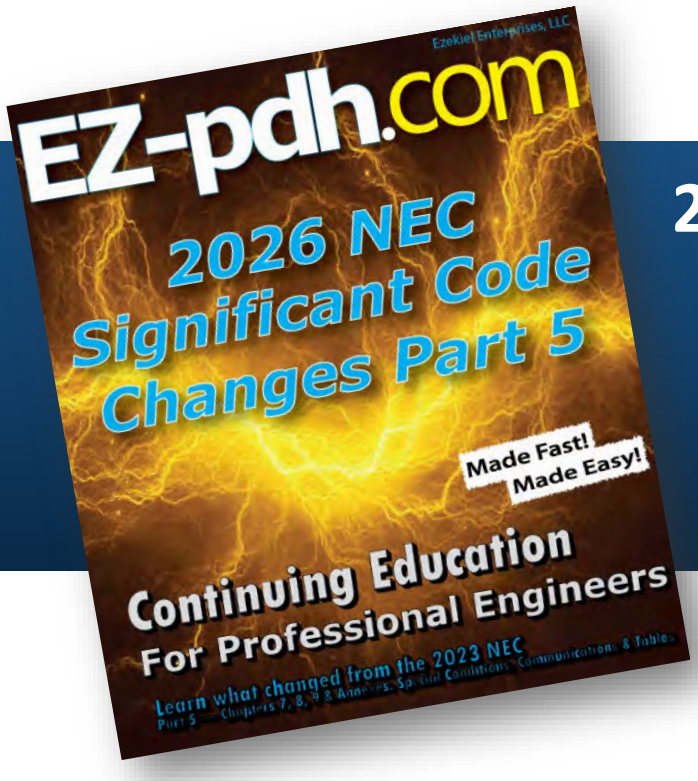

2026 NEC Significant Code Changes Part 5

Four (4) Continuing Education Hours
Course #EE2605

Approved Continuing Education for Licensed Professional Engineers

EZ-pdh.com
Ezekiel Enterprises, LLC
301 Mission Dr. Unit 571
New Smyrna Beach, FL 32170
800-433-1487
support@ez-pdh.com

Course Description:

This NEC 2026 update course (Part 5, 4 hours) covers Chapters 7, 8, and 9 plus Informative Annexes. Chapter 7 updates include emergency and standby system ESS recognition, bidirectional EV as optional standby, interconnected power production source updates, energy storage system provisions, new Article 710 for microgrids, and a completely restructured limited-energy article framework replacing Articles 770, 805, and 840 with new consolidated Articles 720–772. Chapter 8 updates address communications systems including Articles 800, 810, 820, and 830, now subject to Chapters 1–7 following the elimination of Chapter 8 independence. Chapter 9 table revisions and Informative Annex updates round out the course.

Objectives:

The primary objective of this course is to enable the student to understand the significant changes including additions, deletions, and modifications in the 2026 Edition of NFPA 70: National Electrical Code (NEC) from the 2023 Edition. Upon completion, the student will be able to:

- Identify the Chapter 7 emergency and standby system updates in Articles 700–702 including ESS as alternate power sources and new transfer equipment provisions
- Describe the Article 705 interconnected power production source updates including the new microgrid framework and bidirectional EV provisions
- Explain the Article 706 energy storage system changes including new reconditioned ESS prohibition and updated battery system requirements
- Identify the new Article 710 provisions for microgrids and the new Microgrid Interconnect Device (MID) requirements
- Describe the restructured limited-energy system articles 720–772 that replaced deleted Articles 770, 805, and 840
- Apply the updated Chapter 8 communications system requirements including Articles 800, 810, 820, and 830
- Explain the Chapter 9 table updates and Informative Annex changes relevant to electrical installations

Grading:

Students must achieve a minimum score of 70% on the online quiz to pass this course. The quiz may be taken as many times as necessary to successfully pass and complete the course. A copy of the quiz questions are attached to the last pages of this document.

Table of Contents

2026 NEC Significant Code Changes Part 5

Introduction

Chapters 7, 8, and 9 of the NEC address specific conditions and systems, communications systems, and calculation tables. The 2026 edition made some of its most significant structural changes in Chapter 7 — completely restructuring the limited-energy article framework by deleting Articles 770, 805, and 840 and replacing them with a new unified system of Articles 720–772. Chapter 7 also added new Article 710 for microgrids, updated energy storage system requirements, and significantly expanded interconnected power production provisions to address bidirectional EV charging, V2G systems, and integrated microgrid control.

Chapter 7, 8, 9 & Annexes Overview

Part 5 of this series progresses through Chapters 7, 8, and 9 and the Informative Annexes, presenting the most significant changes to Articles 700 through 830. The chapters cover emergency and standby systems, optional standby bidirectional EV provisions, interconnected power production sources, energy storage systems, new Article 710 for microgrids, the completely restructured limited-energy article framework replacing Articles 770, 805, and 840 with new Articles 720–772, communications system updates, and Chapter 9 table and Annex revisions. Changes will be underlined for easy recognition and a short synopsis of the reason for each change is presented.

Chapter 7 — Specific Conditions and Systems

Article 700 · Article 701 · Article 702 · Article 705 · Article 706 · Article 708 · Article 710 · Articles 720–772

Article 700 — Emergency Systems

Article 700 covers emergency systems — those legally required and essential for safety to human life. The 2026 edition updated the sources of power, transfer equipment, and wiring requirements to reflect modern power system technology including energy storage.

Revision – 700.12

Sources of Power — Energy Storage Systems Recognized for Emergency Use

> ***Change at a Glance:*** *Section 700.12 updated to formally recognize Energy Storage Systems as a valid source of power for emergency systems.*

❖ **What Changed:** Section 700.12 was updated to formally recognize Energy Storage Systems (ESS) as a valid alternate source of power for emergency systems. Previously, Article 700 focused almost exclusively on generators as the alternate power source. The 2026 revision acknowledges that modern battery ESS — particularly large-scale lithium-ion and flow battery systems — can provide the reliable alternate power required for emergency systems subject to compliance with Article 706 and appropriate system design. The ESS must be capable of supplying emergency loads for a minimum duration defined by the applicable building code, and must be monitored for state of charge, temperature, and system health.

❖ **Its Effect:** Battery ESS can respond in milliseconds — far faster than the 10-second maximum permitted for generator-based emergency systems. This faster response provides better protection for emergency lighting and life-safety equipment. For facilities where generator installation is impractical — urban high-

rise buildings, underground facilities, or buildings with strict noise or emission ordinances — ESS may provide the only practical means of meeting emergency system requirements without a fuel-burning generator.

Revision – 700.12(A)

Storage Batteries for Emergency Systems — Maintenance and Monitoring Requirements Updated

> ***Change at a Glance:*** *Section 700.12(A) updated with enhanced monitoring and maintenance requirements for battery-based emergency systems.*

❖ **What Changed:** Section 700.12(A) was updated with enhanced requirements for storage battery systems used as emergency power sources. The updated section requires continuous monitoring of battery state of charge, cell voltage, and system temperature with automatic notification to building management systems when the battery capacity falls below a defined threshold. Testing requirements were also updated — battery-based emergency systems must be tested at the design load for the required duration at intervals not exceeding those specified by the applicable standard for the battery chemistry and application.

❖ **Its Effect:** Battery maintenance failures are a leading cause of battery-based emergency system failures. Batteries that appear functional on visual inspection may have lost significant capacity due to cell degradation, sulfation (lead-acid), or electrolyte loss. The enhanced monitoring requirements ensure that battery capacity degradation is detected and corrected before the emergency system is called upon.

Revision – 700.12(F)

Fuel Cell Systems — Formally Recognized as Emergency Power Source

> ***Change at a Glance:*** *Section 700.12(F) updated to formally recognize fuel cell systems as a valid emergency power source.*

❖ **What Changed:** Section 700.12(F) was updated to formally recognize fuel cell systems as a valid source of power for emergency systems. Fuel cells that operate on stored hydrogen, natural gas, propane, or other fuels can provide continuous

power output without the startup delay of engine generators, while offering lower emissions and quieter operation. The fuel cell system must be listed for the application, must be capable of supplying the required emergency load for the duration required by the applicable building code, and must have automatic transfer capability.

❖ **Its Effect:** Fuel cell systems are increasingly deployed in buildings where conventional generator installation is restricted by zoning, noise ordinances, or emission regulations. Hydrogen fuel cell systems, in particular, are seeing growing deployment in data centers and critical facilities where their fast response time, clean operation, and high reliability provide advantages over conventional generator sets.

Revision – 700.25

Wiring — Emergency System Circuits Must Be Identified

> ***Change at a Glance:*** *Section 700.25 updated with enhanced identification requirements for emergency system wiring and equipment.*

❖ **What Changed:** Section 700.25 was updated to require that all boxes and enclosures containing emergency system wiring be permanently marked to indicate that they contain emergency system conductors. The marking must be durable and must clearly distinguish emergency system wiring from normal and legally required standby system wiring. Junction boxes, pull boxes, and outlet boxes containing emergency system conductors must be identified with a distinctive marking visible after installation. This requirement applies throughout the wiring system from the emergency source to the emergency loads.

❖ **Its Effect:** The identification of emergency system wiring is essential for safe maintenance and modification of building electrical systems. Workers who inadvertently interrupt emergency system circuits while working on normal system wiring can disable life-safety systems including emergency lighting, fire alarm power, and elevator recall power. Clear, persistent identification of emergency system wiring reduces this risk throughout the life of the building.

Revision – 700.32

Transfer Equipment — Automatic Transfer Switch Requirements Updated

> ***Change at a Glance:*** *Section 700.32 updated with revised automatic transfer switch requirements addressing modern solid-state and static transfer switches.*

❖ **What Changed:** Section 700.32 was updated to address modern automatic transfer switch (ATS) technologies including solid-state static transfer switches and microprocessor-based intelligent transfer systems. The updated section establishes performance requirements for transfer time, re-transfer delay, and load management during transfer that apply to all ATS types regardless of their switching technology. Requirements for bypass-isolation capability were clarified to ensure that ATS units serving critical loads can be maintained without de-energizing the load. Additionally, the section coordinates with the new ESS provisions to address transfer switch configurations in systems that may have both a utility source and an on-site ESS or generator as alternate sources.

❖ **Its Effect:** Modern solid-state and static transfer switches can achieve sub-cycle transfer times that protect sensitive electronic equipment from even brief power interruptions. Traditional electromechanical ATS units have transfer times of 4 to 15 seconds that are adequate for motor loads and lighting but may cause resets in computers and digital control systems. The updated section ensures that the NEC requirements accommodate the full range of ATS technologies appropriate to the load being served.

Article 701 — Legally Required Standby Systems

Article 701 covers legally required standby systems — those required by governmental bodies such as zoning, health departments, or building codes to remain operational during power outages, but not immediately life-critical like Article 700 emergency systems. The 2026 edition formally recognized Energy Storage Systems as a valid alternate power source and clarified the scope of legally required standby systems.

Revision – 701.12

Sources of Power — ESS Recognized for Legally Required Standby

> ***Change at a Glance:*** *Section 701.12 updated parallel to 700.12 to recognize ESS as a valid power source for legally required standby systems.*

❖ **What Changed:** Section 701.12 was updated parallel to the changes in Section 700.12, formally recognizing Energy Storage Systems (ESS) as a valid source of power for legally required standby systems. Legally required standby systems — which include heating, ventilation, refrigeration, and communications systems that are required by law to remain operational during power outages — can now use listed ESS as an alternate power source subject to the same design and monitoring requirements applicable to ESS in emergency systems.

❖ **Its Effect:** The expansion of ESS recognition to legally required standby systems reflects the same technology evolution that drove the Article 700 changes. Many facilities subject to legally required standby provisions — food storage facilities, hazardous material handling operations, and elevator systems in tall buildings — can benefit from the fast response and silent operation of ESS compared to conventional generators.

Revision – 701.4

Classification of Legally Required Standby Systems — Scope Clarified

> ***Change at a Glance:*** *Section 701.4 updated to provide clearer guidance on which systems qualify as legally required standby.*

❖ **What Changed:** Section 701.4 was updated to provide clearer guidance on which systems qualify as legally required standby systems versus emergency systems (Article 700) or optional standby systems (Article 702). The revision provides specific examples of systems that typically fall under Article 701 — including heating and refrigeration systems, communications systems, ventilation and smoke removal systems, sewage disposal systems, lighting and industrial processes — and clarifies that the legal requirement must come from governmental bodies such as zoning, health departments, or building codes rather than from private agreements or contracts.

❖ **Its Effect:** The distinction between Article 700 (life-safety critical) and Article 701 (legally required but not immediately life-critical) determines the stringency of the wiring methods, circuit separation, and testing requirements that apply. The updated scope guidance helps designers and inspectors correctly classify standby systems and apply the appropriate article requirements.

Article 702 — Optional Standby Systems

Article 702 covers optional standby systems — those installed at the owner's discretion to protect property or processes against loss of normal power, but not legally required. The 2026 edition made a significant addition by formally recognizing bidirectional electric vehicle power transfer systems (V2H and V2G) as valid optional standby power sources.

Revision – 702.4

Optional Standby Sources — New Section 702.4(A)(3) for Bidirectional EV

> ***Change at a Glance:*** *New Section 702.4(A)(3) formally recognizes bidirectional EV charging systems as optional standby power sources.*

Systems

❖ **What Changed:** New subdivision 702.4(A)(3) formally recognizes bidirectional electric vehicle power transfer systems as optional standby power sources. This covers V2H (vehicle-to-home) and V2G (vehicle-to-grid) systems where power is exported from the EV battery to supply building loads during utility outages or as an optional standby source. The bidirectional EVSE must meet the requirements of Article 625 and the export system must be properly interconnected with the building wiring system through appropriate transfer equipment. The EV battery capacity and the anticipated load duration must be evaluated to ensure the system can serve the optional standby loads for the required duration.

❖ **Its Effect:** The recognition of bidirectional EV charging as an optional standby power source reflects the growing prevalence of this technology in the residential and light commercial market. A modern long-range EV battery contains 60 to 100 kWh or more of stored energy — sufficient to power a typical residence for one to several days during an outage. The formal recognition of V2H systems in Article 702 provides a code basis for the installation and inspection of these systems, which are already being marketed and deployed by multiple EV manufacturers.

> 702.4(A)(3) Bidirectional Electric Vehicle Power Transfer Systems. Bidirectional electric vehicle power transfer systems shall be permitted as an optional standby power source where installed in accordance with Article 625 and this article.

Revision – 702.12

Optional Standby System Equipment — Portable Generator Connection Requirements

> ***Change at a Glance:*** *Section 702.12 updated with clearer requirements for portable generator connections to optional standby systems.*

❖ **What Changed:** Section 702.12 was updated to provide clearer requirements for portable generator connections used as optional standby power sources. The revision addresses the specific connection requirements for portable generators including: interlock requirements to prevent simultaneous connection of the portable generator and utility source; inlet requirements for exterior connection points; cord and plug assembly requirements; and the prohibition on using suicide cords (male-to-male extension cords) regardless of whether the generator is grounded or ungrounded.

❖ **Its Effect:** Portable generator connections to dwelling unit wiring systems have been the source of numerous electrocution deaths and utility worker fatalities from backfed voltage on utility lines. The updated Section 702.12 ensures that portable generator connections to optional standby systems are made through properly listed connection equipment with appropriate interlocking to prevent backfeed.

Article 705 — Interconnected Electric Power Production Sources

Article 705 covers the requirements for interconnecting electric power production sources — solar PV, generators, fuel cells, energy storage systems, and other distributed energy resources — with premises wiring. The 2026 edition made extensive updates to Article 705 to address bidirectional EV charging, microgrid integration, and the new Power Control System framework.

Revision – 705.1

Scope — Expanded to Include Bidirectional EV Systems and Microgrids

> ***Change at a Glance:*** *Section 705.1 scope expanded to explicitly include bidirectional EV charging systems and microgrid interconnection.*

❖ **What Changed:** Section 705.1 was revised to explicitly include bidirectional electric vehicle power transfer systems operating in export mode (V2H and V2G) and microgrid systems within the scope of Article 705. Previously, the scope covered solar PV, generators, fuel cells, and energy storage but did not specifically address EV power export or the interconnection requirements for microgrid systems that combine multiple sources and storage. The expanded scope aligns with the new Article 100 definitions for Interactive Mode, Island Mode, Microgrid Control System (MCS), and Microgrid Interconnect Device (MID).

❖ **Its Effect:** The expansion of Article 705 scope to include bidirectional EV and microgrid systems reflects the evolution of distributed energy resources from simple parallel generation sources to complex interactive systems that can import and export power, transition between grid-connected and island operating modes, and coordinate multiple sources and storage assets simultaneously. The 2026 NEC provides a unified framework for all of these interconnected power production source types.

Revision – 705.12

Point of Connection — Load-Side Connection and 120% Rule Updated

> ***Change at a Glance:*** *Section 705.12 updated with revised load-side connection rules and the 120% bus rating calculation method.*

❖ **What Changed:** Section 705.12 on point of connection for interconnected power production sources was updated. The load-side connection provisions were reorganized and clarified for both panelboard bus connections and feeder connections. The 120% rule — which permits the sum of the OCPD supplying the panelboard and the interconnection OCPD to exceed the panelboard bus rating by 20% when the interconnection breaker is at the opposite end of the bus from the supply — was retained with clarified application guidance. New provisions address the connection of bidirectional EVSE systems operating in export mode at load-side connection points.

❖ **Its Effect:** The 120% rule is fundamental to the installation of solar PV and other distributed generation at residential and light commercial panelboards. The clarified application guidance reduces the inconsistency in how this rule has been applied across different jurisdictions and panel configurations. The extension to bidirectional EVSE export mode ensures that V2H systems are subject to the same interconnection rules as other power production sources at load-side connection points.

Revision – 705.28

Circuit Sizing and Current — Maximum Circuit Current Calculation Updated

> ***Change at a Glance:*** *Section 705.28 updated to address maximum circuit current calculation for systems with both import and export capability.*

❖ **What Changed:** Section 705.28 was updated to address the maximum circuit current calculation for bidirectional systems that can both import power from the utility and export power from on-site sources. The revised section clarifies that conductors must be sized for the maximum current that can flow in either direction — the maximum import current from the utility or the maximum export current

from on-site sources, whichever is greater. For bidirectional EVSE operating in V2H mode, the export current must be included in the circuit sizing calculation.

❖ **Its Effect:** Conductor sizing for bidirectional power systems requires consideration of current flow in both directions. A conductor that is adequately sized for import current from the utility may be undersized for the export current from a large bidirectional EV charger operating at full export capacity. The updated calculation methodology ensures that conductors in bidirectional systems are properly sized for the maximum current in either direction of flow.

Revision – 705.40

Loss of Primary Source — Anti-Islanding and Island Mode Provisions Updated

> ***Change at a Glance:*** *Section 705.40 updated with revised anti-islanding requirements and new provisions for intentional island mode operation.*

❖ **What Changed:** Section 705.40 was updated to distinguish between unintentional islanding (which must be prevented) and intentional island mode operation (which is now explicitly permitted under specific conditions). Anti-islanding protection — which disconnects interconnected power production sources when the utility supply is lost — remains required to prevent backfeed onto utility lines during outages. However, the 2026 revision adds provisions for systems with a listed Microgrid Interconnect Device (MID) that can safely transition to intentional island mode operation, supplying building loads from on-site sources without backfeed onto utility lines.

❖ **Its Effect:** The distinction between unintentional islanding (dangerous, must be prevented) and intentional island mode operation (safe and beneficial when properly controlled) is fundamental to microgrid design. A solar+storage+EV system that can island intentionally during a utility outage provides resilience for the building owner. The updated Section 705.40 provides the framework for systems with the listed MID technology needed to safely transition between grid-connected and island modes.

705.40 Loss of Primary Source. Upon loss of voltage in the primary source, an interconnected electric power production source shall be disconnected from the primary source and shall not be permitted to supply power to the system. Exception: A system incorporating a listed microgrid interconnect device (MID) shall be permitted to operate in island mode in accordance with Article 710.

New – 705.50

Microgrid Systems — New Section Addressing Microgrid Interconnection

Change at a Glance: *New Section 705.50 establishes requirements for microgrid systems interconnecting multiple power sources with premises wiring.*

❖ **What Changed:** New Section 705.50 was added to establish requirements for microgrid systems that interconnect multiple electric power production sources, energy storage systems, and loads within a facility. A microgrid system under Section 705.50 must incorporate a listed Microgrid Interconnect Device (MID) that manages the connection and disconnection between the microgrid and the utility system, preventing backfeed during utility outages while enabling intentional island mode operation. The MID must be listed and labeled for microgrid service and must be capable of automatically detecting loss of utility power and initiating the transition to island mode.

❖ **Its Effect:** Microgrid systems are being deployed in an increasing variety of applications: campus facilities seeking resilience, industrial facilities with on-site generation, communities with shared solar and storage, and critical facilities requiring continuous power. Section 705.50 provides the NEC framework for these systems, ensuring that the critical safety function of preventing backfeed is always provided by a listed MID regardless of the number or type of generation and storage sources in the microgrid.

Article 706 — Energy Storage Systems

Article 706 covers energy storage systems (ESS) — battery banks, flow batteries, flywheel systems, and other technologies that store electrical energy for later use. The 2026 edition significantly updated Article 706 to address the proliferation of lithium-ion ESS in residential and commercial applications.

New – 706.3

Reconditioned Energy Storage Systems — Explicitly Prohibited

> ***Change at a Glance:*** *New Section 706.3 explicitly prohibits the use of reconditioned energy storage systems.*

❖ **What Changed:** New Section 706.3 was added to explicitly prohibit the use of reconditioned energy storage systems. Unlike conventional switchgear or transformers that can be inspected, cleaned, and tested to verify their safety, the internal cell degradation that occurs in lithium-ion and other advanced battery chemistries is not visible during external inspection. A battery that appears physically undamaged may have significantly reduced capacity, elevated internal resistance, or internal separator damage that creates thermal runaway risk under charging or discharge conditions.

❖ **Its Effect:** The prohibition on reconditioned ESS aligns with the NEC's approach to other safety-critical devices whose performance cannot be reliably verified after use — GFCIs, AFCIs, and SPDs are similarly prohibited from reconditioning in the 2026 NEC. For lithium-ion batteries, the risk of invisible internal damage is particularly acute given the well-documented potential for thermal runaway in damaged cells.

> 706.3 Reconditioned Equipment. Reconditioned energy storage systems shall not be permitted.

Revision – 706.10

Directory — ESS System Documentation Requirements Updated

> ***Change at a Glance:*** *Section 706.10 updated with enhanced documentation and directory requirements for energy storage systems.*

❖ **What Changed:** Section 706.10 was updated with enhanced documentation requirements for ESS installations. A directory or placard must be installed at the ESS disconnecting means and at the service equipment identifying: the ESS type and chemistry; the ESS location; the disconnecting means location; the system voltage and maximum available fault current; and emergency de-energization procedures. For ESS with lithium-ion cells, the directory must also include information about thermal runaway hazards and the required firefighting protocols, which differ from those for conventional electrical equipment fires.

❖ **Its Effect:** ESS installations present unique hazards for emergency responders who may not recognize the equipment or understand its operational and safety characteristics. A lithium-ion battery fire requires different suppression techniques than a conventional electrical fire — water flooding is often required for lithium-ion thermal runaway, while conventional electrical fires require CO2 or dry chemical suppression. The directory requirements ensure first responders have the critical safety information they need.

Revision – 706.20

Installation — Spacing, Ventilation, and Thermal Management Requirements

> ***Change at a Glance:*** *Section 706.20 updated with revised spacing, ventilation, and thermal management requirements for ESS installations.*

❖ **What Changed:** Section 706.20 on ESS installation requirements was updated to address spacing, ventilation, and thermal management for modern lithium-ion ESS. The revision establishes minimum clearance requirements between ESS modules to permit adequate ventilation and to limit thermal propagation between modules in the event of a thermal runaway event in one module. Ventilation requirements were updated to address both normal off-

gassing during charging and the significantly larger volumes of toxic and flammable gases released during thermal runaway. Coordination with NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) was improved to reduce conflicts between NEC and NFPA 855 requirements.

❖ **Its Effect:** Thermal runaway propagation — where a thermal runaway event in one lithium-ion cell triggers adjacent cells, ultimately involving the entire battery module or system — is the primary safety concern for large-scale lithium-ion ESS. Adequate spacing and ventilation can slow propagation and limit the consequences of a thermal runaway event, while ventilation prevents the accumulation of flammable and toxic gases that could create explosion or poisoning hazards.

Article 708 — Critical Operations Power Systems (COPS)

Article 708 covers Critical Operations Power Systems (COPS) — electrical systems in facilities designated by law or governmental authority as critical to national security and public welfare, including data centers, communications facilities, and emergency operations centers. The 2026 edition updated the risk assessment requirements to include cybersecurity threats to electrical systems.

Revision – 708.10

COPS Risk Assessment — Updated to Address Cybersecurity Threats

> ***Change at a Glance:*** *Section 708.10 updated to include cybersecurity threats in the risk assessment for Critical Operations Power Systems.*

❖ **What Changed:** Section 708.10 was updated to require that the risk assessment for Critical Operations Power Systems (COPS) include an evaluation of cybersecurity threats to the electrical system. COPS — which serve facilities designated by law or governmental authority as critical to national security and public welfare, including data centers, communications facilities, and emergency operations centers — are increasingly vulnerable to cyberattacks that could disrupt their electrical systems. The risk assessment must address threats to automated control systems, building management systems, and smart grid interconnections that could compromise power system operation.

❖ **Its Effect:** The inclusion of cybersecurity in COPS risk assessments reflects the growing recognition that the electrical systems serving critical infrastructure are as vulnerable to cyberattacks as the digital systems they power. A cyberattack that disables the automated control system of a COPS facility could effectively de-energize the facility without any physical intrusion. The updated risk assessment requirements ensure that cybersecurity is integrated into COPS electrical system design from the outset.

Article 710 — Microgrids (New)

New Article 710 is one of the most significant additions in the 2026 NEC. It establishes a dedicated regulatory framework for microgrid systems — localized electrical systems that can operate both connected to and independent of the utility grid.

New – Article 710

Microgrids — New Dedicated Article Establishing the Complete Microgrid

> ***Change at a Glance:*** *New Article 710 establishes the first comprehensive NEC framework for microgrid systems including MCS and MID requirements.*

Framework

❖ **What Changed:** New Article 710 establishes a comprehensive framework for microgrid systems. The article covers: scope and definitions (710.1–2); general requirements including listing and documentation (710.5–6); Microgrid Control System (MCS) requirements (710.10); Microgrid Interconnect Device (MID) requirements (710.15); disconnecting means for microgrid systems (710.20); wiring methods for microgrid interconnection conductors (710.25); protection coordination requirements (710.30); and grounding and bonding for microgrid systems (710.40). The MID — the critical safety device that manages the interface between the microgrid and the utility system — must be listed for microgrid service and must be capable of detecting utility power loss and safely transitioning to island mode without backfeed onto utility lines.

❖ **Its Effect:** Microgrids have been deployed for years in critical facilities and remote locations, but the NEC previously had no dedicated article addressing their unique requirements. Designers relied on Articles 705 and 706 plus utility interconnection agreements, creating inconsistency in how microgrids were designed and inspected. New Article 710 provides a consistent, comprehensive regulatory framework that addresses the complete microgrid system — from the MCS that coordinates all sources and loads to the MID that safely manages the utility interface.

New – 710.15

Microgrid Interconnect Device — Listing and Performance Requirements

> ***Change at a Glance:*** *Section 710.15 establishes listing and performance requirements for the Microgrid Interconnect Device.*

❖ **What Changed:** Section 710.15 establishes that every microgrid system that can operate in island mode must incorporate a listed Microgrid Interconnect Device (MID). The MID must be listed specifically for microgrid service and must meet the following performance requirements: detection of utility power loss within the time limit specified by the listing; automatic disconnection from the utility system before transitioning to island mode; prevention of backfeed onto utility conductors in both island mode and during the transition between modes; synchronization with the utility system before reconnection after an outage; and communication with the Microgrid Control System for coordinated operation.

❖ **Its Effect:** The MID listing requirement is the cornerstone of microgrid safety in the 2026 NEC. The MID performs the most safety-critical function in a microgrid system: ensuring that the microgrid does not backfeed voltage onto utility lines during an outage, which could electrocute utility workers working on lines they believe are de-energized. A listed MID that meets defined performance standards provides the assurance needed for both utilities and AHJs to permit intentional island mode operation.

New – 710.10

Microgrid Control System — Requirements for MCS

> ***Change at a Glance:*** *Section 710.10 establishes requirements for the Microgrid Control System that coordinates all microgrid sources and loads.*

❖ **What Changed:** Section 710.10 establishes requirements for the Microgrid Control System (MCS) — the system that manages the operation of all components within the microgrid including power production equipment, energy storage systems, loads, the MID, and the connection to the utility. The MCS must be capable of: real-time monitoring of all generation and storage sources; demand

management to prevent overloading of microgrid conductors and equipment during island mode; coordination with the MID for transitions between grid-connected and island operating modes; and providing status information to building management systems and, where required, to the serving utility. Documentation of the MCS configuration must be maintained at the facility.

❖ **Its Effect:** The MCS is the intelligence layer of the microgrid that makes coordinated, safe operation possible. Without an MCS, multiple generation and storage sources would compete for control of the microgrid bus voltage and frequency, potentially causing equipment damage or system instability. The MCS requirements ensure that every microgrid has a defined control architecture with clear responsibility for each operational function.

Articles 720–772 — New Limited-Energy Article Framework

One of the most significant structural changes in the 2026 NEC is the complete restructuring of limited-energy system articles. Articles 770 (Optical Fiber Cables), 805 (Communications Circuits), and 840 (Broadband Communications Systems) were deleted and their content consolidated into a new unified framework of Articles 720–772 within Chapter 7. This restructuring eliminates the previous requirement for installers and inspectors to cross-reference between multiple articles to determine which cable type, raceway, and grounding method applies to combined optical fiber/communications/broadband installations.

New – Article 720

General Requirements for Limited-Energy Systems — New Foundation Article

> ***Change at a Glance:*** *New Article 720 establishes general requirements applying to all limited-energy wiring methods and materials.*

❖ **What Changed:** New Article 720 was created to establish general requirements that apply to all limited-energy systems covered by Articles 720–772. Previously, general requirements for limited-energy systems were either in Article 300 (by cross-reference), scattered through the individual articles, or not addressed at all. Article 720 covers: the hierarchy of requirements between Article 720 and the specific articles; listing requirements for limited-energy equipment and cables; mechanical execution of work requirements; protection from physical damage; securing and supporting methods; and the relationship between limited-energy wiring and power wiring installed in the same spaces or raceways.

❖ **Its Effect:** The creation of Article 720 as a general requirements article for limited-energy systems mirrors the role that Article 300 plays for power wiring methods. Just as Article 300 provides the general baseline for all power wiring with specific articles addressing particular wiring methods in detail, Article 720 now provides the general baseline for all limited-energy wiring with specific articles addressing particular cable types, raceways, and system types.

New – Article 721

Power Sources for Limited-Energy Systems — New Article

> ***Change at a Glance:*** *New Article 721 consolidates all power source requirements for limited-energy systems.*

❖ **What Changed:** New Article 721 was created to consolidate power source requirements for limited-energy systems. This includes power source listing requirements, output voltage and current limitations, short-circuit current requirements, and coordination with power system grounding. Previously, power source requirements for Class 2 and Class 3 circuits, fire alarm circuits, and optical fiber cables were spread across multiple articles. Article 721 provides a single reference for power source selection and installation requirements applicable across the full range of limited-energy system types.

❖ **Its Effect:** Consolidated power source requirements reduce the complexity of designing and inspecting systems that combine multiple limited-energy technologies. A smart building installation that includes Class 2 control circuits, fire alarm circuits, optical fiber, and communications cables can now reference Article 721 for all power source requirements rather than searching through five separate articles.

New – Article 722

Limited-Energy Cables — New Article Covering All Limited-Energy Cable Types

> ***Change at a Glance:*** *New Article 722 consolidates requirements for all limited-energy cable types including optical fiber.*

❖ **What Changed:** New Article 722 consolidates requirements for all limited-energy cable types, organized by application in separate parts: Part I (General), Part II (Class 2 and 3 Cables), Part III (Fire Alarm Cables), Part IV (Communications Cables), Part V (Coaxial Cables), Part VI (Network-Powered Broadband Cables), and Part VII (Optical Fiber Cables). The article addresses listing requirements, cable ratings, substitution hierarchy, and permitted uses for each cable type. A unified substitution chart in Article 722 shows which cable types can substitute for others,

replacing the multiple substitution charts formerly in Articles 725, 760, 770, 800, 820, and 840.

❖ **Its Effect:** The unified substitution chart in Article 722 is a major practical improvement. Previously, determining whether a particular cable type could substitute for another in a specific installation required consulting multiple substitution tables in different articles. The single consolidated chart allows installers and inspectors to make substitution determinations quickly and consistently.

New – Article 723

Raceways and Cable Trays for Limited-Energy Systems — New Article

> ***Change at a Glance:*** *New Article 723 consolidates raceway and cable tray requirements for all limited-energy systems.*

❖ **What Changed:** New Article 723 consolidates raceway and cable routing assembly requirements for all limited-energy systems. Previously, raceway requirements for limited-energy systems were scattered between Article 300 (by cross-reference), Article 362 (electrical nonmetallic tubing), and individual limited-energy articles. Article 723 organizes raceway requirements by application: permitted raceway types for each limited-energy system category, fill calculation requirements, separation requirements from power conductors, and requirements for cable routing assemblies used with limited-energy cables.

❖ **Its Effect:** Consolidated raceway requirements ensure consistent application across mixed limited-energy installations where multiple cable types share the same raceway or pathway. The separation requirements from power conductors are particularly important for signal integrity — power conductors can induce noise and interference in limited-energy signal cables if proper separation is not maintained.

Revision – Article 725

Class 1, 2, and 3 Remote-Control and Signaling Circuits — Updated

> ***Change at a Glance:*** *Article 725 significantly updated to coordinate with new Articles 720–723 and 742 framework.*

❖ **What Changed:** Article 725 was significantly updated to coordinate with the new Article 720–723 framework. Many provisions formerly in Article 725 were relocated to the appropriate Article 720–723 articles covering general requirements, power sources, cables, and raceways. Article 725 now focuses specifically on the classification of circuits as Class 1, 2, or 3, and the associated equipment and installation requirements unique to each class. Cross-references to the new articles replace the self-contained requirements that previously appeared throughout Article 725.

❖ **Its Effect:** The updated Article 725 is more focused and easier to navigate than its predecessor. By relocating general requirements to Articles 720–723 and retaining only the class-specific requirements in Article 725, the article better serves its primary purpose: defining the three classes of remote-control and signaling circuits and establishing the safety requirements unique to each class.

New – Article 742

Overvoltage Protection for Limited-Energy Systems — New Article

> ***Change at a Glance:*** *New Article 742 consolidates overvoltage protection requirements for all limited-energy systems.*

❖ **What Changed:** New Article 742 was created to consolidate overvoltage protection requirements for limited-energy systems. Previously, overvoltage (surge) protection requirements for communications, fire alarm, and other limited-energy systems were scattered through the individual articles. Article 742 provides a single reference for overvoltage protection device listing requirements, installation locations, grounding requirements, and coordination with premises wiring surge protection under Article 242.

❖ **Its Effect:** Limited-energy systems are highly susceptible to overvoltage damage from lightning and switching transients because their sensitive electronic components operate at low voltages with tight voltage tolerances. Consolidated overvoltage protection requirements ensure consistent installation of protection devices across all limited-energy system types, reducing equipment damage from transient overvoltages.

New – Article 750

Grounding and Bonding for Limited-Energy Systems — New Article

> ***Change at a Glance:*** *New Article 750 consolidates grounding and bonding requirements for all limited-energy systems.*

❖ **What Changed:** New Article 750 was created to consolidate grounding and bonding requirements for all limited-energy systems within Chapter 7. Previously, grounding requirements for limited-energy systems were cross-referenced to Article 250 with modifications in individual limited-energy articles. Article 750 provides a unified framework for limited-energy system grounding that coordinates with Article 250 (Grounding and Bonding) and Section 250.94 (Intersystem Bonding Termination). The article addresses equipment grounding conductor requirements, system grounding, and the required connection to the building's intersystem bonding termination (IBT) device.

❖ **Its Effect:** Proper grounding of limited-energy systems is essential for personnel protection, equipment protection from surge events, and signal integrity. The consolidated Article 750 ensures that all limited-energy systems are grounded using a consistent framework coordinated with the power system grounding in Article 250, rather than applying different grounding approaches from multiple scattered provisions.

Revision – Article 760

Fire Alarm Systems — Updated to Coordinate with New Limited-Energy Framework

> ***Change at a Glance:*** *Article 760 significantly updated; general requirements relocated to Articles 720–723; fire alarm-specific provisions retained.*

❖ **What Changed:** Article 760 was significantly updated to coordinate with the new Article 720–723 framework. General cable, raceway, and power source requirements that previously appeared in Article 760 were relocated to the appropriate Articles 720–723. Article 760 now focuses on fire alarm-specific requirements: circuit classification (NPLFA vs. PLFA), circuit integrity requirements

for power-limited fire alarm cables in survivability-rated applications, and coordination with NFPA 72 (National Fire Alarm and Signaling Code). New provisions address fire alarm system power supply requirements under 760.33 for supply-side surge protection.

❖ **Its Effect:** Fire alarm systems are among the most safety-critical limited-energy systems, and their requirements must be maintained with the utmost accuracy. The updated Article 760 retains all fire alarm-specific requirements while benefiting from the consolidated general provisions in Articles 720–723. The new Section 760.33 for supply-side surge protection addresses a known vulnerability — fire alarm control panels damaged by voltage transients have been implicated in failures of fire alarm systems during actual fires.

New – Article 772

Fire Resistive Cable Systems — New Article (Relocated from Article 728)

> ***Change at a Glance:*** *New Article 772 contains fire resistive cable system requirements relocated from former Article 728 into Chapter 7.*

❖ **What Changed:** New Article 772 was created to contain the fire resistive cable system requirements formerly in Article 728. The relocation from Chapter 7's mid-700s articles to Article 772 places fire resistive cable systems alongside the fire alarm article (Article 760) and other life-safety cable system articles in the upper 700s. Circuit integrity (CI) cable systems — which are tested to maintain circuit continuity for a specified duration (typically 2 hours) when exposed to fire temperatures — are used for emergency system wiring (Article 700), fire pump circuits (Article 695), and fire alarm circuits (Article 760) where survivability is required.

❖ **Its Effect:** The relocation of fire resistive cable requirements from Article 728 to new Article 772 improves the organization of Chapter 7 by placing CI cable requirements in closer proximity to the articles that require their use. An engineer designing emergency system wiring under Article 700 or fire pump wiring under Article 695 can now find the applicable CI cable requirements in the logically adjacent Article 772 rather than searching back to Article 728.

Chapter 8 — Communications Systems

Article 800 · Article 810 · Article 820· Article 830·

Chapter 8 covers communications systems — telephone, radio, television, cable TV, broadband, and satellite systems. A fundamental change in the 2026 NEC is that Chapter 8 is no longer independent from Chapters 1 through 7. As revised in Section 90.3, Chapters 5 through 7 may now supplement or modify Chapter 8 requirements. Additionally, Chapter 8 received a new subtitle: 'Communications Systems Outside and Entering Buildings.'

Article 800 — General Communications

Article 800 covers the general requirements for communications circuits entering and leaving buildings from outside plant systems. The 2026 edition updated workmanship requirements to reference Section 110.12 directly, reflecting the elimination of Chapter 8's independence from Chapters 1–7, and updated cable requirements to cross-reference new Article 722.

Revision – 800.24

Mechanical Execution of Work — Chapter 8 Now Subject to 110.12

> ***Change at a Glance:*** *Section 800.24 updated; Chapter 8 communications systems now subject to Article 110.12 workmanship requirements.*

❖ **What Changed:** Section 800.24 was updated to explicitly reference Section 110.12 (Mechanical Execution of Work) as applicable to communications system installations. Previously, Chapter 8 included its own workmanship provision that largely paralleled Section 110.12. With the elimination of Chapter 8's independence from Chapters 1 through 7 in the 2026 NEC, the Section 110.12 workmanship requirements now directly apply to communications systems, and the Chapter 8 cross-reference confirms this application.

❖ **Its Effect:** The alignment of communications system workmanship requirements with Section 110.12 creates consistency in the quality standard

applied to both power and communications wiring. Previously, the separate workmanship provisions sometimes led to inconsistent enforcement standards for communications system installations. Under the 2026 NEC, the same workmanship standard applies to all wiring — power and communications — regardless of the chapter governing the specific installation.

Revision – 800.170

Communications Cables — Updated to Reference New Article 722

> ***Change at a Glance:*** *Section 800.170 updated to reference Article 722 for communications cable requirements replacing self-contained provisions.*

❖ **What Changed:** Section 800.170 on communications cables was updated to reference new Article 722 for communications cable requirements, including cable listing, ratings, and substitution hierarchy. Previously, Article 800 contained self-contained cable requirements including the substitution hierarchy chart. These provisions are now in Article 722, and Article 800 cross-references Article 722 for the applicable requirements. Article 800 retains requirements unique to communications systems entering buildings from outside plant, including requirements at the network demarcation point.

❖ **Its Effect:** The cross-reference to Article 722 for cable requirements eliminates duplication between Article 800 and Article 722 and ensures that communications cable requirements remain consistent with those for other limited-energy cable types. When Article 722 cable requirements are updated in future code cycles, the updates automatically apply to communications systems through the cross-reference without requiring independent updates to Article 800.

Article 810 — Radio and Television Equipment

Article 810 covers radio and television receiving equipment including antenna systems, satellite dishes, and associated wiring. The 2026 edition updated antenna conductor and grounding requirements to address modern high-frequency wireless systems including 5G cellular, satellite internet, and distributed antenna systems (DAS), with improved coordination with the Intersystem Bonding Termination requirements of Section 250.94.

Revision – 810.20 & 810.21

Radio and Television Equipment — Antenna Installation Requirements Updated

> ***Change at a Glance:*** *Sections 810.20 and 810.21 updated with revised requirements for antenna system conductors and grounding.*

❖ **What Changed:** Sections 810.20 and 810.21 on radio and television antenna systems were updated to address modern antenna configurations including those used for 5G cellular, satellite internet (including LEO constellation systems), and distributed antenna systems (DAS). The conductor and grounding requirements were updated to address the higher frequencies and power levels used in modern wireless systems. Section 810.21 on grounding of receiving antenna equipment was revised to improve coordination with the Intersystem Bonding Termination (IBT) requirements of Section 250.94.

❖ **Its Effect:** Modern wireless antenna systems operate at much higher frequencies than the broadcast radio and television antennas for which the original Article 810 requirements were written. The updated conductor and grounding requirements address the impedance and shielding characteristics important for high-frequency antenna systems, while maintaining the fundamental safety requirements for protection against lightning-induced transients and accidental contact with power conductors.

Articles 820 & 830 — Community Antenna Television and Broadband Communications

Articles 820 and 830 cover coaxial cable-based community antenna television (CATV) systems and network-powered broadband communications systems respectively. The 2026 edition updated both articles to cross-reference new Articles 722 and 723 for cable and raceway requirements, reducing duplication and ensuring cable and raceway requirements remain synchronized with other limited-energy systems.

Revision – Articles 820 & 830

CATV and Broadband — Updated to Reference New Article 722 and 723

> ***Change at a Glance:*** *Articles 820 and 830 updated to cross-reference Articles 722 and 723 for cable and raceway requirements.*

❖ **What Changed:** Articles 820 (Community Antenna Television) and 830 (Network-Powered Broadband Communications Systems) were updated in parallel to cross-reference Articles 722 and 723 for cable and raceway requirements. Article 820 retains requirements specific to CATV systems including coaxial cable requirements at the building entry point, CATV cable grounding and bonding requirements at the building entry, and protection requirements for cables entering from outside. Article 830 retains network-powered broadband-specific requirements for the power source at the building entry and the protection of network interface units.

❖ **Its Effect:** The cross-referencing to Articles 722 and 723 reduces the size and complexity of Articles 820 and 830 while ensuring that cable and raceway requirements remain synchronized with those for other limited-energy systems. CATV and broadband systems share cable trays, conduits, and pathways with other limited-energy systems in many commercial installations, and consistent requirements for cable ratings and raceway fill reduce installation errors.

Chapter 9 — Tables

Table 1 · Table 13 ·

Chapter 9 contains the engineering tables used throughout the NEC for conduit fill calculations, conductor dimension data, and protection technique classifications. The 2026 edition updated several tables to reflect new materials, cable types, and reclassified protection techniques.

Table 1 — Percent of Cross Section of Conduit and Tubing for Conductors and Cables

Table 1 provides the maximum percent fill allowed for conductors and cables in conduit and tubing. The 2026 edition updated the table notes to address fill space when listed cable ties are used inside raceways per new Section 300.13(E), and clarified the 40% fill calculation for limited-energy cables in shared raceways containing both power and limited-energy cables.

Revision – Table 1

Percent of Cross Section of Conduit and Tubing for Conductors and Cables — Note Updated

> ***Change at a Glance:*** *Table 1 notes updated to address new cable tie provisions and the 40% fill calculation for limited-energy cables in shared raceways.*

❖ **What Changed:** Table 1 notes were updated to address two new provisions: the application of cable tie fill space to the conduit fill calculation when listed cable ties are used in conduit or tubing; and clarification of the 40% fill calculation for limited-energy cables in shared raceways containing both power and limited-energy cables. The updated notes ensure consistent application of the fill calculation when the new cable tie provisions of Section 300.13(E) are applied in raceway installations.

❖ **Its Effect:** Table 1 is one of the most frequently referenced tables in the NEC, as conduit fill calculations are required for virtually every raceway installation. The

updated notes ensure that the new cable tie provisions are properly accounted for in fill calculations and that shared raceways with mixed cable types are calculated correctly.

Table 13 — Equipment for Hazardous (Classified) Locations

Table 13 lists the explosion protection techniques and equipment types permitted in hazardous classified locations. The 2026 edition added new protection type "v" for artificially ventilated rooms as a permitted technique for Zone 2 and Class I Division 2 locations, aligning U.S. practice with IEC 60079-13 / ANSI/UL 60079-13, and added subtype "vc" for equipment used to monitor and control the ventilation system itself.

Revision – Table 13

Equipment for Hazardous Classified Locations — New Type 'v' Protection Added

> ***Change at a Glance:*** *Table 13 updated to include new protection type 'v' for artificially ventilated rooms and subtype 'vc' for ventilation control equipment.*

❖ **What Changed:** Table 13 was updated to include the new protection type 'v' (artificially ventilated rooms) and subtype 'vc' (equipment used to monitor and control the ventilation system) as explosion protection techniques for Zone 2 and Class I Division 2 locations. These additions correspond to the ANSI/UL 60079-13 standard for protection by pressurization and ventilation. The table also reflects the updated terminology and equipment marking requirements for protection types that were harmonized with IEC 60079 standards.

❖ **Its Effect:** The addition of protection type 'v' to Table 13 provides the code basis for using artificially ventilated rooms as an explosion protection technique in U.S. installations. This technique has been standard practice internationally under IEC standards but lacked a clear NEC reference. The addition enables engineers and AHJs to approve ventilated room installations with reference to a specific NEC provision and listed equipment evaluated under ANSI/UL 60079-13.

Informative Annexes

Annex A· Annex D Annex H

The 2026 NEC includes 12 Informative Annexes (A through L). Informative Annexes are not mandatory — they provide supplementary guidance, reference standards, and worked examples to aid in the application of NEC requirements. Several annexes were updated in the 2026 edition to reflect the structural changes in the code and to provide additional guidance on new technologies.

Annex A — Product Safety Standards

Annex A lists the product safety standards referenced by the NEC for equipment listing and approval. The 2026 edition added new and revised standards for equipment categories updated throughout the code, including UL 9540 and UL 9540A for Energy Storage Systems, UL 2594 for Electric Vehicle Supply Equipment, ANSI/UL 60079-13 for artificially ventilated room protection, and standards for Microgrid Interconnect Devices and Microgrid Control Systems.

Revision – Annex A

Product Safety Standards — Updated to Include New Listing Standards

> ***Change at a Glance:*** *Annex A updated to reference new and revised product safety standards including standards for ESS, EVSE, and microgrid equipment.*

❖ **What Changed:** Annex A (Product Safety Standards) was updated to include new and revised product safety standards for the equipment categories added or updated in the 2026 NEC. New entries include: UL 9540 and UL 9540A for Energy Storage Systems (ESS) and ESS fire testing; UL 2594 for Electric Vehicle Supply Equipment (EVSE); ANSI/UL 60079-13 for artificially ventilated room protection (new Table 13 protection type 'v'); and standards for Microgrid Interconnect Devices (MID) and Microgrid Control Systems (MCS). Previously listed standards were reviewed and updated references were incorporated where applicable.

❖ **Its Effect:** Annex A serves as the reference point for AHJs and installers who

need to verify the listing standards applicable to a specific type of equipment. With the addition of ESS, EVSE, and microgrid equipment to the 2026 NEC, the corresponding product safety standards need to be readily identifiable. The updated Annex A ensures that the complete chain from NEC requirement to product listing standard is traceable for all major equipment categories in the 2026 edition.

Annex D — Examples

Annex D provides worked calculation examples illustrating the correct application of NEC load calculation requirements. The 2026 edition added new worked examples for EV charging load calculations using the demand factors in new Tables 120.83 (single-family dwellings) and 120.84(C) (multifamily dwellings), and for Power Control System load reduction under new Section 120.140(A), providing step-by-step guidance for these new calculation methodologies.

Revision – Annex D

Examples — New Load Calculation Examples for EV Charging and Power Control Systems

> ***Change at a Glance:*** *Annex D updated with new worked examples for EV charging load calculations and Power Control System load reduction.*

❖ **What Changed:** Annex D (Examples) was updated to include new worked calculation examples for EV charging load calculations using the demand factors in new Tables 120.83 (single-family dwellings) and 120.84(C) (multifamily dwellings), and for Power Control System load reduction under new Section 120.140(A). The new examples illustrate how to correctly apply demand factors for multiple EVSE in residential settings and how to calculate service and feeder sizes when a listed PCS is used to manage EVSE loads within service capacity.

❖ **Its Effect:** Worked examples are among the most valuable educational tools in the NEC, providing code users with model calculations that demonstrate the correct application of complex provisions. The EV charging demand factor tables in Article 120 are new in the 2026 NEC, and the worked examples in Annex D provide the step-by-step calculation methodology needed for consistent application across the industry.

Annex H — Administration and Enforcement

Annex H provides guidance on code adoption and enforcement procedures. The 2026 edition updated the annex to reflect modern practices in code adoption including guidance on adopting the NEC with local amendments, the role of the AHJ in granting special permission under Section 90.4(C), procedures for appealing AHJ decisions, and documentation requirements for alternative method approvals.

Revision – Annex H

Administration and Enforcement — Updated for Modern Code Adoption

> ***Change at a Glance:*** *Annex H updated to reflect modern practices in code adoption, enforcement, and amendment procedures.*

❖ **What Changed:** Annex H (Administration and Enforcement) was updated to reflect modern practices in code adoption and enforcement, including guidance on the process for adopting the NEC with local amendments, the role of the AHJ in granting special permission, and the procedures for appealing AHJ decisions. The annex also includes updated guidance on the use of alternative methods and materials under Section 90.4(C) and the documentation requirements for alternative method approvals.

❖ **Its Effect:** The administration and enforcement provisions of the NEC are non-mandatory but provide valuable guidance for jurisdictions adopting the NEC and for code users seeking to understand the AHJ's role in code interpretation and enforcement. The updated Annex H reflects the evolution of code adoption and enforcement practices over the past code cycle.

Quiz Questions

1. **Section 700.12 was updated in 2026 to formally recognize which type of system as a valid source of power for emergency systems?**
   a) Utility-owned fuel cell systems
   b) Energy Storage Systems (ESS) meeting Article 706 requirements
   c) Solar photovoltaic systems with battery backup
   d) Portable generator systems rated over 50 kW

2. **New Section 702.4(A)(3) formally recognizes bidirectional electric vehicle power transfer systems as which type of standby power source?**
   a) Emergency power source under Article 700
   b) Legally required standby source under Article 701
   c) Optional standby power source under Article 702
   d) Critical operations power source under Article 708

3. **New Section 706.3 in the 2026 NEC explicitly prohibits which of the following?**
   a) Reconditioned energy storage systems
   b) Energy storage systems over 100 kWh installed outdoors
   c) Lithium-ion batteries in residential occupancies
   d) Energy storage systems connected on the supply side of the service disconnect

4. **New Article 710 establishes requirements for which type of system that previously had no dedicated NEC article?**
   a) Critical Operations Power Systems (COPS)
   b) Microgrid systems
   c) Distributed antenna systems (DAS)
   d) Solar photovoltaic systems over 1000 volts

5. **The Microgrid Interconnect Device (MID) required by Section 710.15 must perform which critical safety function?**
   a) Monitor battery state of charge in the microgrid ESS
   b) Automatically test all emergency loads monthly
   c) Communicate real-time power data to the serving utility
   d) Prevent backfeed onto utility conductors when operating in island mode

6. **Articles 770, 805, and 840 were deleted from the 2026 NEC. Where was their content relocated?**
   a) Into Chapter 4 as new Articles 497, 498, and 499
   b) Into new Articles 720–772 within Chapter 7
   c) Into Chapter 8 as new Articles 801, 802, and 803
   d) Into Informative Annex L as non-mandatory guidance

7. **New Article 722 in the 2026 NEC provides a unified substitution chart for which category of cables?**
   a) Medium-voltage cables rated over 1000 volts
   b) Power cables in cable tray installations
   c) Service entrance cables and feeders
   d) All limited-energy cable types including optical fiber

8. **The 2026 revision to Section 90.3 eliminated Chapter 8's independence. What is the practical effect of this change?**
   a) Chapter 8 articles were deleted and moved to Chapter 7
   b) Chapters 5 through 7 may now supplement or modify Chapter 8 requirements
   c) Chapter 8 now applies only to outside plant utility communications
   d) Communications systems are now governed exclusively by Chapter 4

9. **New Article 742 in the 2026 NEC consolidates which type of protection requirements for all limited-energy systems?**
    a) Arc-fault circuit interrupter (AFCI) protection
    b) Ground-fault circuit interrupter (GFCI) protection
    c) Overvoltage (surge) protection
    d) Overcurrent protection

10. **Fire resistive cable system requirements were relocated from Article 728 to new Article 772 in Chapter 7. What is the primary benefit of this relocation?**
    a) It reduced the stringency of the fire resistive requirements
    b) It made fire resistive cables optional rather than mandatory
    c) It transferred responsibility for CI cable listings from UL to FM Global
    d) It placed CI cable requirements closer to the articles (700, 760, 695) that require their use

11. **Section 705.40 was updated in 2026 to permit intentional island mode operation under which condition?**
    a) When the utility outage lasts more than 30 minutes
    b) When a listed Microgrid Interconnect Device (MID) is installed
    c) When the on-site generation capacity exceeds 50% of peak demand
    d) When the AHJ grants special permission under Section 90.4(C)

12. **New Section 705.50 establishes requirements for microgrid systems. Which component must every microgrid system that can operate in island mode include?**
    a) A listed Microgrid Interconnect Device (MID)
    b) A listed Power Control System (PCS) meeting Article 130 requirements
    c) A dedicated emergency generator rated for 100% of the microgrid load
    d) A utility-approved energy management system

13. **Section 700.25 was updated to require that all boxes and enclosures containing emergency system wiring be marked. What must the marking indicate?**
    a) That they contain emergency system conductors
    b) The voltage and ampere rating of the emergency system circuits
    c) The date of installation and the installing contractor's license number
    d) The load served and the transfer switch location

14. **Table 13 in Chapter 9 was updated in 2026 to include new protection type 'v.' What does protection type 'v' represent?**
    a) Vapor-tight equipment listed for outdoor wet locations
    b) Artificially ventilated rooms as an explosion protection technique
    c) Vacuum-sealed equipment for ultra-pure gas environments
    d) Vibration-resistant equipment for industrial machinery installations

15. **Annex D was updated with new worked examples for which two new calculation provisions in the 2026 NEC?**
    a) DC load calculations and health care facility demand factors
    b) EV charging demand factors and Power Control System load reduction
    c) Multifamily optional calculations and commercial lighting load factors
    d) Motor load calculations and transformer secondary conductor sizing

16. **Article 760 was significantly updated in 2026. What happened to the general cable, raceway, and power source requirements that previously appeared in Article 760?**
    a) They were deleted as redundant with NFPA 72 requirements
    b) They were moved to Annex L as informational guidance
    c) They were relocated to the appropriate Articles 720–723
    d) They were retained in Article 760 with minor editorial updates

17. **New Section 710.10 establishes requirements for the Microgrid Control System (MCS). Which of the following is a required capability of the MCS?**
    a) Recording energy consumption data for utility billing purposes
    b) Providing internet connectivity for remote meter reading
    c) Generating monthly energy efficiency reports for building occupants
    d) Real-time monitoring of all generation and storage sources with demand management

18. **Section 706.10 was updated to require a directory at the ESS disconnecting means. For ESS with lithium-ion cells, what additional information must the directory include?**
    a) The cell manufacturer's name and model number
    b) The battery management system software version number
    c) Thermal runaway hazard information and required firefighting protocols
    d) The ESS installer's electrical contractor license number

19. **Section 800.170 was updated to cross-reference which new article for communications cable requirements?**
    a) Article 720
    b) Article 722
    c) Article 742
    d) Article 750

20. **Which of the following is a key distinction between Article 700 (Emergency Systems) and Article 701 (Legally Required Standby Systems)?**
    a) Article 700 applies to residential occupancies; Article 701 applies to commercial occupancies
    b) Article 700 covers systems essential for life safety; Article 701 covers systems legally required but not immediately life-critical
    c) Article 700 requires generators only; Article 701 permits ESS as the sole alternate source
    d) Article 700 requires 10-second transfer; Article 701 requires 60-second transfer